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Under the Patronage of His Majesty King Abdullah II ibn Al Hussein

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المؤتمر الدولي العاشر للخدمات الطبية الملكية

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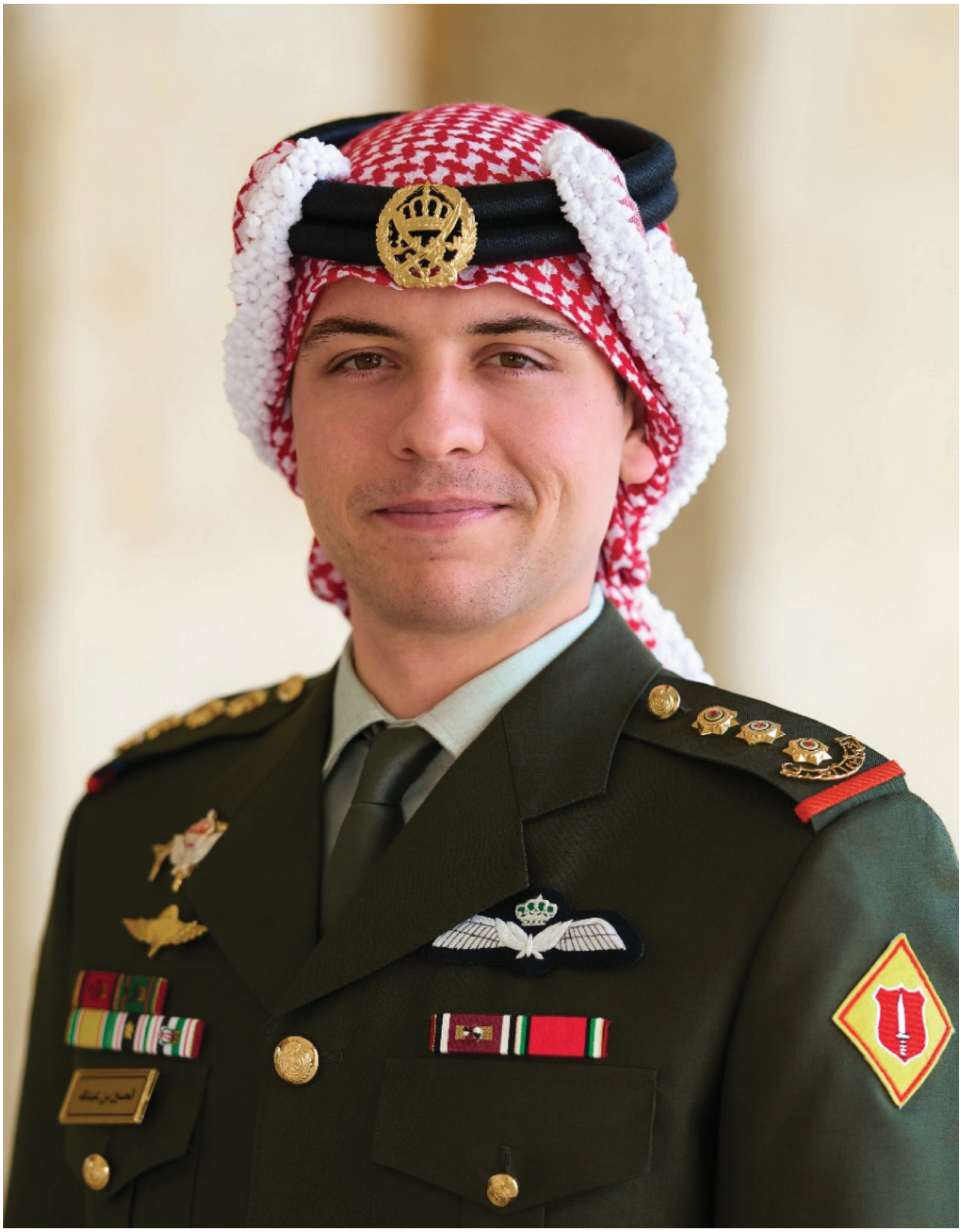
المعرض الصحي الأردني

GLOBAL CHALLENGES AND SUSTAINABLE DEVELOPMENT IN HEALTH

التحديات العالمية والتنمية المستدامة في الصحة

His Majesty

King Abdullah II ibn Al Hussein



His Royal Highness

Crown Prince Al Hussein Bin Abdullah II

Abstract Sequential Order (01 – 451)
Wednesday 8 March 2023
Thursday 9 March 2023

(1)
Howard Catton, RN (UK)

(2)
Involvement of Nurses in Quality Management Programs and Excellence

Ibraheem Faouri, RN (Jordan)
Nurses deal with quality issues continually in their daily work and become more involved and empowered based on their work in quality programs which give them real voice in patient care. Quality and excellence in nursing are used interchangeability in many situations based on the perception and experience of healthcare givers. Despite the interrelation between the two concepts nursing leaders, educator and researchers needs to clarify and understand the relationship between the two concept and to define operationally the two concept. Quality of nursing care received an enormous attention in the last 20 years in Jordan due to implementation of the different accreditation programs in hospital and primary health care. On the other hand, excellence need more focus and effort at professional, institutional and individual nurse level. Finally, there is a good opportunity to build on the work of nurses in quality to achieve the nursing excellence at all levels.

(3)
Midwifery Competency-based Education to Meet Reproductive Health Services Needs

****Jamila Abu-Idhail, RN (Jordan)***
A pracademic is someone who is both an academic and an active practitioner in her or his subject area. Midwifery as a profession is one of the professions that need bridging between theory and practice and the midwife can be considered a pracademic.
Midwifery education contributes to the transformation and expansion of the health workforce. The midwifery role and function in practice have changed to the internationally respected status of a profession. However, educators are more confident with theoretical classroom teaching than clinical teaching to support competency-based education with women and babies.

To achieve good-quality care, midwives have to be educated and trained to work as autonomous professionals and provide knowledgeable, skilled, respectful, and compassionate care based on midwifery competencies.

The evidence showed that midwifery care could avert over 80% of all maternal deaths, stillbirths, and neonatal death if midwives are educated to international standards and midwifery competencies. Further, they will be able to provide most of the care that women, newborns, and families need. Quality midwifery education is urgently needed to improve quality midwifery care and decrease preventable maternal and newborn mortality. Quality midwifery care reduces harm and enhances women's and children's survival, health, and well-being.

(4)

Improving Quality of Care for Bone Marrow Transplant Patients: RMS Experience

Mohammad Sarairah, RN (Jordan)

(5)

Nurses Leading and Responding to Global Health Challenges

Howard Catton, RN (UK)

As the world begins to recover from the COVID-19 pandemic, the global health challenges we face provide the context for the type and amount of care that will need to be delivered over the next decade. We face an ageing global population, rampant noncommunicable diseases (NCDs), new infections and countless humanitarian crises. Universal Health Coverage (UHC)and the promise of Healthcare for All remain on the agenda, but seem to be more difficult to achieve than ever. All of these health issues rightly fall within the remit of nurses, but the global nursing workforce has suffered greatly during the pandemic, so much so that its future effectiveness will depend on governments making good decisions about the shape of the future healthcare workforce, and fast. Nursing, especially through the development of advanced nursing practice, has the solutions to the challenges we face. But with a well-established pre-pandemic deficit of six million too few nurses worldwide, which ICN believes may have more than doubled, political decisions need to be made about the massive investment that is required in nursing jobs, nurses' education and their leadership. We need to see a new political mindset that creates a new, post-pandemic normal that puts nurses in their rightful place- at the centre of policymaking and care delivery.

(6)

Nursing Informatics: Assessment of Undergraduates Competencies in Princess Muna College of Nursing in Jordan

*Jumana Almomani, RN (Jordan)
Hajar Mohammed Al-freihat. RN

Objectives: This study is conducted to identify the nursing informatics competencies for undergraduates nursing students in princess Muna college of nursing (PMCN) in Jordan after first time of induced informatics curriculum.
Methodology: A descriptive cross sectional study was conducted after ethical approval among 165 nursing students from 10th august 2021 till 10th September 2021 after course completion. Self-assessment of 30-items in nursing informatics competencies were send via an email to the students whom were agree to participated in this study
Results: Validated instrument was used,TIGER on line survey in fives subscales: clinical informatics role, basic computer knowledge and skills, applied computers skills, attitude and wireless scale .Mean competencies scores were analyzed using SPSS version. The overall score showed that students were competent in informatics skills in nursing informatics with 56% at all with Mean =3.67; SD=0.05.
Conclusion: This course is fairly helpful to get students' knowledge and basic skills . The researcher recommended to use informatics course of the undergraduate students, focusing on clinical practical works that will be helpful post their graduation
Keywords: Nursing Informatics, Informatics Curriculum, Informatics practice

(7)

The International Childbirth Initiative (ICI): 12 Steps to Safe and Respectful MotherBaby-Family Maternity Care

**Roa A Taweli, RN (KSA)*

The International Childbirth Initiative (ICI): 12 Steps to Safe and Respectful MotherBaby-Family Maternity Care provides clear steps for implementing evidence-based maternity care worldwide, acknowledging the interaction between the MotherBaby dyad, Family and Environment as well as their interactions with health providers and health systems. The 12 steps will lead to better health and wellness for mothers and their babies, with more positive birth experiences and a better start to life within an environment of strong emotional attachment.

(8)

Maternal, New-born, and Infant Health Integration

**Jamila Abuidhail, RN (Jordan)*

The Third Sustainable Development Goal (SDG) is concerned with ensuring healthy lives and promoting well-being for all ages. One of the targets of the third SDG is reducing global maternal, neonatal, and infant mortality by 2030. Most maternal and infant deaths occur during pregnancy, childbirth, or the immediate postpartum period, which are mostly preventable. Many low- and middle-income countries have not reached maternal and child health targets yet or during the period of achieving Millennium Development Goals.

To achieve the target of the third SDG globally many lifesaving interventions are being introduced in antenatal, delivery, and postnatal care. Similarly, to improve maternal and child health, promotion from pregnancy and delivery to early childhood is being implemented. Understanding the relationship between a mother's health and her newborn infant is essential to decrease maternal and infant mortality and morbidity. This relationship between mothers and their infants or children is complex. It is both biological and social and has critical implications for health systems. Therefore, maternal and child health professionals must work together and look at the continuum of maternal, newborn-infant, and child health in an integrated fashion.

(9)

Midwifery and maternity nursing services in RMS.

**Maria Hawari, RN (Jordan)*

The royal medical services are one of the main pillars of the Jordanian armed forces and well recognized multidisciplinary organization, founded in 1941, and plays a distinguished and comprehensive role in all aspects of medical and healthcare in partnership with the ministry of health, university hospitals, and the private sector.

JRMS provides highly professional medical care service on all levels, including maternal and newborn one through 10 military hospitals and many peripheral centers, which received them in special highly prepared clinics in ratio 9.9% and total 11029 client admission, total 48239, admission ratio 24.74%, and discharge ratio 24.7%, the deliveries reach 34287 deliveries and CS to ND ratio reach 45.8%, and with bed turnover rate 45.8 which is high, that needs professional midwives and nurses. The number of midwives up to year 2021 was 479 (84% have the middle diploma, 10-11% bachelor degree and 6-7% have a higher diploma) which is within the national situation.

The scope of service for registered midwives is written clear and updated according to the continued education and the quality parallel with the RMS vision and mission and core values, and they are included in the education and training programs, and Category requirements parallel with the nursing council and soon with GNC and connect it with military promotion, testing and ranking according to RMS, JSC, AAFP courses (ALSO, BLSO), in addition to The military academies which offers the qualification needed to practice midwifery (Princess Muna Collage of nursing, RMS College for Allied Health Care Professions.
The collaborative training programs at the national and global level and NGOs collaboration and examples from the recent programs (ex: training on the facility-based toolkit to support vaginal birth and reduce unnecessary CS deliveries in Jordan, training on hospital postpartum counseling program, workshop to discuss episiotomy best practice in public hospitals, baby friend hospital…ect and its impact on the services.
Additional Services such as maternal HEALTH EDUCATION CLINIC as a new service, Family planning indicators.

(10)

Predictors of Fatigue among Jordanian Pregnant Women: Cross Sectional Study.

**Dalal Basheer, RN (Jordan)*
Dr. Malaka Z Malak, Associate. prof.

Objectives: The study aimed to assess the correlation between fatigue and psychological factors, namely stress, social support, self-esteem, and depression among pregnant women in Jordan.
Methodology: A cross-sectional design was suggested. Cluster stratified random sampling technique was adopted. Fatigue assessment scale, Rosenberg Self-Esteem Scale, Perceived Stress Scale, Multidimensional Social Support Scale, and Beck's Depression Inventory were used.
Results: A total of 580 pregnant women were included. Overall, 67.4% of the participants experienced fatigue, about 74.0% had moderate to high stress, 56.0% had moderate social support, around 89.0% had normal self-esteem, and 43.1% experienced moderate to extreme depression. Stress, self-esteem, and depression were correlated with fatigue
Conclusion: This study can help develop proper psychosocial care and sustain mental health among women during pregnancy
Keywords: Jordanian pregnant women, fatigue, predictors

(11)

Women's Health in Jordan: Challenges and Promises.

**Rahma Jebril, RN (Jordan)*
'Wafa Jameel ,Walaa Ayasrah

Objectives: This paper discuss the current situation of women's Health in Jordan including exploring the significant indicators, challenges, success stories and efforts especially in Royal Medical Services and National woman's health care center
Methodology: A narrative literature review in order to review more than 50 studies, national reports, strategies, and indicators through searches of official and scientific websites. The national efforts, recommendation and promises will be impeded in this presentation
Results: There is a need to focus on women's health at primary care level not only at a secondary care level, including adopting life cycle approach. Also there is a need to use a creative way to deliver women health services such as hotlines, mobile campaigns, home visits, support groups and youth programs. NWHCC is an example of a public entity that is currently operating such services in all over the country
Conclusion: It is recommended that more studies should be conducted to explore the reasons behind some alarming number of cesarean section, infertility rate and family planning usage. Results will give suggested implications that is important for health policy makers, health care providers whose working and obstetric clinics. In general, for whom care about women in their different age groups
Keywords: Woman's health Life cycle approach

(12)

Baby Friendly Hospital Initiative: A Success story for Implementation of Steps to Successful Breastfeeding in Royal Medical Services.

**Soonya Fraihat, RN (Jordan)*

Objectives: The purpose of this presentation is to show the process of implementation of (Ten Steps of Baby-friendly Hospital initiative) project in Princess Haya Hospital as the first hospital from the Royal Medical Services and show the success story of implementation from 2018 until now
Methodology: Implementation of (Ten Steps of Baby-friendly Hospital initiative) developed by UNICEF and WHO in the maternal and newborn services in Princess Haya Hospital to achieve successful breastfeeding to promote optimal clinical care for mothers and their infant's The project was assessed as a Quality Recognition Program from HCAC (Health

Care Accreditation Council) and had the Platinum level (highest level) for two cycles

Results: Ten Steps of Baby-friendly Hospital initiative project is a global effort to implement practices that protect, promote, and support breastfeeding, according to the WHO website. It was launched in Jordan 2018. Five hospitals from all sectors were chosen for the implementation for this project. Princess Haya Hospital was chosen from RMS. The Ten Steps were implemented: Comply fully with International Code OF Marketing of breast-milk substitute. Have a written infant feeding policy. Establish ongoing monitoring system. Ensure that staff has sufficient knowledge and competencies. The other steps were key clinical practices started from: Discuss the importance of breastfeeding with pregnant women and their families. Facilitate immediate Skin-to- skin contact. Support mothers to initiate & maintain breastfeeding. Do not provide breastfed newborns any other than breast milk unless medically indicated. Enable mothers and their infants to remain together. Support mothers to initiate & maintain their infant's cues for feeding. Council mothers on the use and risks of bottles. Coordinate discharge plan for ongoing support and care. The implementation of these steps required many efforts and change of structures and process of the services applied to mothers and infants. Training was a key element in success of this project. The report of the last survey conducted showed fully implementation of 100% of all steps, deserved to be honored with the Platinum level for the second cycle.

Conclusion: The success of conducting this project in the first cycle of the first (Five) hospitals encourage other (Nine) hospitals from all sectors to implement this project. Another new (Three) military hospitals are now (Baby friendly hospitals). The strategic planner could implement this project in developing health policy in Jordan. The initiative has proven its significance in increasing the probability of exclusive breastfeeding for the first six months in infants life, all partners in Jordan health sector including: Ministry of health, Royal Medical Services, University hospitals and the private sector could generalize the project in their fields to improve the practices which encourage (Breast -Feeding) for its positive feedback on the long run. In the community further studies should by conducted to show the real impact on mothers and their children and the community.

Keywords: Baby Friendly Hospital Initiative Ten Steps of Baby-friendly Hospital initiative International Code OF Marketing of breast Platinum level

(13)
Global Future Preparedness for Pandemics.

**Howard Catton, RN (UK)*

The COVID-19 pandemic exposed shortcomings and frailties in the world's health and care systems that prevented many more people's lives from being saved. From the outset of the pandemic, the International Council of Nurses (ICN) kept tabs on how many nurses and other healthcare workers (HCWs) were dying from COVID-19. We now know from official figures from the World Health Organization that at least 180,000 HCWs perished, many of them nurses. There are vitally important lessons to learn before the next pandemic inevitably sweeps across the globe. Nurses must be involved in the planning and preparation for the next time, and to this end, ICN has contributed to the WHO's Intergovernmental Negotiating Body's thinking on its new international agreement to prevent and manage further pandemics, which is due to be presented to the World Health Assembly in 2024. ICN's message is that nurses and healthcare workers must be at the centre of the new instrument or convention, and that resulting plans should specifically emphasise support, protection and safety of nurses and healthcare workers.Spending on healthcare is not a cost, but a cast-iron investment that brings huge returns. Now is the time for the world to act in solidarity to support, protect and invest in health workers, recognising that good health is the bedrock of our global safety and security.

(14)
The role of the midwives in saving lives and achieving positive childbirth experience.

**Roa Al Taweli, RN (KSA)*

Strengthening the capacity of midwives to deliver high-quality maternal and newborn health services has been highlighted as a priority by global health organisations. The midwife has an important role in saving lives and achieving a positive childbirth experience. Therefore, midwives need to have skills and competencies in line with recommendations from the International Confederation of Midwives, to be part of a team of sufficient size and skill, and to work in an enabling environment.

(15)
Crises Management and Emergency Preparedness.

**Ibraheem Faouri, RN (Jordan)*

In the last three years' world confronted and struggles with CIVID-19 pandemic which showed challenges to respond at individual, organizational, national and international levels. Hospitals learns how they can prepare themselves for high performance in such situations and how can effectively prepare for pandemics or other crises. Emergency Preparedness aims to establish plan with a standing capacity to respond to a range of different situations that may affect the organization or the community by putting in place a broad set of preparedness measures. All hospitals are expected to have preparedness plan for any predicted crises. A crisis is a sudden event or set of circumstances that could significantly affect an organization's ability to carry out its business, and if not handled or if not handled in an appropriate and timely manner, a crisis may turn into a disaster or catastrophe. Crises management aims to restore the hospital work capacity, minimize losses and to learn from what happened.

(16)
Health Risk Management in Jordan.

**Haitham Dweiri, MD (Jordan)*

(17)
From The Rme Experience: How we Get Ready to the Emergency Situations.

**Nancy Alshorafa, RN (Jordan)*
Mutaz Odeh Alshofeen, RN.

Bachelor of Nursing, Jordan University.
Quality coordinator, Technical grade nursing specialist.
Objective from emergency preparedness in RMS: The main objective from this literature review is to develop a comprehensive plan at the level of the Royal Medical Services for emergency preparedness in all its forms. Evaluate Risk assessment: Before preparing the procedure, it is appropriate to assess the risks to estimate how likely an emergency event will occur and, if it does, how severe and damaging its consequences are. The emergency action taken should provide a response that is appropriate and proportionate to the situation. Advance preparedness to prevent and prepare for disasters. Preparedness focuses on preparing human resources for immediate handling, preparing equipment and procedures for use in the event

of a disaster, warning planning, and training in evacuation plans. Continuity of emergency services. The planning process for the continuity of routine emergency services and does not stop receiving patients.

Methodology: A literature review of 3 studies, and from WHO (regional officer of Europe), Google scholar databases in a set time frame of 2021-2022 including key wards emergency preparedness. Data bases of royal medical services yearly spread on www.jrms.jaf.mil.jo

Results: To achieve the best results of emergency preparedness for a rapid, effective response to a critical event The Royal Medical Services worked on all of the following this checklist that aims to support hospital managers and emergency planners in achieving the following: (1). Human resources :(Employment, Availability, Training, Calling the health staff). (2). Communication :(Clear, accurate and timely communication is necessary to ensure informed decision-making, effective collaboration and cooperation, and public awareness and trust). (3). Safety and security: (Developed safety and security procedures are essential for the maintenance of hospital functions and for incident response operations during a disaster). (4). Supply management and operations management: (Continuity of the hospital supply and delivery chain is often an underestimated challenge during a disaster, requiring attentive contingency planning and response). (5). leadership and coordination :(A well-functioning command-and-control system is essential for effective hospital emergency management operations). (6). Training program :(Training health teams on preparedness and how to deal with emergency situations is one of the most important ways to prepare for emergencies. Courses for emergency team. TRIAGE Course • ACLS • ATCN nursing • ATLS Physicians • Air evacuation training • Infection control to deal with epidemic and pandemic. (7). Development and update :(The Trauma and Accident Team, which was formed from a specialist for all types of surgical procedures, was established to deal with injuries and emergency accidents. A major emergency operating room has been established in Al-Hussein Medical City Emergency. Equipped with all surgical equipment to perform major emergency surgeries). (8). Ambulance services and air evacuation: In the Royal Medical Services in every hospital and medical center there is a 24-hour ambulance service. The main ambulance unit in the

Conclusion: The Royal Medical Services has adopted an active role in which the administration can achieve efficiency and emergency preparedness with the highest goals and the lowest losses, the RMS adopted ten components to achieve emergency preparedness, all departments in the RMS cooperate and participate in the provision of logistical assistance in preparedness and effective management of emergencies.

Keywords: — RMS: Royal Medical Services. — Emergency preparedness

(18)

Roles and Responsibilities for the National Emergency Medical Services Educational Center (NEMSEC).

**Ahmad Sharayah, RN (Jordan)*
'Ahmad Aldhoun

Objectives: This study aimed to investigate the Roles and Responsibilities of the National Emergency Medical Services Educational Center (NEMSEC) in Jordan and Worldwide.
Methodology: Descriptive research
Results: National Emergency Medical Services Educational Center (NEMSEC) Achieved the Goal.
Conclusion: In conclusion, National Emergency Medical Services Educational Center has Excellence and leadership nationally, regionally, and globally in providing high-quality education and training programs in emergency medical services.
Keywords: JRMS: Jordan Royal Medical Services NEMSEC: National Emergency Medical Services Educational Center PHTLS: Prehospital Trauma Life Support

(19)

The Effectiveness of Cognitive-Reminiscence Therapy on Depressive Symptoms, Negative Automatic Thoughts, and Self-Transcendence Among People with Major Depressive Disorders: A Feasibility Study.

**Mutasem Al-Omari, RN (Jordan)*
'Ahmad Mousa Alswaeer; Yazan Mohammad Alshrrab; Duha abdul Aziz hamed alqaisi; Osama Ibarhim hussni abd alqutami

Objectives: (1) test the feasibility and acceptability of cognitive reminiscence therapy among patients with major depressive disorder and (2) test the effectiveness of cognitive reminiscence therapy on depressive symptoms, negative automatic thoughts, and self-transcendence among patients with major depressive disorder.
Methodology: A convergent parallel design was employed. In the quantitative (quasi-experimental one-group pre-post-test) and qualitative (focus groups) approaches, a convenience sampling method was used to recruit 36 participants from two Jordanian psychiatric institutions. A total of 31 participants were included in the analysis, divided into six groups, with 5–6 participants in each group. Cognitive-reminiscence therapy included eight supported sessions of up to 2 hours each, , delivered over 4 weeks.

Results: The recruitment, adherence and retention, and attrition rates were 80%, 86.1%, and 13.9%, respectively. No serious adverse events were reported. The results also show a significant reduction in the mean of depressive symptoms ($p < 0.001$), negative automatic thoughts ($p < 0.001$), and a significant increase in the self-transcendence mean ($p < 0.001$) post-intervention. Four themes emerged from qualitative data, showing that cognitive reminiscence therapy is generally well accepted.
Conclusion: The study's results suggest that cognitive reminiscence therapy is feasible and acceptable among patients with major depressive disorder in Jordan. Cognitive reminiscence therapy is a promising nursing psychosocial therapy and nursing intervention to reduce depressive symptoms and negative automatic thoughts and increase self-transcendence for those patients.
Keywords: Cognitive-reminiscence therapy, Major depressive disorders, Reminiscence therapy, Self-transcendence, Negative automatic thoughts, Feasibility study

(20)

The Experience of Family Support among Patients Newly Diagnosed with Cancer in Jordan.

**Ruqayya Zeilani, RN(Jordan)*
Maysoon S. Abdalrahim; Randa M. Albusoul

Objectives: To describe the experiences of family support from the perspectives of patients newly diagnosed with cancer.
Methodology: A descriptive qualitative phenomenological design was undertaken, including in-depth individual interviews with 13 newly diagnosed cancer patients from two hospitals in Jordan.
Results: 3 themes emerged: 'being there,' 'family reunion & connectedness,' & 'gratified with family support.' 1) the compassion of family together, support by encouragement, and using religious rituals and traditional remedies. 2) cancer brings family reunions & strengthens relationships between spouses. 3) The patients expressed gratitude that their families were compassionate, active listeners, and willing to help, which helped them make decisions related to cancer treatment and overcome their fears
Conclusion: Findings show the strength and priority of family support in Jordanian Arabic culture during an initial cancer diagnosis. In cultures where family members take the burden of care, religion and cultural practices play a vital role in directing patient care. Understanding the experiences of family support from the patients' view could help nurses provide comprehensive and culturally sensitive care and require adopting a family-centered approach in preparing care plans for patients.
Keywords: Family support, Jordanian culture, patients' experiences

(21)

Quality of life of Jordanian menopausal working and retired women and its associated factors: a cross-sectional study.

**Enas Assaf, RN (Jordan)*

prof. Dr. Muntaha Gharaibeh, Dr. Sawsan Abuhammad; Prof Dr.Muhand Aburuz

Objectives: Life expectancy of Jordanian women has increased, indicating that the number of women entering menopausal age, during the prime of their working life, will also increase. Therefore, assessments of the quality of life (QoL) of working and retired women and factors associated with overall wellbeing, are essential for the provision of quality services and care.

Methodology: A cross-sectional study was conducted with 200 Jordanian women between the ages of 45 to 60 years old. The Utian QOL tool was used to assess the quality of life among menopausal women. Multiple regressions were used to determine predictors for QoL for the whole sample and for each group of working and retired women.

Results: The study shows that the total QoL for women was 77.5 ±14.4, with a significant difference (p=.023) in total QoL and the occupational domain (p=.003) between working and retired women. Employed women with fewer chronic diseases and using frequent preventive measures had a higher QoL compared to others.

Conclusion: Working itself might be an important indicator for better a quality of life among menopausal women. Better working conditions and more attention from the health care providers for the menopausal changes and the preventive measures could enhance women's perceived QoL in addition to increasing their productivity

Keywords: menopausal women, QoL, Jordanian

(22)

The knowledge, Attitudes, and Barriers of Breastfeeding Practices in Southern Jordan: A Cross-Sectional Study.

**Sajeda Al-Mawajdeh, RN (Jordan)*

Professor Hala Mahmoud Obeidat; RN Belal Ali Al-Mawajdeh; Dr Kholoud Ghalib Al-Matar.

Objectives: To explore the knowledge, attitudes, and barriers that affect breastfeeding practice among mothers from four governorates in southern Jordan.

Methodology: A cross-sectional descriptive study was conducted in four governorates in Southern Jordan. A simple random sampling was used in this study to select five governmental comprehensive health centers out of 23 Ministry of Health-affiliated centers in South Jordan (Al-Karak, Al-Tafila, Maan, and Al-Aqaba governorates). Convenience sampling was used to recruit mothers who have an infant aged two weeks to six months.

Results: 381 mothers completed questionnaires. 23.95% exclusively breastfed their infant, (57.63%) used the mixed method, and only (18.42%) used artificial feeding. (51.8%) have good knowledge levels about breastfeeding. Also, mothers have a neutral attitude toward breastfeeding. Mother's work and the lack of a nursery at work, congenital infant abnormalities, breast problems such as sores, and embarrassment from feeding in public were all identified as significant barriers to exclusive breastfeeding.
Conclusion: Mixed feeding was the most common way of feeding. Mothers showed a neutral attitude and good knowledge about breastfeeding benefits. Also, breastfeeding practice is affected by various socio-cultural and environmental factors, which can impact a mother's ability to continue breastfeeding her infant. This study helps nurses, midwives, and healthcare providers to identify the barriers; accordingly, provide prenatal and early postpartum education to increase mothers' attitudes and knowledge.
Keywords: Breastfeeding, Exclusive Breastfeeding, Breastfeeding Initiation, Barriers, Knowledge, Attitude, Jordanian Mother

(23)
Public Awareness about Premature Neonates and Health Outcomes among Jordanian People: A National Descriptive Study.

**Buthayna Al-Nasarat, RN (Jordan)*

Objectives: To assess public level of awareness about premature neonates in Jordan. Also, to examine the association between sociodemographic factors and people's awareness of premature birth and premature infant's health problems and development.
Methodology: A national descriptive-correlational cross-sectional design was used for a convenience sample. The online questionnaire was administered via SurveyMonkey and posted on social media platforms.
Results: 3,048 Jordanians completed the questionnaires their age was from 18 to 77 years (mean= 31.39, SD= 8.05); majority of them were married and females. Most (66-77%) of respondents defined correctly what does prematurity mean. The average correct answers regarding knowledge of prematurity seriousness, causes and complication were 71%, 74%, and 60% respectively. Findings showed that the awareness level is significantly higher among people who have high family income, well-educated and employment at medical fields.
Conclusion: Poverty and poor education were found to be associated with low level of awareness of premature birth and premature infants' health problems and development among public in Jordan. Health promotion programs are needed to enhance public awareness about this serious health problem which mainly can be done through maternal and child health centers.

Keywords: “premature infants”, “developmental outcomes of premature infants”, “awareness”, “knowledge”.

(24)

A Qualitative Study of the Comfort Care Experience from the Perceptions of Health Care Providers Providing Care for Terminally Ill Infants in Neonatal Intensive Care Unit at the End of Life.

**Aamaal AL Qatameen,RN (Jordan)*
Professor Hala mahmoud Obaidat

Objectives: The purpose of this study is to explore and describe the comfort care experiences of health care providers in the NICU at the end of life.
Methodology: The study used phenomenological approach to collect data from 20 health care providers (nurses and physicians) who are selected purposively from the NICUs settings in three Jordanian military hospitals. The researcher collected data utilizing semi structured interviews. The data was recorded and analyzed thematically.
Results: Five distinct themes captured the comfort care experiences of health care providers: (1) Reality vs. Hope, (2) Beliefs and Emotions, (3) Provision of comfort care, (4) Passion of Attachment, and (5) Humanitarian Terms at the End of Life. Anew finding of this study reflects the use of holy Quran to provide comfort to infants at the end of life.
Conclusion: The findings of the study indicated that the experience of the health care providers was very stressful and there was a lack of prior education on comfort care, poor communication between nurses and doctors, and a lack of comfort care policies to provide quality comfort care. This study supports the need for end of life education and the need for adjustment in the staffing to meet the complex needs of dying infants in the NICU.
Keywords: Comfort Care Experiences, End of Life, Neonatal Intensive Care Unit, Health Care Providers, and Terminally Ill Infants

(25)

The Impact of an Educational Intervention on Nurses’ Knowledge and Nursing Care Practices Regarding Respiratory Distress Syndrome in Premature Neonates.

**Lubna Tarawneh,RN (Jordan)*

Objectives: The purpose of this study is to evaluate the effectiveness of an educational intervention on nurses’ knowledge and nursing care practice regarding respiratory distress syndrome in premature neonates

Methodology: Quasi-experimental, repeated measures one group pretest-posttest design was used with a sample of 48 participants recruited from three selected hospitals in Irbid city. The data was collected in three phases. First, a pretest questionnaire to assess nurses' knowledge was completed by all participants and observational checklist to assess nursing care practices was completed by the researcher then followed by two hours' educational session. Second, the data was collected immediately after educational intervention. Third, the data was collected again after one month of the educational intervention. The same instruments were used in all phases. The collected data was analyzed by descriptive and inferential statistics.
Results: There is a significant improvement in mean difference of nurses' knowledge $P < 0.001$ between pre, post, and after four weeks post intervention, mean difference was 49.48, 81.7, and 77.83 at pre-intervention, post intervention, and after 4 weeks post intervention respectively. Nursing care practices also showed significant difference in mean ($P < 0.001$) from 31.9 at pre-intervention to 58.3 at post intervention, and 55.5 after 4 weeks post intervention.
Conclusion: More than fifty percentage of study participants demonstrated poor level of knowledge and more than two third demonstrated poor level of practice regarding RDS before educational intervention. The educational intervention improves the level of knowledge and nursing care practice significantly to good level. Periodic teaching and training programs based on updated evidences with different teaching approaches are strongly advised. This study provides deep insight about Jordanian neonatal nurses' knowledge and their nursing care practices for neonates with RDS. Moreover, study provides evidence on the impact of educational interventions on improving the level of nurses' knowledge and their nursing care practices regarding RDS.
Keywords: RDS, Nurses, Knowledge, practice, education, NICU

(26)

Predictors of Cardiac Cachexia among Jordanian Chronic Heart Failure Patients.

**Ahmad Al Omari, RN (Jordan)*
Issa M. Hweidi

Objectives: The aim of this study was to identify the most significant predictors of cardiac cachexia in Jordanian chronic heart failure patients.
Methodology: A cross-sectional design was employed in the study. A convenient sample of 300 chronic heart failure patients was recruited from accessible chronic heart failure patients who regularly visit the cardiac care clinics at two different selected hospitals that represent two different major health sectors in Jordan. A self-developed instrument was used to collect the data for the purpose of this study.

Results: Stepwise regression analysis was conducted to determine whether the interaction of different sociodemographic variables of chronic heart failure patients contributed significantly to the total cardiac cachexia score. The most significant predictors of cardiac cachexia are: age, New York Heart Association (NYHA) classification of heart failure, hospital type, chronic diseases that the participating chronic heart failure patients suffer from, and level of education. These variables explained 65.8% of the variance in the total cachexia score.
Conclusion: Cardiac cachexia has not been widely measured and studied yet world widely. The findings of this study can be used as baseline data about the predictors of cardiac cachexia and the roles of the sociodemographic characteristics among Jordanian chronic heart failure patients since this study is the first of its kind conducted to examine cardiac cachexia at the national and even regional level. In addition, this study can be useful for determining effective therapeutic modalities that can be employed on behalf of those patients among the health care team; particularly nurses.
Keywords: Cardiac cachexia, chronic heart failure (CHF), complication, Jordan

(27)

The Effect of Cardiac Rehabilitation Program on Health Related Quality of Life among Coronary Artery Bypass Graft Patients.

**Mohammad Al Rahahleh,RN (Jordan)*
Amal Nasser Abdullah Obeidat; Huthaifa Mohammad Salman Alawasa; Rami Abed AlFattah Mahmoud Yacoub; Hanady Abdallah Ibrahim Alshahwan

Objectives: Background: Cardiac rehabilitation program (CRP) has been reported to improve health related quality of life (HRQOL) of patients after coronary artery bypass graft surgery (CABG). Aim: To investigate the effect of the CRP on the HRQOL and its domains of CABG patients.
Methodology: Quasi experimental non-equivalent control group pretest-post-test design. The intervention group (n = 20) complete CRP for three months after discharge, while control group (n = 20) had the usual routine. Nottingham Health Profile questionnaire which measures health related quality of life was used for HRQOL assessment. The population being studied was all Jordanian CABG patients who underwent surgery at Queen Alia Heart Institute (QAHI). The sample size was 40 patients The study was conducted in QAHI outpatient clinic which is a part of King Hussein Medical City (KHMC)
Results: An independent t test showed a significant improvement in the HRQOL and its domains for the interventional group after CRP (M = 2.25, SD = 1.74) when compared with the control group (M = 19.9, SD = 3.11), (P = 0.001).
Conclusion: Health related quality of life and its domains was significantly improved in intervention group at 3 months after surgery
Keywords: Cardiac Rehabilitation Program, Health Related Quality of Life, Coronary Artery Bypass Graft, Quasi- Experimental

(28)

The Effect of Nurse-Guided Use of Incentive Spirometer on Postoperative Pulmonary Complications among Cardiac Surgery Patients.

**Amer Maaitah , RN (Jordan)*
Saja Ahmad Alwekhyan,RN (Jordan)

Objectives: To determine the effect of nurses-guided use IS on postoperative oxygenation and pneumonia development among (CABG) surgery patients.
Methodology: Participants: Patients who planned for elective coronary artery bypass graft (CABG) surgery at Queen Alia Heart Institute in Jordan, male and female adult patients above 18 years. Patients who had a previous history of lung disease as asthma, chronic obstructive pulmonary disease, and pulmonary hypertension or prolonged postoperative intubation more than 48 hours were excluded. Interventions: Patients in the control group received routine postoperative respiratory physiotherapy including intermittent positive pressure breathing (IPPB), coughing exercise, percussion and incentive spirometer (IS) in the 4th post-extubation hour. Patients in the intervention group, in addition to the routine postoperative respiratory physiotherapy, their IS usage was guided by nurses. Outcome: The primary outcomes were the number and duration of hypoxic events (SpO2 <92% for more than 10 seconds) for 24 hours, the incidence of pneumonia, and pulmonary function variables (FEV1, FVC, FEV1/FVC). Secondary outcomes were the intensive care unit and hospital length of stay. Randomization: The participants who had met the eligibility criteria and accepted to participate in the study were randomized to either the control or intervention group using the Urn adaptive randomization method. Blinding: participants and those assessing the outcomes were not blinded to group assignment
Results: Number randomized: 89 patients were randomized into two groups; 46 in the intervention group, and 43 in the control. Recruitment: 5 patients were rated as non-compliant, 3 patients had a prolonged period of endotracheal intubation for more than 48 hours, one patient had missed postoperative PFT, and one patient died in the first 24 hours after surgery. Number analyzed: 39 patients from each group included in the analysis. Outcome: Patients in the intervention group had experienced a lower mean number of hypoxic events with a shorter duration (9.35 ± 7.64) vs. (30.94 ± 26.17) in the control group ($P < 0.05$). Patients in the control group had a greater decrease in the postoperative mean FEV1 (1.82 ± 0.72) vs. (2.16 ±0.72) in the intervention group (P= .04). The mean length of stay in hospital and intensive care unit (8.61 ± 3.73), (1.76 ± .80) respectively were shorter among the intervention group vs. (12.00 ±7.72), (12.00 ±7.72) among the control group. No significant differences were detected in FVC, FEV1/FVC, and postoperative pneumonia occurrence. Harms: None
Conclusion: The nurse-guided use of IS is recommended to reduce the risk of pulmonary

complications and hospital length of stay after CABG surgery in hospitals with non-constrained resources.

Keywords: cardiac surgery, hypoxemia, nurse-guided use of incentive spirometer, pneumonia, postoperative pulmonary complications.

(29)

Effectiveness of the educational intervention program in increasing nurses' knowledge of central venous line patient care.

**Nuha Alqatawneh, RN (Jordan)*
Alaa Al-Sayaydeh, RN; Rana Aljafreeh, RN; Dima Al-Nwaiseh, RN; Sanaa Almawadyah, RN

Objectives: To measure the impact of the educational intervention program in increasing in intensive care unit (ICU) nurses' knowledge of The central venous line (CVL) patients' care.
Methodology: A pre-experimental study (one-group pretest-posttest design) using a random sample of 50 ICU nurses from King Hussein Medical Center in Amman was used. After all institutional approvals, a random sample of registered Jordanian nurses was randomly selected in a simple random manner - a lottery. After signing the informed consent, all participants filled out a self-administered, structured questionnaire to collect pre- intervention data. Then, a 2-week educational intervention program was implemented that included definition of the CVL, risks and benefits of the CVL, methods of reducing and managing catheter-related infections, and CVL patient care. At the end of the intervention programme, all participants taken post-intervention test with the same research tools that were applied in the pre-intervention phase. The nurses' knowledge was assessed by recording their answers, the test included 26 questions and each correct question carried one degree with a total degree of 26. The total degree of knowledge was converted to percentages and the general level of knowledge was classified based on the following percentages: if the degree < 50%, low knowledge level; 50% - 75%, medium knowledge level; > 75%, high knowledge level. Data was analyzed by applying the Paired "t" test at a $P \leq 0.05$.
Results: The mean total degree of knowledge in the pre-intervention test was (15.65 ± 3.1). After the educational intervention program, the mean total degree of knowledge in the post-intervention test increased to (18.9 ± 6.2). There were significant differences in the total degree of knowledge between the pre-and post-intervention tests (P=0.003). According to the classification of the general level of knowledge, 17.3% of the participants had a low knowledge level, and 82.7% medium knowledge level in the pre-intervention test, while 7.5% had a low knowledge level, 45% medium knowledge level, and, 47.5% high knowledge level in the post-intervention test, (P=0.003).

Conclusion: The educational intervention program led to a significant development in the level of ICU nurses' knowledge of CVL patients' care. Where it was found that the total degree of general knowledge between the pre-and post-intervention tests was statistically significant.
Keywords: central venous line, educational intervention program, nurses' knowledge, patients' care

(30)

Challenges in the Diagnosis and Management of Cushing Syndrome.

**Prof. Ashley Grossman (UK)*

Cushing's syndrome (CS) is a rare condition once one has excluded exogenous causes, but one which has exercised endocrinologists for generations since the first description by Harvey Cushing around 100 years ago. The initial challenge is to diagnose the presence of the syndrome, and differentiate it from the many patients with hypertension, diabetes, simple obesity, depression, and other common disorders. In CS, the increased secretion of principally glucocorticoids produces the typical changes in carbohydrate metabolism, fat distribution, and protein catabolism: it is this latter phenomenon which is responsible for the thin skin, myopathy and osteoporosis which are also the most specific clinical features to distinguish true CS. The diagnostic tests rely on the autonomous nature of cortisol secretion, producing a loss of the normal circadian rhymicity and total or partial failure of steroidal feedback. The diagnostic tests rely on these features, with generally an increase in total 24h urinary cortisol (UFC), a failure of response to dexamethasone, and an elevated late night/midnight serum or salivary cortisol. However, while these may all be elevated in the most clear-cut cases, increasingly we see patients in whom only two or occasionally one of these tests is clearly abnormal, such that the diagnosis is probabilistic and reliant on the constellation of clinical and biochemical changes.

In terms of the differential diagnosis as to the cause, this is principally divided into ACTH-dependent and independent causes. For patients with ACTH-dependence, 'Cushing's disease', pituitary-dependent CS, comprises the great majority of cases, predominates in women (except for a male predominance in pre-pubertal children), and is often associated with partial responsiveness to dexamethasone suppression, a response to CRH and/or desmopressin, and often (but not always) a microadenoma on MRI scanning of the pituitary. Ectopic sources are due to neuroendocrine tumours, often bronchial, but patients may need bilateral petrosal sinus sampling to confirm a lack of a pituitary source as a small tumour can be very difficult to identify. CT scanning, best performed in association with a 68Ga-dotatate PET scan, is

most useful in confirming an ectopic source. ACTH-independent causes are mostly adrenal adenomas or carcinomas, rarely micronodular or macronodular hyperplasia.

Treatment of CD is transsphenoidal surgery in the first instance, but external beam radiotherapy or radiosurgery, or bilateral adrenalectomy, may not infrequently be necessary. Medical therapy with adrenostatic agents such as metyrapone, osilodrostat or ketoconazole, are useful for the treatment of severe CS or while awaiting the effects of radiotherapy; the directly-acting agents cabergoline or pasireotide are effective in only a minority of cases, especially those with mild disease, while mifepristone, a glucocorticoid-receptor blocker, may be very occasionally be helpful. Etomidate as a direct adrenolytic agent which is active parenterally can be extremely useful in the acute situation. However, mortality rates from CS are only likely to be normalised when first-line surgery is curative.

(31)
Challenges in Management of mild primary hyperparathyroidism

**Dr Abdallah Al-Eyadeh (Jordan)*

Primary hyperparathyroidism is an increasingly prevalent disorder and is considered the most common cause of hypercalcemia in an outpatient setting. The estimated prevalence is 0.1-1% in post-menopausal women and its three times greater in women than men The first line treatment strategy is surgical excision of the diseased parathyroid gland. Disastrous consequences affecting bones, kidneys and other organs may occur if patients with primary hyperparathyroidism left untreated. However, there are mild forms of hyperparathyroidism in which debates present regarding best modality of treatment. I will discuss clinical presentations of mild forms of primary hyperparathyroidism, diagnostic features and challenges regarding management according to recent guidelines.

(32)
Overview of Phaeochromocytoma and Paraganglioma.

**Prof. Ashley Grossman (UK)*

Phaeochromocytomas and extra-adrenal phaeochromocytomas, or paragangliomas, are relatively uncommon tumours arising from neural crest cells in the adrenal medulla or sympathetic and parasympathetic systems respectively. Phaeochromocytomas classically present with uncontrolled, resistant or paroxysmal hypertension, often with typical attacks of sweating, headaches or palpitations, although they are being increasing diagnosed as ‘adrenal

incidentalomas' where they represent round 4% of such tumours. Paragangliomas occur wherever there is sympathetic or parasympathetic nervous tissues, including intra-abdominal sites such as the para-aortic organ of Zuckerkandl, the bladder, and in the neck along the great arteries and veins where they are now best referred to as 'head-and-neck paragangliomas' (HNPGL). However, it used to be considered that only 10% have a genetic basis, but now the figure in unselected series is around 30% of phaeochromocytomas being associated germline mutations, with the figure approaching 50% for paragangliomas. Around 10% of apparently sporadic non-syndromic phaeochromocytomas are now known to be associated with germline gene disorders.

Patients with phaeochromocytomas are best assessed with plasma or urinary metanephrines, then imaged with CT or MRI. Radionuclides such 68Ga-dotatate PET scanning can usefully help specify suspect adrenal masses, and identify metastases. Such secretory tumours should be blocked with an a-adrenoceptor antagonists such as phenoxybenzamine of doxazosin, and then my also need subsequent b-adrenoceptor blockade (always after, never before). Such tumours can usually be removed laparoscopically by an experienced surgeon and anaesthetist 2-3 weeks later. Larger tumours, >5cm in diameter, have a greater propensity to malignancy, but histopathological features are not always helpful in deciding on metastatic potential. Paragangliomas are less often secretory, and should also be considered for surgical removal, except for HNPGL which need individual assessment as surgery may cause severe neurological damage; radiotherapy or embolisation can also be considered.

(33)

Evaluation and Management of Thyroid Nodules with Indeterminate Cytology.

**Ass.Prof. Hussam Al Hawari (Jordan)*

The management approach of patients with thyroid nodule FNA with cytologic results showing follicular lesion of undetermined significance, atypia of undetermined significance or follicular neoplasm varies based on different institutional practices and availability of molecular testing. Will discuss this and also when thyroid scintigraphy is indicated in these cases.

(34)

Teamwork in Action: Multidisciplinary Management of Diabetes.

Dr.Omar Mustafa (UK)

(35)

Epidemiological Profile and Risk Factors of Retinopathy in Moroccan Type 2 Diabetics.

Prof. Ahmad Guerboub (Morocco)

Objective: To evaluate the ophthalmic impact, compare characteristics, and identify risk factors related to diabetic retinopathy (DR) in patients seen for the first time in consultation.
Patients and methods: This descriptive cross-sectional study was conducted during the period from June to December 2018, of a representative sample of 156 diabetics recruited in the department of endocrinology diabetology and metabolic diseases of the Military Hospital of Instruction Mohamed V of Rabat.
Results: Among the 156 patients included in our study, 86 (55.1%) had a normal eye fundus, while 70 (44.8%) had DR. Glycemic control, age of diabetes, as well as diabetic nephropathy and abdominal obesity were risk factors ($OR>1$, $p<0.05$), while physical activity and development of lean body mass are protective factors ($OR<1$, $p>0.05$) of diabetic retinopathy.
Conclusion: Our study reflects the epidemiological profile of the Moroccan population, where the prevalence of DR remains high, with poor control of risk factors.
Key words: Retinopathy, diabetes, risk factors, maculopathie.

(36)

One Hormone, A Double-Edged Sword

Ass. Prof. Nazik Abdeldafia (Sudan)

This is a report of chronological history of a complicated lady we first saw in the diabetes clinic.
She is a case of Occult Cushing's syndrome in a patient with T2DM with a post operative normalization of cortisol and proper healing of the wound, however she leads an unexpectly complicated course progressively.
The conclusion is to draw the attention for the importance of looking for atypical cases in the diabetes clinic and to acknowledge the imperative role of the team work.

(37)
AKI causing CKD: Why, How and When?

**Prof. Claire Sharpe (UK)*

Acute Kidney Injury (AKI) is defined as a sudden deterioration in renal function in response to an injury or insult. In most cases, particularly in patients with previously normal renal function, healing and repair mechanisms result in a normalisation of kidney function within 3 months. For this reason, recovering AKI was thought to be self-limiting with no long-term sequelae and this dogma persisted until this century. Recent studies however have reversed this long-held belief and it is now recognised that episodes of AKI can predispose patients to new-onset CKD, progression of pre-existing CKD or rapid acceleration to end-stage kidney disease.
In this talk I will describe which patients are at most risk of developing CKD following AKI, some of the physiological and metabolic mechanisms that underpin this transition and potential opportunities for future therapeutic intervention.

(38)
Lupus and Vasculitis

**Prof. Mumtaz Patel (UK)*

(39)
Membranous Glumerulonephritis, an Update.

**Prof. Mohammad Ghnaimat (Jordan)*

(40)
IGA Nephropathy: An Update

**Dr. Ayham Haddad (Jordan)*

(41)
Managing The Patient with Sickle Cell Disease and Kidney Complications

**Prof. Claire Sharpe (UK)*
As the life expectancy of patients with sickle cell disease (SCD) continues to improve, the spectrum of complications suffered by these patients has shifted towards chronic disease.

Sickle cell nephropathy (SCN) is a well-described and common complication of the condition, particularly in older patients. Early epidemiological studies described patients with end-stage renal failure and SCD disease to be in their early twenties with a life expectancy of less than 4 years, whereas more recent observational data has suggested that it is becoming increasingly diagnosed in patients over the age of 60. It is therefore important to recognise the early signs of SCN, and other factors which may influence the course of chronic kidney disease, so that we may identify patients who are at risk of developing renal failure, and intervene early.
This talk will cover the pathophysiology of sickle cell nephropathy, how to recognise risk factors for developing renal complications, what treatment options are available to prevent progression and how best to manage patients with end-stage kidney disease with dialysis and transplantation. It will be illustrated with examples from our own patient population.

(42)
Diagnostic Challenges in LEMS and Role of Neurophysiology Investigations.

**Prof. Thabit Sabboubeh (UK)*

Lambert-Eaton Myasthenic syndrome (LEMS) is a rare immune-mediated disorder of neuromuscular transmission characterized by proximal muscle weakness, autonomic symptoms and depressed tendon reflexes. About 50-60% of cases are associated with malignancy (paraneoplastic), most commonly small-cell lung cancer, whereas the remaining cases are found in younger adults with a higher likelihood of coexisting autoimmune disease. The early recognition of LEMS is crucial for improving clinical outcomes but remains a major challenge.

(43)
Trigeminal Autonomic Neuralgia.

**Dr. Marina Hadidi (Jordan)*

(44)
Roche Symposium: Can we Shift MS Curve by Optimizing Early Treatment?

**Dr. Martin Duddy (UK)*

This lecture will explore the early signs of disease progression in Multiple Sclerosis (MS), examine the current evidence for early high-efficacy treatment paradigms and evaluate the

long-term safety and adherence data of high-efficacy treatments in MS.
In addition to highlight the benefits and risks of long-term treatment with Ocrelizumab as an early treatment therapy was examined in a treatment-naive, early RMS subpopulation. Results for disease activity and disability progression are reported over 8 years of treatment in the open-label extension.
Germline mutations of SDHx genes are not uncommon, and SDH-B in particular has been associated with a c.30% metastatic potential, and SDH-D with HNPGLs. Patients with Von Hippel-Lindau disease and MEN2 more often have bilateral phaeochromocytomas, but these are usually benign. Other germline gene mutations are seen, and every patient should have panel of genes tested in order to optimise personal surveillance and family screening.

(45)
Neurophysiological Assessment of Coma.

**Prof. Thabit Sabboubeh (UK)*

EEG and Evoked potentials have been long used to evaluate comatose patients.
Different EEG patterns have prognostic significance and can reveal underlying treatable seizure activity. Nevertheless, Somatosensory Evoked potentials performed at early stage of post anoxic coma can add important information about the clinical outcome.

(46)
Challenging Cases in Neurology.

**Dr. Abdelrahim Dwweiri (Jordan)*

(47)
Novartis Symosium: "Escalation Strategy" vs "Early Intense Therapy".

Prof. Ralf Gold

(48)
Otosclerosis and Dysplasias of the Temporal Bone.

**Prof. Osamu Sakai (USA)*

Numerous bone diseases and dysplasias may affect the temporal bone, resulting in auditory and/or vestibular dysfunction. Otosclerosis is a bone disorder that results in abnormal bone remodeling with areas of demineralization and dense bone replacement adjacent to the

oval window (fenestral otosclerosis) and/or more extensive involvement of the otic capsule (retrofenestral/cochlear otosclerosis). The diagnosis may be easily made clinically; progressive conductive hearing loss and normal tympanic membrane, without middle ear inflammation. However, imaging plays an important role in confirming the clinical assumption of otosclerosis and excluding other causes of hearing loss that may mimic otosclerosis clinically. Additionally, imaging provides important information to pal the treatment and predict the outcome. Otosclerosis only involves the temporal bone, whereas other dysplasias may affect other areas of the body, including fibrous dysplasia, Paget disease, osteogenesis imperfecta, and osteopetrosis. Depending on the affected region, patients may present with conductive, sensorineural, or mixed hearing loss or neuropathies from cranial nerve compression, which can significantly impact the quality of life. High-resolution CT is sensitive to detecting subtle osseous changes, making it the initial imaging modality of choice. In contrast, MR imaging is useful to assess the membranous labyrinth and bone marrow to evaluate vascularity or activity of the disease and for potential cranial nerve involvement. Through this lecture, the imaging features of otosclerosis and its different manifestations and various osseous dysplasias that may affect the temporal bone will be reviewed, and the differentiating features that distinguish these conditions from each other will be discussed.

(49)

Vertigo and Dizziness: Peripheral Vestibulopathy Advanced Imaging

**Dr. Qamar Mala'beh (Jordan)*

Vertigo is a symptom, rather than a condition itself, reflects a wide range of conditions; It's the false sensation of self or surrounding environment movement, may or may not be accompanied by hearing loss, tinnitus based on underlying pathology.

Vertigo can be caused by central (cerebellar or brainstem diseases), or peripheral pathologies (inner ear pathologies), cervical, or psychosomatic disorders. The diagnostic pathway in a patient with vertigo starts with an accurate evaluation of medical history and neuro-otological examination followed by imaging. It is not uncommon that most of the imaging would be normal, in addition, the imaging findings are often subtle, in case of disruption of the clinical diagnostic pathway and loss of communication between otoneurologist and neuroradiologist, along with lack of clear imaging protocols and guideline, this would result in underdiagnoses of causes of vertigo on imaging that can lead to long standing suffering from vertigo.

Imaging techniques have a great value in diagnosing central causes of vertigo (brain tumors, strokes, Multiple Sclerosis), on contrary peripheral causes are poorly investigated radiologically; in this presentation we will emphasis on the differential diagnosis of peripheral Vestibulopathy with more elaboration of specific advanced imaging features in third window

syndrome, Meniere's disease, labyrinthitis, vascular loop (vestibular paroxysmia), vestibular neuritis.

Third window syndrome is a set of auditory and vestibular symptoms caused by a pathological third window in the bony labyrinth of the inner ear, with Superior Semicircular Canal Dehiscence being the most common cause, we will present other less common types seen in our patients using high resolution 3D Temporal CT with standard coronal, axial, sagittal cuts along with special Stenver, and Poschl views.

In the RMS we also have a new experience in improving the diagnosis of Meniere's disease, by using the cochlear hydrops protocol MRI, in which double dose IV contrast is given to the patient, then Three-dimensional fluid attenuated inversion recovery (3D-FLAIR) magnetic resonance imaging (MRI) by 3 T MRI scanner is obtained four hours later, can increase the diagnostic value in Meniere's disease in the acute stage.

Other imaging protocols like Brain MRI with and without contrast, CPA MRI with contrast, 3D CISS protocol, are used frequently in our center to diagnose peripheral Vestibulopathy like labyrinthitis, vascular loop (vestibular paroxysmia), vestibular neuritis.

(50)

Imaging of Orbit and Sinus Inflammatory Disease.

**Prof. Nada Nakhla (UK)*

(51)

Endometriosis, Much More than a Chocolate Cyst.

**Dr. Mahasen Al-Najjar (Jordan)*

Endometriosis is a common gynecologic disorder characterized by the presence of ectopic endometrial tissue outside the endometrial cavity. Magnetic Resonance Imaging (MRI) has become a mainstay for diagnosis and staging of this disease.

Endometriosis affects a significant number of reproductive age women and can continue to be present after menopause. The disease is much more complex than ovarian endometriomas, and understanding histology, disease location, and the limitations and benefits of imaging can aid in the diagnosis and management of these patients.

(52)

Neuro-ophthalmic imaging in cancer patients

Prof. Osamu Sakai (USA)

Ophthalmic problems such as decreased visual acuity, visual field defects, diplopia, and eye movement disorders are not uncommon in cancer patients and cause significant discomfort and morbidity. These abnormalities can be detected clinically with easily performed, noninvasive maneuvers. However, identifying these problems may not be sufficient to pinpoint the exact cause. The entire optic pathway, from the globe to the visual cortex, must be thoroughly evaluated for causes of impaired visual acuity and visual field defects. For diplopia and eye movement restriction, the specific causes can be localized to the cranial nerve nuclei in the brainstem, the pathways of the ocular motor cranial nerves (CN III, IV, and VI), or the extraocular muscles in the orbit, with the disease at any of these sites manifesting clinically as an eye movement disorder. A thorough understanding of central nervous system anatomy, cranial nerve pathways, and orbital anatomy, as well as familiarity with patterns of eye movement restriction, is necessary for accurately detecting radiologic abnormalities that support a diagnostic source of the suspected eye movement disorder. The abnormality may be secondary to direct tumor invasion, perineural tumor spread, metastatic lesion, side-effect or complications from treatment such as surgery, radiation and chemotherapy, infection/inflammation, or vascular compromise. Imaging plays an important role in detecting a specific cause responsible for clinical presentation. However, the radiologist should be aware that the imaging findings in many of these conditions are often nonspecific when taken in isolation from the clinical history and symptoms.

(53)

MRI in the Catheterization of Focal Lesions in Non-Cirrhotic Liver

Dr. Abed Al-Hamed Al-Adwan (Jordan)

Magnetic resonance imaging has more advantages than computed tomography in diagnosing focal hepatic lesions. A combination of T1, T2 weighted sequences, diffusion weighted imaging DWI, and extra or intra cellular contrast agents, most liver lesions can be characterized. Benign lesions, like cyst, hemangioma, or focal nodular hyperplasia can be distinguished from malignant lesions.

(54)
The Role of MRI in Gynecologic Imaging

**Dr. Soha Al-Ghoul (Jordan)*

(55)
Imaging of Airway Compromise

**Prof. Nada Nakhla (UK)*

(56)
Imaging of Hearing Loss

**Prof. Nada Nakhla (UK)*

(57)
Spectral ("dual-energy") CT in the Head and Neck

**Prof. Osamu Sakai (USA)*

Spectral ("dual-energy") CT is a technique that allows the differentiation of materials and tissues based on information derived from two synchronous image acquisitions at different tube voltages. Since the introduction of clinical dual-energy CT scanners in 2006, the ability of spectral CT to differentiate materials of other effective atomic numbers (Zeff) has made several clinically relevant CT applications possible. Each vendor is taking a different approach to obtaining high-energy and low-energy datasets; dual-layer acquisition, fast kV switching method, dual-source acquisition, and single-source two-rotate method. Each method has some strengths and weaknesses. Recently, spectral CT has been more utilized, and more evidence supports the advantages of this technique in the head and neck. Spectral CT can potentially improve the detection of abnormalities and increase diagnostic confidence in assessing a variety of pathologies in the head and neck. Virtual monochromatic imaging (VMI) can be used as an additional tool to help differentiate materials and may be useful to determine the optimal VMI energy level for the visualization of lesions. Compared to the conventional 120 kVp, the low keV VMI provides increased conspicuity of enhancing lesions and is useful in detecting head and neck cancers for both the initial diagnosis and recurrent diseases, and iodine mapping enables more quantitative analysis. Spectral CT offers different sets of images suitable for various clinical needs. This session aims to review the basic principles and concepts of spectral CT and the applications of spectral CT in the head and neck with representative cases.

(58)

Minimally invasive Laparoscopic Renal Surgery

**Prof. Jerard Ghossein (Australia)*

Minimally invasive renal surgery is now the gold standard approach for upper renal tract tumours. This presentation will cover the laparoscopic and robotic approaches to nephrectomies and nephro-ureterectomies. The trans and retro peritoneal techniques are discussed as well as donor laparoscopic nephrectomies.

(59)

Flexible Ureteroscopy and Laser Therapy for Renal Stones: Our experience at Prince Hussein urology center

**Dr. Firas Khori (Jordan)*

The aim of our study is to determine the safety and efficacy of flexible ureterorenoscopy and holmium laser lithotripsy for the treatment of renal stones. A retrospective study that is done at Prince Hussein Urology Center included 120 patients (82 male patients and 38 females) over ten months duration, with an average age of 38 years (range 22 to 65 years), the mean stone size was 8 mm(mean 6 - 20 mm), majority of the patients treated as a day case, the stone free rate reached 92%, the highest clearance rate observed in renal pelvic stones(96%), and the lowest clearance rate is seen in lower calyx(83%). Average time for the surgery was 35 minutes.

Stone free status was defined as no fragments or a single fragment ≤4 mm in diameter at the 2 month follow-up. The procedure efficacy, operative time, stone free rates and perioperative complications were documented.

The results of the study suggest that flexible ureterorenoscopy with Holmium Laser Lithotripsy may be considered the primary method for the treatment of renal calculi in select patients, due to its acceptable efficacy, low morbidity, and relatively low maintenance costs.

(60)
Small Renal Masses – Diagnosis and Surgical Management

**Prof. Jerard Ghossein (Australia)*

There has been a significant rise in the incidence of SRM due to increase utilization of imaging. Proper diagnosis and management are paramount to reduce the rate of unnecessary intervention and ensure preservation of renal function.
Novel imaging modalities and interventional radiological procedures have improved diagnostic accuracy. Nephron sparing surgery through minimally invasive techniques has become the standard of care for the majority of SRM.

(61)
Urothelial Carcinoma and Immunotherapy a Paradigm Shift in Treatment Algorithms

**Dr. Mohammad Abo Faraj (Jordan)*
(62)
Thoracotomy

**Prof. George Nada (UK)*

(63)
Family Medicine Active Role in Development and sustainability

**Dr. Mohammed Tarawneh (Jordan)*

A strong Primary Health Care (PHC) system enables individuals and communities' access to a full range of quality, essential health services. PHC also goes beyond providing health care services to individuals. It is a whole-of-society approach that seeks to address the broader determinants of health, The Center of Primary Care Family medicine
World Organization of Family Doctors (WONCA) mission is to improve the quality of life of the peoples of the world through defining and promoting its values, including respect for universal human rights, and including gender equity, and by fostering high standards of care. WONCA contributes worldwide to developing countries health systems in collaboration with global stockholders such as World Health Organization, and other international organization. WONCA composed of more than 130 family medicine/general practice society existed in 110 countries across the globe, where about 500.000 family doctors belongs to WONCA, providing preventive and treatment measures to the individuals and families in their own

societies through comprehensive and continuity of care.
Education, research, mental health, eHealth, quality and safety, adolescence and young adult care, aging and health, women's health, emergency medicine, health equity, non-communicable disease and other issues are considered the area of development and sustainability for family medicine.

(64)
Leadership Lessons Learned

**Prof. Paul Kivela (USA)*

(65)
Atrial Fibrillation Treatment Guidelines

**Dr. Tamara Salman AlTawara (Jordan)*

Objectives: Atrial fibrillation (AF) poses a significant burden to patients, physicians, and healthcare systems globally. Substantial research efforts and resources are being directed towards gaining detailed information about the mechanisms underlying AF, its natural course and effective treatments. The complexity of AF requires a multifaceted, holistic, and multidisciplinary approach to the management of AF patients, with their active involvement
Methodology: scientific articles from. www.aafp.com, www.escardio.org.
Results: New guidelines of treatment and screen of atrial fibrillation
Conclusion: detect screen methodology and best treatment regimen according to patient health issues
Keywords: atrial fibrillation guidelines 2020

(66)
Emergency Medicine Beyond the walls of ER

**Prof. Paul Kivela (USA)*

(67)
ER Roles in Disaster Management

**Dr. Mohamad Al Hassan (Jordan)*

(68)
Advanced Echo Procedure

**Prof. George Nada (UK)*

(69)
Smoking Cessation during Pregnancy and Breastfeeding

**Dr. Nuha Qasem (Jordan)*

Objectives: To stress on the importance of smoking cessation among pregnant and lactating ladies, to review available recommendations from different organizations about available modalities to assist these ladies in stopping smoking, to spotlight on the prevalence of maternal smoking in Jordan, and to draw attention to the significance of founding a national program to educate and help this group of smokers in particular.
Methodology: Review the available guidelines from the following organizations concerning maternal smoking cessation recommendations: The United States Preventive Services Task Force (USPSTF), The American College of Obstetricians and Gynecologists (ACOG), The 2011 Society of Obstetricians and Gynecologists of Canada (SOGC), and the 2010 United Kingdom National Institute for Health and Care Excellent (NICE)
Results: Strategies for smoking cessation in general combine behavioral counseling with pharmacological agents. According to the available data, the balance of benefits and harms of using these medications during pregnancy and breastfeeding is not clearly evident, so available guidelines are variable regarding their recommendations for the use of these products
Conclusion: The best approach to help pregnant and lactating ladies stop smoking is not clearly evident, but healthcare providers should balance the benefits of smoking cessation with the potential harms of using these medications and the harm of continuing smoking
Keywords: smoking, cessation, pregnant, breastfeeding

(70)
The Failsafe Approach to Decreasing Diagnostic Error

**Prof. Paul Kivela (USA)*

(71)
Role of EUS in Border Resectable and Unresectable Pancreatic Tumors

**Prof. Paolo Archidiachono (Italy)*

(72)
Colorectal Cancer Screening Strategies
**Dr. Mohammad Yassin (Jordan)*

(73)
Interventional EUS in Biliary Drainage

**Prof. Paolo Archidiachono (Italy)*

(74)
Endoscopic Management of Peri-pancreatic Fluid Collections

**Dr. Hazem Hmmad (Jordan)*

Endoscopic ultrasound-guided transmural drainage is considered the preferred option for drainage of walled-off peripancreatic fluid collections compared to surgical and percutaneous approaches. It has been shown to highly effective with low adverse events rates. In addition, transmural drainage can be followed by direct endoscopic necrosectomy for treatment of complex walled-off pancreatic necrosis.
Traditionally, double pigtail plastic stents were used for transmural drainage. More recently, novel fully covered lumen apposing metallic stents, especially designed for drainage of peripancreatic fluid collections have become available and are commonly used, particularly in the settings of walled-off necrosis, given the added advantage of ability to do endoscopic necrosectomy through the fully expanded metal stent.
This presentation will review the development of peripancreatic fluid collections drainage over the last two decades, discuss the evidence for EUS-guided drainage and DEN, and discuss the procedure technique and challenges that could be encountered.

(75)
Vasculitis Mimics

**Dr. Mahdi Abusalameh (UK)*

In addition to different types of primary vasculitis, there are numerous vasculitis mimics that all general and specialist physicians should be aware of. Will discuss the most common causes of secondary vasculitis including evidence-based management. Will use multiple clinical cases in a case-based discussion approach to emphasise on the most important practical tips.

(76)
Hematological challenges in Systemic Lupus Erythematosus

Dr. Ala'a Al-Hirsh (Jordan)

Systemic lupus erythematosus, has many hematological manifestations. Blood dyscrasias and other hematological abnormalities are sometimes the first sign of the disease.
The differential diagnosis of various hematological disorders should include rheumatic autoimmune diseases among other causes of blood cell and hemostasis abnormalities.
In this this review we will discuss the diagnosis and management of different cytopenias caused by systemic lupus erythematosus such as anemia, autoimmune hemolytic anemia, thrombosis, and thrombotic microangiopathies related to SLE.

(77)
Acute Rheumatology for the General Physicians

**Dr. Mahdi Abusalameh (UK)*

There are several important rheumatological and musculoskeletal conditions that we as Internal medicine physicians and general practitioners should be aware of including diagnosis and management whether acutely or long term. Will cover acute hot joint including septic arthritis and crystal arthropathy in addition to the latest update about giant cell arteritis. Will touch on the important safety signals when dealing with immunosuppressed patients.

(78)
Updated in Fibromyalgia

**Dr. Shadi Al-Daoud (Jordan)*

(79)
Optimising the Use of Methotrexate in Rheumatoid Arthritis

Dr. Mahdi Abusalameh (UK)

Methotrexate remains a cornerstone drug in rheumatology practice and treatment of multiple immune-mediated diseases including various types of inflammatory arthritis and autoimmune connective tissue diseases. It has a favourable benefit-risk ratio and cost effectiveness. Will focus in this talk on how to get the best out of methotrexate and emphasise on its important role despite the advances in therapeutic options including biologic drugs.

(80)
Transplantation for Older Adults

**Prof. Uday Poppat (USA)*

(81)
Immune Check Inhibitors (ICI) in classical Hodgkin's lymphoma (cHL)

**Prof. Abdallah Awidi (Jordan)*

Hodgkin's lymphoma ranks number 10 of all malignancies in Jordan in both genders [1]. The great majority of cases are classical type. The Hodgkin/Reed Sternberg cells (RS) are characteristic of CHL and can be recognized by their morphological appearance as well as by their positive staining with CD 30 and CD 15. They stain positive for PDL-1 [2], RS cells are known to be immune evasive [3].
While currently practiced therapy may achieve 60-85 % long-term survival,
15-40 may be primary refractory or relapse (RR) after the initial response.
The practiced standard of care for this patient is high-dose chemotherapy
(HDCT) followed by autologous bone marrow transplantation (ABMT) [4].
In this category of patients or in patients who are not candidates for HDCT and ABMT, newer combinations have been studied and are being incorporated into the standard of care. They include Brentuximab vidotin with chemotherapy or with ICI [5]. The results are remarkable,

and some of these combinations have moved to first-line combinations in high-risk newly diagnosed patients with cHL [6].
Two of the most studied ICI are Nivolumab and pembrolizumab [7-10].
The presentation will review the updated literature and findings on using ICI in cHL.

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(82)
Updated in Multiple Myeloma

**Dr. Majdi Al Jadayeh (Jordan)*

(83)
Transplantation for AML

**Prof. Uday Poppat (USA)*
(84)
Updates in the management of Hr +, Her - Breast Cancer

**Prof. Stephen Chia (Canada)*

(85)
Flexible care Treatment Options in Her2 Positive Bc

**Prof. Christian Jackisch (Germany)*
Flexible care is an attractive alternative to traditional cancer treatment administered in hospitals or oncology clinics. It may be more convenient for patients, allowing continued treatment with reduced hospital travel; patients prefer SC to IV. It also offers resource savings

for healthcare professionals and payers. There is a trend to move care outside hospitals, especially where the evidence of benefit has been established

FDA Approves Phesgo (Fixed-Dose Combination of Perjeta and Herceptin for Subcutaneous Injection) for HER2-Positive Breast Cancer.

Approval is based on results from the pivotal phase III FeDeriCa trial, which showed that Phesgo delivered non-inferior levels of Perjeta and Herceptin in the blood and comparable efficacy and safety versus IV formulations.

Phesgo offers faster administration of Perjeta and Herceptin under the skin in just minutes, compared to hours with standard intravenous administration.

Data showed that 85% of patients preferred Phesgo compared to standard intravenous administration

(86)

1. **Recent updates in the Management of advanced Nsclc! Best of 2022**

** Prof. Hazem Assi (Lebanon)*

2. Role of IO in the early stage and metastatic setting of Triple Negative Breast Cancer

** Prof. Sherko Kummel (Germany)*

(87)

Why Should we Move from Compliance Thinking toward a more Flexible Approach to Standardization?

**CEO of ISQua Dr. Castren Engel (Denmark)*

(88)

A Roadmap for Health Services Entities towards Excellence Transformation

**Prof. Ibrahim Rawabdeh (Jordan)*

Today, different challenges face health services development, modernization, and transformation. The challenges of the need for restructuring the economy, matching the exponential pace of technological advancement, fulfilling the rising citizen expectations for greater transparency, and limited levels of trust in government are among those to be mentioned. As a result, there is a need to evolve the health services providers' way of doing business or restructure future services to deal with these challenges. This paper will present a model for a roadmap for health services entities toward excellence transformation. Drivers of transformation will be based on a set of main fields used as a primary reference to develop the roadmap.

(89)

The Growing Role of External Evaluation Amidst Technological Advances and Artificial Intelligence – the Future of Accreditation of Healthcare Institutions.

Ms. Salma Jaouni (Jordan)

Provision of healthcare services is changing amidst the growth of digital services, virtual consultations, and the use of artificial intelligence. The new methodologies of delivering healthcare were tested rapidly during the pandemic. This expedited their uptake and posed pressure on healthcare institutions to be vigilant to the importance of change and response to patient and family needs. During the pandemic, healthcare institutions in Jordan that had been accredited were more ready to deal with the COVID19 implications specifically in areas of infection control, emergency preparedness, communication, and environmental and patient safety. Accreditation schemes need to grow in a way to address quality in the new modalities of healthcare delivery with focus on the voices of the patients, standards for safety in the new world, and healthcare outcomes. Additionally, accreditation needs to support the strategic expansion of healthcare services as set by countries and specifically for Jordan, to be a catalyst for medical and health tourism growth.

(90)

Impact of Accreditation on Quality of Care in Royal Medical Services Hospitals

Dr. Majdi Al Soudi (Jordan)

Every Healthcare establishment has some form of internal standards for conducting its operations, however, accreditation asserts that your establishment meets the standards set by a well-known organization, showing you follow healthcare standards and best practices. Going through the process of accreditation improves the quality of care, builds trust within the community and with patients, it provides better operational efficiency, it reduces insurance liability, it helps to gain competitive advantage with other establishments that are non-accredited, and it ensures the establishment is receiving best policies, procedures, and practices. This paper aims to discuss the impact of accreditation in Royal Medical Services Hospitals, how it improved the quality of care, and how it made adoption of best practices more efficient.

(91)

The Effect of 5Q Model On Patient's Satisfaction in Military Hospitals in Jordan

**Balqees Salem Ajarmah, RN (Jordan)*
Dr. Tareq N. Hashem; Dr Rateb J Sweis

Objectives: 1- The quality of diagnosis and treatment. 2- Health care provider performance. 3- Available resource, technology, skill and competence of health care provider. 4- Communication skill and providing respect and privacy. 5- Quality culture, commitment and trust in the military health hospitals.
Methodology: this research based on hypotheses testing. H0: There is no statistically significant (0.01) effect of 5Qs model (object, process, infrastructure, interaction, and atmosphere) on patient satisfaction. The questionnaire consisted of 28-statements related to 5Qs. The research surveys two military hospitals in Jordan (Queen Rania pediatric hospital and al Hussein hospital), through distributing 350 questionnaires to a convenient sample of inpatients. A total number of 324 questionnaires were return
Results: the results indicate is that 77.7% of the variance (R-Square) in the patient satisfaction has been significantly explained by the five independent variables. The quality of object scored the highest mean which implies its relative importance to the patient's satisfaction. The highest mean was for the overall satisfaction with the hospital over all with a value of 4.23, while the lowest mean was for the satisfaction with the services with a value of 3.41.
Conclusion: The variation in levels of satisfaction that have been introduced in the analysis could be explained due to the following reasons: • The unsatisfactory income of professionals working as the health care staff. • The management turnover and the demanding work load which causes, in turn, deficient professional control over the processes and health care staff.
Keywords: 5Q MODEL, PATIENT'S SATISFACTION.

(92)

Surgical Smoke Hazards for Operating Room Personnel

**Samya Albakkar, Rn (Jordan)*

Samar Khaled al bakkar ; RN, Doaa Mahmoud Awad abuqula,RN; Malak Ali alharahshah.OT

Objectives: during the daily life of a scrub nurse and other health care providers, Surgical smoke is omnipresent in the operation room. Surgical smoke has typically been produced by electrocautery and is more present in a new form with the burgeoning use of the laser. Exposure to surgical smoke can have side effects that affect different organs and parts of the

surgical team, such as carcinogenicity and toxicity, and also could transmit the live HPV virus from electro-surgery smoke. Aim: This literature review aims to detect the importance of protection from surgical smoke side effects such as human papillomavirus (HPV) transmission by patients in the operating room.

Methodology: According to the aim of this study; a standard literature review was used in this study. (Medline/PubMed, CINAHL, and google scholar) were reviewed for articles that are published from 2017 to 2022, All observational studies published in the English language were included in this study, any study without full-text articles or other languages was not included in this study. after inclusion and exclusion criteria,10 studies were included in this literature review that reviewed the harms of surgical smoke exposure on the operating room personnel.

Results: from variant databases, the Complications from the studies seen Complications related to toxicity, such as carcinogenicity and irritability; also Complications related to Respiratory illness; and Complications related to Microorganism transmission; finally the researchers found Complications related to Mutagenicity

Conclusion and recommendations: Surgical smoke needs more serious concern because the severity of the risk has not been determined. also, there is no safe level is known at this point. Efforts should be made to reduce and possibly eliminate smoke from the operating room. the need for more research about cost-effective forms of smoke evacuation. also, Studies of respiratory and cancer sequelae of exposure to operating room smoke in personnel should be started especially who have had long-term exposure. we must move toward increasing our focus to protect ourselves, healthcare workers in the operating room, and patients from surgical smoke. Also, we should differentiate between all types of smoke.

Keywords: Keyword Surgical smoke, operation room, scrub nurse, hazards.

(93)

Launching quality Department vision and initiatives for 2023-2024

**Dr. Majdi Al Soudi (Jordan)*

(94)

Patients Post Coronary Artery Bypass Graft Surgery: The Relationship Between Perceived Control and Quality of Life.

**Walaa Al-Halah, RN (Jordan)*
Mohammad Tayseer Albetar, RN. MS; Ola Ibrahim Butros Haddad RN. MBA.; Ghada Sitain Yaqoub Qandah, RN. ; Amani Jumah Alfaoury, RN.

Objectives: The study aimed to examine the effect of Perceived control (PC) on the quality of life (QoL) among patients post-Coronary Artery Bypass Graft (CABG) in Jordan.
Methodology: A non-experimental, descriptive, cross-sectional design was used to meet the aim of this study. A total of 160 patients (116 males and 44 females) undergoing CABG after 3 months of surgery were recruited from the outpatient clinics of four hospitals in Jordan as a convenience sample. QoL was measured by the 36-Item Short Form Survey (SF-36) and PC was measured by the Control Attitudes Scale-Revised (CAS-R). The relationship between PC and QoL was analyzed by descriptive analysis, multiple regression tests, and one-way analysis of variance (ANOVA).
Results: The mean of PC was (28.63±4.64). Patients reported high mean scores in all domains of QoL (58.80±14.16), indicating high QoL. Higher levels of PC for elder patients, male gender, higher level of education, married patients, and the absence of previous MI and angina symptoms were significant predictors of improvement QoL.
Conclusion: PC is the most important predictor associated with QoL in the current study. Based on these results, the role of nursing is appearing in developing plans and programs to enhance the levels of PC for patients who are planning to perform CABG before or after surgery. New RCT and interventional studies are recommended to enhance PC and compare it with standard treatment post-CBAG, in addition, to different studies with different research designs to investigate more factors that affect the QoL.
Keywords: Coronary Artery Bypass Graft, Perceived Control, Quality of Life.

(95)

Measuring Knowledge of Jordanian Nurses Working in Critical Care Units toward Stroke Patients

**Eslam Allsassmah, RN (Jordan)*

Objectives: This study aimed at measuring the knowledge of Jordanian nurses working in critical care units toward stroke patients.
Methodology: This cross-sectional study used the descriptive approach in order to measure the knowledge of the Jordanian nurses working in critical care units regarding stroke patients in the Jordanian hospitals. Data were collected from Jordanian critical care units' nurses from seven hospitals; five private and two public hospitals. Critical care units' nurses were selected conveniently based on specific inclusion criteria. Eligible participants were required to complete self–reported questionnaires about knowledge in addition to completing demographic questionnaires. The descriptive and inferential statistics were conducted using the SPSS software

Results: A total of (200) Critical care units' nurses from public and private hospitals participated in the study. The nurses in this study exhibited poor knowledge on the study scales. There were statistically significant differences among nurses according to the type of hospital on the one scales (P< .05). There is a negative relationship between the knowledge and years of nursing practice in ER or ICU (P= .013).
Conclusion: The measures of knowledge among the nurses in critical care units in the Jordanian hospitals towards stroke patients seem to be highly poor. Nurses in critical care units seem to have acceptable information, but inadequate to correctly enhance stroke awareness. There is a gap that should be stuffed via planning and implementation of educational and instructional programs focused on hospital nurses as well as community sectors in order to improve the stoke focus and experience and avoid the delay in accessing the medical help which would, in return, improve stroke management and reduce its effect in Jordan.
Keywords: knowledge, Stoke.

(96)

Insomnia and Related Factors in Post Cardiac Surgery Patients in the Intermediate Care Unit

**Zainab Al-Manaseer, RN (Jordan)*
Alaa Hammad; Abdullah khraisat; Asia alghnania; Angham almajali; Nour hijazin

Objectives: Insomnia is common health issue among patients after coronary artery bypass graft surgery (CABG). This cross-sectional study investigated the levels of insomnia and related factors among post-CABG patients in the intermediate care unit.
Methodology: A cross sectional study was used. Participants were 200 (184 males and 16 females) post-CABG patients. The questioner consisted of three parts; 1) demographic and clinical data sheet. 2) The Arabic version of the Insomnia Severity Index. 3) The Arabic version of the Freedman sleep in the intensive care unit questionnaire.
Results: The prevalence of insomnia was 86.5%. Patients post cardiac surgery in the intermediate care unit exhibit similar insomnia scores regardless of age, gender, monthly income, educational level, marital status occupation, body mass index, coffee drinking and length of stay. Insomnia was significantly associated with smoking (p-value 0.003), and chronic disease (P-value 0.04). The results show that the nursing intervention and pain consider the most clinical factors that affect sleep in the Intermediate Care Unit. However, cardiac monitor alarm and talking are considered the most environmental factor that affects sleeping in the Intermediate Care Unit.
Conclusion: The results suggest that insomnia is associated with smoking status and chronic disease. In this regard, healthcare practitioners, particularly nurses, are advised to monitor

sleep issues in CABG patients following surgery to identify those who require more attention.
Keywords: Insomnia, coronary artery bypass graft surgery, Insomnia Severity Index, sleep

(97)

Effect of Endotracheal Suctioning with Normal Saline on Heart Rate, Arterial Blood Gases, and Oxygen Saturation

**Hani Alrefai, RN (Jordan)*
Haleemeh Alshibly, RN; Razan Al Shaheen, RN; Hanan Alqudah, RN; Layali Almanaseer, RN.

Objectives: The present study was designed to evaluate the effect of endotracheal suctioning with normal saline on heart rate (HR), arterial blood gases (ABGs), and oxygen saturation (SpO2) for mechanically ventilated patients in the intensive care units (ICUs).
Methodology: A quasi-experimental study was carried out on a convenient sample of 40 patients undergoing mechanical ventilation in ICUs at King Hussein Medical Center in Amman. The study sample included adult patients who underwent mechanical ventilation due to cardiovascular problems, lung problems, or shock. Patients with chronic diseases, temperature ≥ 38 °C, use of muscle relaxants, and urine output ≤ 30 cc/hour were excluded, as these factors affect HR and ABGs results. All patients were monitored electronically and had a catheter in the radial artery and a normal range of ABGs and electrolytes. According to hospital policies, the researchers performed endotracheal suctioning at 3-hour intervals for the same patient, with suction once without normal saline and once with it, and thus suctioning twice for each patient. Suctioning with normal saline was performed as follows: Before suctioning, the patient was exposed to 100% oxygen for a minute to reach hyperoxygenated, then normal saline (5 cc) was instilled into the tube and reconnected to the ventilator for five breaths, and finally, the suction was done for 10 seconds using a 14-French catheter. Suctioning without normal saline was performed as follows: Before suctioning, the patient was exposed to 100% oxygen for a minute to reach hyperoxygenated, then suction was done for 10 seconds using a 14-French catheter. After suctioning in both cases, the patient was exposed to 100% oxygen for a minute to reach hyperoxygenated. HR, ABGs and SpO2 were measured at one and five minutes before and after suctioning by the standard monitor. HR was measured from the electronic monitor and SpO2 from the pulse oximeter. ABGs sample was taken using a heparin-flushed syringe and the sample was analyzed using the same blood gas machine for all samples. Independent and paired t-tests were used to analyze the data in this study. Significant results were adopted at a P-value ≤ .05.
Results: For the patients in this study, 56% were men, 43.5% were aged 60-69 years, and 41.2% were exposed to mechanical ventilation due to respiratory insufficiency. The results

showed a statistically significant increase in HR at the fifth minute after suctioning with normal saline, while there was no increase after suctioning without normal saline ($P < 0.05$). ABGs analysis after suctioning with or without normal saline revealed slightly decreases in ABGs such as partial pressure of oxygen (PaO2), partial pressure of carbon dioxide (PCO2), bicarbonate (HCO3), and oxygen saturation (SaO2), which were not statistically significant ($P > 0.05$). While there were significant increases in the potential of hydrogen (PH) values after five minutes of suctioning with normal saline ($P < 0.05$). However, by comparing the pH values for both methods, there was no significant difference between the values before and after five minutes of suctioning ($P > 0.05$). No significant differences in the SpO2 values upon suctioning with or without normal saline ($P > 0.05$). While there was a slight decrease in the SpO2 values after a minute of suctioning in both methods, but values were not statistically significant ($P > 0.05$).

Conclusion: Instillation of normal saline before suction led to undesirable, though not significant, changes in HR, ABGs, and SpO2. It is recommended to use, more suitable methods of diluting secretions with fewer side effects, such as moistening inhaled gas.

Keywords: Endotracheal intubation, tracheal suctioning, normal saline, heart rate, arterial blood gases, oxygen saturation

(98)

Health Related Quality Of Life (HRQoL) among Patients with Implanted Permanent Cardiac Pacemaker in Jordan

**Mohammad Abdullah,RN (Jordan)*
Abdullah Hamdallah khresat,RN; Abeer Al-Wahadneh,RN; Hala mohammad Alazzeh,RN; Ma'moun Salah,RN,MSN

Objectives: To determine the HRQoL for patients with PCPM from patients' perspective, and its correlation with the perceived social support.

Methodology: A descriptive correlational, cross-sectional design was used. Participants were recruited conveniently from an implanted cardiac devices clinic at one military referral hospital in Amman. Data collection instrument comprised of (a) the specific activity scale for the functional classification of patients with cardiovascular disease, (b) the Arabic-version of multidimensional scale of perceived social support (MSPSS), (c) the Assessment of quality of life and related events (Aquarel) questionnaire, and demographic data sheet

Results: Mean age of the participants was 51.8 years, and 55.6% had class I in functional classification scale. The mean of total scores of HRQoL was 48.07 ± 19.01, and mean score of MSPSS was 5.7 ± 1.19. Results showed that female participants reported significantly ($t=3.75$, $df=25$, $P=0.028$) higher mean of total scores of HRQoL (60.6 ± 19.61). Also, the

participants who used digoxin had a significantly (f =4.19, df=2, P=0.028) higher mean of total scores of HRQoL. There was a statistically significant, moderate positive correlation between social support and device implantation period (r=0.5, P=0.008). While HRQoL had a positive, but weak non-significant correlation with the perceived social support (r=0.22, P=0.264).

•**Conclusion:** The positive but weak association between social support and HRQoL suggests that social support could be predictor to improve HRQoL.

Keywords: Quality of life, Jordan, permanent, pacemaker

(99)

Sociodemographic Characteristics of Mothers and Their Children Who Suffer from Febrile Seizure under Six Years Old in North Jordan (Cross-Sectional Study)

**Nooraldeen Alhsenat, RN (Jordan)*

Prof. Huda Gharaibeh; Haya Alsmadi.RN ; Mountaha Bani Salman, RN; Hamza Almashaqbeh, RN; Wafa Zuraiqat,RN.

Objectives: To assess the sociodemographic characteristics of mothers and children who suffer from febrile seizure under six years in north Jordan.

Methodology: A cross-sectional survey was used, 84 mothers and their children who were admitted to pediatric between August and December 2021. We included mothers who had children under six years of age with first or recurrent febrile seizures. And excluded the mothers who have children who suffered from seizure-related metabolic disorders or neurological disorders were excluded from the study.

Results: The mean age of mothers and children was (29.89 ± 5.66 years), (24.55 ± 15.41 months) respectively, about 60.7% of children were male. The mean age of the occurrence of febrile seizure was (19.54± 12.54 months), 61.9% of febrile children have had one attack of the febrile seizure since birth. Also, 50% of the febrile seizure lasts for less than five-minute duration, and about 73.8% of children experience cyanosis during the febrile seizure. The majority 88.1% of mothers' have one child who suffers from a febrile seizure.

Conclusion: The majority of mothers are at a young age and are more educated. most children have a simple febrile seizure, have one seizure attack, and cyanosis occurs during attacks.

Keywords: Febrile seizure, Febrile convulsion, Simple febrile seizure. Children.

(100)

Effect of Covid-19 on Food Security: A Cross-Sectional Survey

**Nour Elsahoryi, Mlt (Jordan)*
Hiba Al-Sayyed; Mohanad Odeh; Andrea McGrattan; Fwziah Hammad

Objectives: This study aimed to assess the impacts of COVID-19 on household food security in Jordan, determined the percentage of food security and the levels of food insecurity during the quarantine, determined the associated factor with food insecurity, and determined main food groups associated with FINS during the quarantine

Methodology: A cross-sectional study was conducted using a Web-based validated questionnaire. The Food Insecurity Experience Scale was used to measure the food insecurity during the first four weeks of the quarantine, and a modified food consumption score was used to determine the number of times the household consumes each food group. Univariate and multiple logistic regression models were used to describe, explore, and predict risk factors correlated with food insecurity among Jordanians, during the first four weeks of the quarantine.

Results: A total of 3129 Jordanians had responded to the assessment and fully answered the questionnaire. 23.1% of the total participants were severe food insecure, while 36.1% were moderate food insecure, 40.7% were food secure. The regression model demonstrated the monthly income per capita below the poverty line and a number of the family member (1e4 and 5e7) associated significantly with moderate food insecurity (OR: 5.33; 95% CI: 4.44e6.40, OR: 0.64; 95% CI: 0.47e0.86, OR: 0.76; 95% CI: 0.58e0.98, respectively). As well as with the severe food insecurity (OR: 6.87; 95% CI: 5.542e8.512, OR: 0.52; 95% CI: 0.37e0.74, 0.64; 95% CI: 0.48e0.87, respectively). Age 18e30 years old (OR: 1.80; 95% CI: 1.23e2.65) and living in a rented house (OR: 1.30; 95% CI: 1.01e1.69) were associated significantly with severe food insecurity. Carbohydrates and the meat group were significantly related to food insecurity (p-value was <0.001 for both groups).

Conclusion: Covid-19 and its subsequent quarantine have a tangible impact on food security levels for the populations. Awareness and strategies to support individuals at higher risks should be guided not only by the income but also by other risk factors identified in the present study as the number of persons in the family, younger adults (18e30 years old), and those who do not own their houses)

Keywords: Coronavirus (COVID-19) Quarantine Food security (FS) Food insecurity (FINS) Jordan

(101)

Skin and Nasal Carriage of MRSA and MRSE Among Healthcare Workers

** Esraa Hasan Al-Nsour, Mlt (Jordan)*
Prof. Hadeel T. Al-Hadithi

Objectives: To investigate the incidence of MRS on the skin and nasal cavities of healthcare workers and identify recovered isolates to the species level.
Methodology: Culturing samples on mannitol salt agar supplemented with 6ug/ml methicillin and identify grown colonies by API system and PCR.
Results: Percentage recovery of Staphylococci from nasal cavities was 62.7% followed by skin (57.4%) of female healthcare workers, age ranged 28-35 years. Incidence of methicillin resistant S. aureus (MRSA) from healthcare workers was almost similar to that of methicillin resistant S. epidermidis (MRSE) constituting 16.2% and 17% respectively. The highest incidence of MRSA was obtained from doctors (p-value 0.033), while the highest incidence of MRSE was obtained from the nurses (p-value 0.048).
Conclusion: This study reveals that incidence of MRSA was obtained mainly from doctors and MRSE from nurses. Healthcare workers in internal medicine ward exhibited the highest percentage recovery of MRS in both nasal cavities and skin as compared to healthcare workers in the other ten wards.
Keywords: MRSA : Methicillin Resistant S. aureus MRSE : Methicillin Resistant S. epidermidis

(102)

The Effect of Procalcitonin level in COVID-19 Patients

**Esraa Mawajdeh, Mlt (Jordan)*
Faten Wrekat; Moutaz Mahmoud; Sahar Al_nawaiseh; Ahmad Al_naanaah

Objectives: to examine the effects of variations in procalcitonin (PCT) levels and how they affect on corona virus patient.
Methodology: Medical records of patients treated at queen alia hospital, 95 patients from (February 2021 to December 2021), the inclusion criteria were as follows: adult patients with laboratory confirmed covid-19, and procalcitonin test method taken from manual is chemiluminescence.
Results: The study comprised 90 COVID-19 patients in all, including 34 male and 56 female. The current study included 34 male and 56 female patients who had their PCT values serially measured; of these, 26 male patients were released from the hospital when their PCT level

was normal, and 8 patients had complications and blood poisoning because their PCT values were very high; and of the 56 female patients, 33 were released and 23 had complications and blood poisoning because their PCT values were very high. Both high-normal and abnormal PCT levels dropped in the patients who were released as they recovered.

Conclusion: This study demonstrates that PCT may be an indicator of disease severity and may contribute to determining the severity of patients with COVID-19. In addition, PCT level increase in chronic corona virus patients.

Keywords: Corona virus, COVID-19, Procalcitonin, Severity, Prognosis.

(103)

Nutritional Consultation and Health Education Effect on Lifestyle and Food Habits for Adults

**Mohamed Hamdan, Nut. Eng (Jordan)*

Nisreen Almalahmeh, Nut. Eng; Mohammad Abuhawas, Nut. Eng; Abedalaziz Ghunimat, Nut. Eng.; Amjad Shaher Aref Alalaween, Nut. Eng.

Objectives: The study aimed to find out how nutritional consultation and health education effect on lifestyle and food habits for adults.

Methodology: This was a questionnaires survey by collecting data sheet for 340 healthy adult people's in the community (from 18 to 60 years old) before and after nutritional counseling and health Education by nutritionist, 188 males, 152 females, live in different regions in Amman from August 2021 to November 2021. each of them answer the questionnaire contains 16 questions, after that data was collected and analyzed by using SPSS program.

Results: the results before and after nutritional consultation and health education were as follows respectively: people don't follow a healthy diet 55%&18% people don't prefer nutritionist consultation 35.7%&23%, people don't know their daily water requirement 33.2%&21%, smokers 37%&19%, people drink soft drinks daily 34%&17%, have caffeinated drinks daily 63.3%&40%, people don't make any type of exercise 76%&45%, people skip dinner to reduce body weight 72%&16%.

Conclusion: Nutritionist consultation and health education has a major role to reduce the unhealthy behaviors and improve lifestyle to avoid the risk of many nutritional problems and chronic diseases.

Keywords: Consultation Lifestyle Improve

(104)
Recent Advances in liver Transplantation

**Prof. Nigel Heaton (UK)*

(105)
ALPPS Procedure Obstacles & Lessons

**Dr. Ali Dabous (Jordan)*

An associating liver partition and portal vein ligation for staged hepatectomy is a novel procedure was first performed in Regensburg, Germany 2007. It is a variation of two-stage hepatectomy to induce rapid liver hypertrophy allowing the removal of large tumors otherwise considered irresectable due to a too small future liver remnant.

In 2012, the international ALPPS registry was created, and in May 2019 the registry accounted for more than 1,100 cases from 142 centers in 42 countries. Since 2007, improved patient selection and refinements in operative techniques, in particular, less invasive approaches such as Partial ALPPS, have resulted in significant improvements in safety although long-term outcome data are still missing.

Early enthusiasm was hampered by an initial high perioperative morbidity and mortality as well as by early and rapid disease-recurrence. Continuous efforts to improve patient selection, to optimize timing of stage 2 and to refine operative technique have led to reduced morbidity and mortality rates.

In my presentation I will go through the historical timeline of ALPPS procedure together with, I will elucidate the obstacles we faced and the lessons we learned. I will share with you our experience at KHCC.

(106)
A Neoenteric Technique for Pancreaticojeunostomy by Integration of Three Antecedent Surgical Approach.

**Dr. Tariq Almnaizel (Jordan)*

(107)
Hepatobiliary and Pancreatic Surgery in Children

**Prof. Nigel Heaton (UK)*

(108)

The Influence of liver transplantation in Complex Hepatobiliary Surgery

**Prof. Nigel Heaton (UK)*

(109)

Management of Ascites Following Deceased Donor Liver Transplantation: A Case Series

**Dr. Mohammad Al-Zoubi(Jordan)*
Moath Alarabiyat, MD; Angus Hann, MD; Homoyon Mehrzhad, MD; Salil Karkhanis, MD; Paolo Muiesan, FRCS; Manuel Abradelo, FRCS; Hermien Hartog, FEBS; Keith Roberts, FRCS; Darius F. Mirza, FRCS; John R. Isaac, FRCS; and Bobby V.M. Dasari, FRCS.

Objectives: Persistent ascites after orthotropic liver transplantation has numerous causes and can be challenging to manage. This study aimed to determine the outcomes associated with conservative and endovascular intervention of posttransplant ascites after deceased donor liver transplantation.

Methodology: Adult (≥18 y) liver transplant recipients (between 2006 and 2019) who underwent hepatic venous pressure studies to investigate posttransplant ascites were included in this retrospective study. Comparisons were made between those who were managed with conservative therapy versus endovascular intervention and were also based on hepatic venous wedge pressure gradient (normal [≤10 mm Hg] versus elevated [>10 mm Hg]).

Results: A total of 30 patients underwent hepatic venography to investigate ascites during the study period. The median time from transplant to venography was 70 d. At least 1 endovascular intervention was performed in 18 of 30 patients (62%), and 12 of 30 patients (38%) were managed conservatively. Endovascular interventions included angioplasty (n = 4), hepatic vein stenting (n = 9), or a transjugular intrahepatic portosystemic shunt (n = 7). The mean (range) hepatic venous wedge pressure gradient for the conservative and endovascular intervention groups was 12 mm Hg (3–23) and14 mm Hg (2–35), respectively. At a 6-mo follow-up, ascites resolved in 6 of 12 patients (50%) and 11 of 18 patients (61%) in the medical management and endovascular groups, respectively. The graft survival rates at 6 and 12 mo were (7/12 [58%] versus 17/18 [94%], P = 0.02) and (7/12 [58%] versus 14/18 [78%], P = 0.25), respectively.

Conclusion: Despite medical or endovascular intervention, resolution of ascites is achieved in <60% of patients with persistent ascites. Biopsy findings and venographic pressure studies should be carefully integrated into the management of posttransplant ascites.

Keywords: Ascites, Liver transplantation, Hepatic Vein Wedge Pressure, Venography

(110)

Evaluation of Sleeve Gastrectomy Conversion to Omega Gastric Bypass

Dr. Sami. Salem (Jordan)

Objective: Laparoscopic sleeve gastrectomy becoming is a favorable and common bariatric operation. In recent years we see more patients post sleeve gastrectomy with insufficient weight loss and comorbidity where conversion becomes indicated.
omega gastric bypass (OGB) is becoming a good optional revisional procedure after failed Laparoscopic sleeve gastrectomy. The aim of this study was to evaluate the safety, feasibility and results of the conversion to omega gastric bypass (OGB).

Methods: We have observed the results of the converted sleeve gastrectomy patients to OGB in our clinic for period 2009-2020. The excluded biliary limb was 2/5th of the entire length of small bowel. All procedures were performed laparoscopically. We collected our data prospectively. Recorded data preoperatively included age, sex, comorbidity, body mass index (BMI), Postoperatively recorded data included, intra and post-operative morbidity and mortality, percentage of excess weight loss(%EWL). Resolution of co-morbidities like Diabetes mellitus (DM) type II, Hyperlipidemia and arterial Hypertension were recorded as well.

Results: between 2002-2020 we have performed1668 sleeve gastrectomy operations, 1180 (70.1%) patients were available for follow between 1-15Ys. 236 patients (20%) were converted and of them 40 cases (3.3%) were converted to other bariatric procedure. 196 (16.7%) patients(P) had conversion to omega gastric bypass mean time of FU 8 ys (1-15 ys), Mean BMI 34,4kg/m2 by conversion and decreased to 27.2kg/m2.1 patient had anastomotic ulcer perforation, 6 P endoscopic anastomotic ulcers, 6 cases hyperproteinemia, iron deficiency present in 18%before and increased to 34% post omega bypass, 44% gastroesophageal reflux disease before and decreased to 5% post omega bypass, 88% good satisfaction. DM type II was present in 22%, decreased to 5% post OGB, resolved in 68% of cases and improved in the remaining. Hypertension and Hyperlipidemia were present preop. in 40 P (33%), 44 P (37%) respectively and resolved in 66% and 62% of cases respectively.

Conclusion: Conversion of sleeve gastrectomy to Omega gastric bypass is technically feasible and leads to good satisfaction regarding weight loss, decrease of co-morbidity and side effects with low incidence of complications in follow up to 8 ys.

(111)
Bariatric Surgery at RMS

**Dr. Mohammad Alhrout (Joradn)*

(112)
New technique in Roux-en-y gastric Bypass

**Dr. Mohammad Al-Rushdan (Jordan)*

(113)
Role of Prophylactic Enoxaparin in Pre-Vention of Venous thromboembolism Post Bariatric

**Dr. Taghleb Mazahreh (Jordan)*

(114)
Pudendal Neuropathy: Diagnosis and Treatment

**Dr. Ganio Ezio (Italy)*

(115)
Laparoscopic Colectomy with Complete Mesocolic Excision

**Dr. Ahmad Uraiqat (Jordan)*

After the introduction of total mesorectal excision (TME) for rectal cancer by Bill Heald in early 80s the local recurrence rate for rectal cancer has dropped from 30% to 5%-8% and the five-year survival rate has increased from 45%-50% to 75%. The technique follows the principle that dissection in the mesorectal plane creates an intact fascial-lined specimen, which contains all the blood vessels, lymphatic vessels, and lymph nodes through which the tumor may disseminate.
In 2008 Hohenberger et al. 2 developed the concept of complete mesocolic excision (CME). This concept is based on TME, where it aims at the separation of the mesocolic from the parietal plane and true central ligation of the supplying arteries and draining veins right at their roots. By this procedure the local 5-year recurrence rates in colon cancer decreased from 6.5% to 3.6% and the cancer related 5-year survival rates increased from 82.1% to 89.1%.
We present the surgical techniques for laparoscopic surgery with CME, as well as the surgical, pathological and oncological outcomes of the procedure that are available to date.

(116)
Ana Fistula: from the Origins

**Dr. Ganio Ezio (Italy)*

(117)
Treatment of Colorectal Peritoneal Metastasis: Principles & Perspectives

**Dr. Ali Dabous (Jordan)*

Colorectal cancer (CRC) is the third most common cancer worldwide, and up to 20% of the patients have synchronous distant dissemination at diagnosis, among whom 4% exhibit isolated peritoneal spread. In the modern era, about three-quarters of the patients presenting with CRC are treated with a curative intent, and 5-year survival rates range from 71.2% -90.1%. Unfortunately, despite a curative colorectal resection, many patients with initial stage II or III disease will develop local or distant recurrence. The peritoneum is the third most common site of recurrence after the liver and lung, with peritoneal metastasis (CRPM) occurring in about 8% to 20% of cases. CRPM is most of the time diagnosed at a very advanced stage because non symptoms are fully specific, and is associated with a poor survival. However, the prognosis of patients with CRPM has been widely improved with the development of a new therapeutic approach consisting of a complete cytoreductive surgery (CRS) of the peritoneal disease followed with hyperthermic intraperitoneal chemotherapy (HIPEC). In my presentation, I will go through the principle and perspectives for such procedure, and I will share with you the lessons we learned at KHCC

(118)
A Descriptive Study of Trends in Appendectomy Surgery in Jordan: Evidence from a Retrospective Database Analysis from Jordan: 2016-2022

**Dr. Gayth M.Arabyat, (Jordan)*
Rasha M.Arabyat

Objectives: To summarize trends in appendectomy surgery in Jordan related to age, gender, and seasonal variations
Methodology: Medical records of patients admitted with confirmed cases of acute appendicitis found in Hakeem database for hospitals affiliated with the Royal Medical Services were requested. Patients were included if they were over the age of 18 with a confirmed diagnosis of acute appendicitis using the ICD-10 surgical code of K35. Summary statistics such as mean, standard deviation, and frequencies were calculated using STATA version 14
Results: A total of 5610 cases of appendectomy performed in hospitals affiliated with Royal

Medical Services were extracted from Hakeem database in the period between 2016-2022. Most surgeries were performed at King Hussein Hospital (32.5%) followed by Prince Hashem Bin Al-Hussein Hospital (14.78%) and Princess Haya Hospital (13.9%). The year 2018 was associated with the highest number of performed surgeries (n = 1284, 22.8%). The average patient's age was 32 years (SD = 10.9) and more than 60% of sur

Conclusion: There is an evidence of seasonal variations in the incidence of appendectomy. The highest was during the months of July and August and the lowest during December. The number of surgeries was affected by COVID-19, as there was a drop in the number of surgeries. Ramdan was associated with lower cases compared to average number of cases per month.

Keywords: A Descriptive Study of Trends in Appendectomy Surgery in Jordan: Evidence from a Retrospective Database Analysis from Jordan: 2016-2022

(119)

The Lateral Pelvic Lymph Nodes in low Rectal surgery after Neoadjuvant Chemradiotherapy, is it Achilles Heel?

Dr. Mahmoud Almasri (Jordan)

(120)

Gastric Cancer in Young Adults

Dr. Sahem Al Qusous (Jordan)

(121)

Management of intestinal Neuroendocrine Neoplasia

Dr. Rami Addasi (Jordan)

(122)

Management of Cutaneous T cell lymphoma

Prof. Chalid Assaf,(Germany)

Cutaneous T-cell lymphomas represent extranodal non-Hodgkin lymphomas consisting of mature lymphocytic populations targeting the skin, persisting and proliferating initially in the skin environment. Cutaneous lymphomas reveal a broad variety of clinical manifestations and histological pictures. In contrast to lymphomas of nodal origin, 80% of all cutaneous

lymphomas (CTCL) derive from T-cell populations, the other 10-20% being of B-cell origin (CBCL). The remaining number of lymphomas correspond to rare entities, such as blastic plasmazytoid dendritic cell neoplasm. There is a broad heterogeneity of these tumours and their varying biological potency, showing long-term benign or fatal clinical courses. Therefore, the exact diagnosis is an important requisite for an adequate and stage-adapted treatment. Classical histological examination together with immunochemistry and molecular biological techniques are the most important factors for introducing proper treatment.

(123)
Management of Cutaneous T cell lymphoma

**Prof. Chalid Assaf,(Germany)*

Adequate therapeutic management of cutaneous T cell lymphoma (CTCL) requires the identification of the exact CTCL stage and entity within the current WHO classification. Patients often suffer from visible, severely pruritic skin lesions, infections, relapses, and their life expectancy may be reduced. There is no curative CTCL therapy yet, so that treatment actually aims at improving symptoms and life quality as well as reducing relapse rates. The treatment has to be adapted to the CTCL stage. Therapeutic options comprise skin-directed as well as systemic treatments. In early stages, phototherapy and local steroids are the first-line therapeutic options. In addition, topical treatment with chlormethine gel has recently licensed for the management of patients with mycosis fungoides of all stages. The treatment of advanced CTCL like tumor-stage MF or Sézary syndrome (SS) still poses a challenge. Although first-line treatments as bexarotene or interferon-alpha often induce clinical responses, remissions are invariably short lived, thus necessitating more aggressive treatment regimens like cytoreductive drugs e.g. gemcitabine, doxorubicine, CHOP and CHOP-like regimen
However, systemic therapy options have evolved in recent years with the approval of novel agents such as the anti-CD30 fusionprotein brentuximab vedotin, and the anti-CCR4 monoclonal antibody mogamulizumab. Both are milestones in the treatment of CTCL as a montherapy and as well as used in a combination therapy.

(124)
Practice of Clinical Dermatology: Clinicopathololological Cases.

**Dr. Nedal Obeidat (Jordan)*

Dermatopathology is very important to the practicing dermatologist. Frequently, a correct clinical diagnosis cannot be established, necessitating a skin biopsy. This applies equally to skin rashes and tumors.
In this presentation, a few cases are presented with their clinical settings and how dermatopathology is helpful in reaching a diagnosis and initiating treatment.

(125)
Tricoscopy

**Dr. khetam Rfou (Jordan)*

(126)
Immunotherapy in Melanoma: Recent Advances and Updates

**Dr. Claus Garbe (Germany)*

(127)
Immunotherapy in Melanoma: Recent Advances and Updates
**Dr. Claus Garbe (Germany)*

(128)
The Incidence of Melanoma and Non-Melanoma Skin cancer in Jordan

**Dr. Nour Ma'ani (Jordan)*

Skin cancers are among the commonest cancers worldwide. However, there are no comprehensive reports on skin cancer incidence in Jordan during the last two decades. In this research we report data on malignant melanomas (MM), squamous cells carcinomas (SCC) and basal cell carcinomas (BCC) in Jordan and comment on age-specific and overall age-standardized incidence rates as well as incidence trends.

(129)
Infantile Hemangioma

**Dr. Hiathem Abo Al-Haija*

Infantile hemangioma is the most common benign tumor in the neonatal age group. Which is characterized by rapid growth during the first several months of life, followed by slow spontaneous involution in the following years.
Infantile hemangioma cases are commonly seen in our pediatric dermatology clinics.
Topical and systemic B-blocker therapy has been observed to stop rapid proliferation and accelerate regression of infantile hemangioma.
Oral Propranolol can be safely initiated in an outpatient basis in infants older than 2 months of age.
The late presentation of our cases might be due to the late referral to a dermatologist , which may be related to the insufficient awareness among other physicians and parents about the efficacy and safety of Propranolol as a treatment for Infantile hemangioma.
The most challenging cases that we are dealing with are patients with vascular malformations, which necessitate multidisciplinary team approach to alleviate the tribulation.

(130)
Bio Markers and Targeted Therapy in Skin Inflammatory Disease

**Prof. Wolf-henning Boehncke (Switzerland)*

(131)
Overview on Psoriasis Management

**Prof. Wolf-henning Boehncke (Switzerland)*

(132)
Updates on the management of Atopic Dermatitis

**Dr. Feras Qarqaz (Jordan)*

AD is a common inflammatory skin disease characterized by recurring eczematous rash associated with itch commonly starting from an early age. The pathogenesis of AD involves barrier structural abnormalities and immune dysregulation. The clinical phenotypes and severity are variable and this implicates need for individualized treatment plans. There are

many new updates on the pathogenesis, clinical assessment and therapeutic strategies for AD. In this presentation I will focus on new updates related to various aspects of AD especially treatment and current gaps in management of AD.

(133)
Systemic Inflammatory in Psoriasis

**Dr. Salah Al-Abdallat (Jordan)*

Psoriasis is now widely accepted as a multi-systemic inflammatory disease, as evidence is building up in favor of this concept. This paper will review the literature discussing systemic inflammation as a shared pathogenesis of psoriasis and its co-morbidities, with its impact on management of this disease, including individualized approach to assessment, follow up, and pharmacologic therapy.
Keywords: Systemic Inflammation, psoriasis

(134)
Mediterranean Spotted Fever and the Impact of Climate Change

**Dr. Anouar Ilyass (Morocco)*

Background: Mediterranean spotted fever (MBF) is an infectious disease caused by Rickettsia Conorii spp.and transmitted to humans by the brown dog tick, Ripicephalus (Rh) sanguineus. It is endemic in North Africa and other regions around the Mediterranean, from early summer to midautumn.
We have seen during the 2017 summer a sharp increase in the number of recorded cases compared to the usual incidence. This work's focus is on the discussion of the contributing factors, in particular climatic.
Materiel & Method: The study was conducted over a 13-year period at the dermatology department of the Mohammed V Military Hospital in Rabat and was conducted in two steps:
- A preliminary phase, from May to October 2017, in which all patients suspected of having FBM in our training will be surveyed. The inclusion criterion was a Raoult score greater than 25.
- A second phase: retrospective and analytical, between 2005 and 2016, during which all confirmed FBM cases and meteorological data were recorded. These data concerned two parameters: annual precipitation in millimeters, as well as the number of days of rain per year, and average temperatures during the summer season based on National Oceanic and Atmospheric Association medians (NOAA).

We used IBM® SPSS® version 23 and R for MacOS® for the statistical analysis, and the statistical significance was set at $p \leq 0.05$

Results: We collected a total of 91 patients (69 men and 22 women), with a significant increase during the summer of 2017 with 21 cases recorded, including three severe forms, representing a

300% increase over the previous 13-year average of approximately 7 cases per year (5,017). During the same year, pluviometry recorded precipitation totaling 1091,74 mm in 113 days of rain, with yearly average temperatures of 29,85 degrees Celsius (28,8392 - 29,1200, +/- 1,03249), which are also significantly higher than seasonal averages. As a result, with a =0.05 and a p=0.049, we were able to reject the null hypothesis and confirm that climate conditions and FBM incidence are statistically related.

Discussion: Rh. Sanguineus is known to have a weak affinity for humans (accidental host) and lives in semidomestic environments shared with dogs (host required). The longevity and mobility of tics are among the biological characteristics that affect their ability to vector, both of which are influenced by external factors, primarily climatic conditions and vegetation. This one is a significant modifier of the local weather patterns or so-called microclimatic conditions to which tics must adapt in order to develop and survive, primarily during the parasite-free periods of their life cycle. It also provides support for the activity of host-hunting. As a result, the heavy rains that were observed in 2016–2017 allowed for the development of an abundant wildflower that was conducive to their proliferation. Additionally, the high summer temperatures may have contributed to this bloom, which explains the observed sporadic epidemic.

Conclusion: Thus, understanding of macro- and microclimatic conditions could be used to build early warning systems capable of identifying the distribution and seasonality of tics and pathologies that result, allowing for the launch of prevention campaigns to avoid the emergence of similar epidemics, particularly during hot, humid winters.

(135)

Vascular Occlusion post Filler

**Adam Almuhaisen (Jordan)*

Dr salah alabdullat; Dr alsharif Mohammad fwaz ; Dr Hossam Alissa

Objectives: Vascular occlusion review protocol post dermal filler

Methodology: presenting cases of vascular occlusion post dermal argumentation with dermal filler using different protocols to end up with optimal outcome

Results: With the expansion of aesthetic procedures and the unsupervised work happening in this field, dealing with the complications resulting from cosmetic procedures has become a

priority and is of the utmost importance, especially when dealing with cases transferred from unqualified doctors. Here, establishing protocols to handle these situations, chiefly, Arterial blockages that could lead to skin necrosis where time is of the essence, is a must.
Conclusion: By presenting this issue, I will be demonstrating a treatment plan, through some cases that were transferred to me and the protocol suggested in accordance with the chronological history of the injury; to avoid any further dangerous complications.
Keywords: Dermal filler Vascular occlusion

(136)
Unusual Dermatological Presentations
**Dr. Hussam Al-Issa (Jordan)*

Objectives: My presentation include a group of rare dermatologic diagnosis, which include Keratosis lichenoides chronica (NEKAM Disease), angioplasmacellular hyperplasia, generalized acanthosis nigricans, cutaneous chrohn's disease.
Methodology: Patients underwent a multiple diagnostic steps including laboratory investigations and skin biopsies. Our final diagnosis reached in calloboration with histopatological team. Our patients followed during the past period with a flexible treatment plans tailored according to the disease response and possible side effect that could happen during treatment.
Results: Keratosis lichenoides chronica (NEKAM Disease) is a rare chronic and progressive disease with only less than 80 cases reported in literature as of 2019, the cause of keratosis lichenoides chronicais not well understood with some reported familial cases due to germ line mutation in LNRP1 gene. Angioplasmocellular hyperplasia is a rare clinical condition with blood vessel proliferation and a reactive plasma cell infiltrate. Acanthosis nigricans is a skin condition characterised by a velvety papillomatous overgrowth of the epidermis that usually involve flexures and considered a sign of an underlying condition or disease, however it is predominantly linked to states of insulin resistance where obesity, diabetes, or metabolic disorders co-exist. Crohn's disease is characterized by segmental granulomatous inflammation of the intestinal tract and frequently involves cutaneous tissues and genital area in childhood disease is predominantly involved.

Conclusion: Our cases considered rare entities with a few number of cases published in literature, reaching a diagnosis and putting a treatment protocol was challenging.
Diagnosing of such a rare cases considered significant and added scientific value for our development and institute.
Keywords: keratosis lichenoides chronica, angioplasma cellular hyperplasia, generalised acanthosis nigricans, cutaneous crohns disease.

(137)

Unusual Dermatological Presentations

**Dr. Alsharif Mohammad Muhanna (Jordan)*

Objectives: My presentation will include a collection of rare dermatological diagnoses: Rosai-Dorfman disease, Pemphigus vulgaris treated with Rituximab, Vogt-Koyanagi Harada Disease and Self-healing collodion baby (SHCB).

Methodology: We used different dignostic procedures and modalities to reach the diagnosis of such a rare dermatological diseases in corporation with other medical specialities, following the patients and providing treatment plans for best outcomes.

Results: Rosai-Dorfman disease is rare disorder also known as Sinus histiocytosis with massive lymphadenopathy (SHML) which is considered as a non-Langerhans histiocytic disease of a benign and self limiting nature. Pemphigus describes a group of chronic autoimmune bullous disorders of the skin and mucous membranes characterized clinically by appearance of flaccid blisters and erosions of the mucous membrane and the skin. Pemphigus vulgaris considered fatal disease causing extensive, life-threatening erosions, especially if the diagnosis is delayed. Anti-CD20 monoclonal antibody (rituximab) is an FDA treatment option for complicated and serious cases. Vogt-Koyanagi Harada Disease (VKHD) is a rare multisystem autoimmune inflammatory condition targeting melanocytes causing dermatological, neurological, ophthalmological and auditory manifestations. Self improving collodion icthyosis (SICI) is heterogeneous group of congenital disorders that describe babies who are born covered by collodion membrane which is a translucent, parchment-like skin membrane or sheet.

Conclusion: Our cases are a rare multisystem diseases that presents with a combination of ophthalmological, neurological, auditory, dermatological signs and symptoms. Clinical diagnosis, laboratory findinds and histopathological correlation aid in the diagnosis. The diseases has a wide range of differential diagnosis in addition to different treatment modalities. Diagnosing such a rare cases considered an added scientific value for our development and institute.

Keywords: RDD : Rosai-Dorfman disease SICI : Self improving collodion icthyosis SHCB : Self healing collodion baby VKHD :Vogt-Koyanagi Harada Disease PUVA: Psoralen ultraviolet A radiation NB-UVB: Narrow band ultraviolet B radiation HLA: Human leukocyte antigen CNS: Cranial nervous system TCI: Topical calcineurin inhibitors

(138)

Ocular Manifestations of Systemic Isotretinoin in Patients with Acne: A Systemic Review and Meta-analysis

**Dr. Heba Alebous (Jordan)*
Khaled Ali Elubous ;Ahmad A Toubasi; Abedalaziz Elubous; Saif Aldeen Alryalat

Objectives: To examine the effects of systemic isotretinoin treatment on the eye using several ocular examination parameters.

Methodology: We conducted a systemic review for literature published up to June 2021 in both PubMed and Web of Science databases. We included prospective observational or interventional studies evaluating ocular manifestations of isotretinoin in acne patients. The primary outcome measures were anaesthetized and non-anaesthetized Schirmer test, tear break-up time (TBUT), central corneal thickness (CCT), average retinal nerve fibre layer (RNFL) thickness, ganglion cell-inner plexiform layer (GC-IP) thickness, subfoveal choroidal thickness, axial length, ocular surface disease index (OSDI), meibomian gland expression (MGE) and conjunctival stain. The National Institute of Health (NIH) quality assessment tools were used to assess the data quality. The effect size used to analyse the included studies was the weighted mean difference (WMD) and its related confidence intervals (95%CIs).

Results: Twenty-one publications involving 1105 eyes of 842 participants met the inclusion criteria. Isotretinoin use was significantly associated with reduction in the scores of anaesthetized Schirmer (WMD = -2.23, 95%CI: -3.28 to -1.18), non-anaesthetized Schirmer (WMD = -3.74, 95%CI: -4.23 to -3.25), TBUT (WMD = -3.47, 95%CI: -5.09 to -1.86), and CCT (WMD= -7.39, 95%CI: -13.91 to -0.88). Isotretinoin use was significantly associated with increase of OSDI (WMD = 18.29, 95%CI: 7.54-29.03), MGE (WMD = 1.02, 95%CI: 0.70-1.33) and conjunctival stain scores (WMD = 0.61, 95%CI: 0.47-0.76). No significant change was noted in RNFL thickness (WMD = -0.64, 95%CI: -1.80 to 0.51); GC-IP thickness (WMD = 0.42, 95%CI: -1.08 to 1.92); subfoveal choroidal thickness (WMD = -1.80, 95%CI: -6.69 to 3.09), and axial length (WMD = 0.08, 95%CI: -0.19 to 0.35). A significant heterogeneity was found between the study estimates in each of anaesthetized Schirmer, TBUT, MGE, OSDI, and conjunctival stain tests

Conclusion: Isotretinoin use results in a statistically significant reduction of the central corneal thickness, TBUT, and Schirmer test scores. A statistically significant increase in MGE, OSDI and conjunctival stain scores was found. No statistically significant change of average RNFL, GC-IP thickness, subfoveal choroidal thickness, or axial length was observed. Further well-designed studies should evaluate the long-term effect of isotretinoin on the eye and reach a firmer conclusion.

Keywords: Acne; GC-IP; RNFL; Schirmer test; axial length; central corneal thickness; choroidal thickness; isotretinoin; ocular side effects; ocular surface disease index

(139)
Mental health Conferences and Building Global Mental health treatment Capacity

Prof. Jed Magen (USA)

(140)
Gender Dysphoria, Transsexualism

Dr. said Al-Shunnaq (Jordan)

Transsexualism, gender dysphoria, and gender variance have been recorded throughout history and across cultures.
Transsexualism is a condition in which a person with apparently normal somatic sexual differentiation is convinced that he or she is actually a member of the opposite sex. It is associated with an irresistible urge to be hormonally, surgically, and psychosocially adapted to that sex. Transsexuality, variant of gender identity in which the affected person believes that he or she should belong to the opposite sex. The transsexual male, for example, was born with normal female genitalia and other secondary characteristics of the feminine sex; very early in life, however, he identified with men and behaved in a manner appropriate to the male sex. His sexual orientation is generally one of attraction to other females.
The biological basis of transsexualism is uncertain.
Based on healthcare demand, the prevalence of transsexualism was 22.1 in 100,000 inhabitants: 31.2 for MtF and 12.9 for FtM, making the MtF/FtM ratio approximately 2.2:1. The incidence rate was 2.5 in 100,000 inhabitants, representing an annual average of 130 demands.
With the development of successful surgical techniques and hormone therapy, several thousand transsexuals, male and female, have undergone a permanent gender reassignment. Although both male and female transsexuals exist, the male-to-female operation is more common because the genital reconstruction is more satisfactory. The male-to-female transsexual's penis and testes are removed, and an artificial vagina is created; breast implants may be inserted, although some breast development usually is promoted with the use of feminizing hormones. Female-to-male transsexuals may undergo mastectomy and hormone treatments to produce the male secondary sexual characteristics, but attempts to create an artificial penis have not been particularly satisfactory.

(141)
Cerebral Malaria: Result of a Study Children

Prof. Jed Magen (USA)

(142)
Ketamine Therapy for Resistant Depression

Dr. Naser Shuriquie (Jordan)

(143)
The Origins of Delusion

Dr. Mohammad Hindeyeh (Jordan)
Awad Dmour M.D; Praveen kumar M.D

Objectives: The objective of this research is to review structurally the literature with scanning the trans-cultural theories, reviewing databases as well as gathering clinical experiences about the origin of delusions. In addition, to facilitate clearer understanding of the true nature of the delusional experiences.
Methodology: Systematic review of the databases about the origins of delusion and testing of models and previous clinical experiences with comparing them to each other, displaying what's in common between those complex diagnostic formulations and trying to get to a conclusion to these data.
Results: A disturbances of certain chemicals in the brain (neurotransmitters) has the strongest linkage to appearance of delusions. Other environmental , social and psychological factors support the formation of delusions, but no specific pathognomonic factor causes it directly.
Conclusion: From reviewing the literature and going through various past theories , high definition brain images and previous clinical experiences, there was no definite answer to the origin of delusions , but a strong linkage to imbalance between dopamine and acetylcholine in specific regions in the brain and the starting of delusions. Other biopsychosocial factors seem to play the trigger role for the delusions to appear.
Keywords: Delusions Dopamine Acetylcholine Biopsychosocial theory Psychodynamic theory Cognitive behaviour theory

(144)

An Unexpected Approach to the Management of Chronic Motor Tic Disorder: A Case Report from the Jordanian Royal Medical Services

**Dr. Arafat Zubi, (Jordan)*

Dr. Laith Aljarrah; Dr. Najib Alqsous; Dr. Rayeh Alrashed; Dr. Mohammad Hindeyeh; Dr. Sami Bawalsa

Objectives: The purpose of this abstract is to report on the use of a simple, removable dental splint in the management of a case of chronic motor tic disorder. As is common with Tourette and tic disorder patients, conventional pharmacological therapy fell short in providing adequate symptom relief for SM, a 12-year old boy followed at KHMH outpatient psychiatry. This prompted our trial of a less-established treatment modality, the oral orthotic, adjunctively.

Methodology: In 2014, a proof of concept RCT was sponsored by the Tourette Association of America, and the positive findings from the 13-subject study were published in May 2021. Elsewhere, in 2019, researchers in Japan reported on groups of cases helped by this treatment modality and the removable device was patented and manufactured. In 2020 and 2021, several international review articles were published.

Results: SM saw clinical improvement in upper and lower limb motor tics within 24 hours of oral splint fitting. Improvement increased as he grew accustomed to the splint over the first 2 weeks, has been sustained while it is in place in his mouth, and dissipates upon removal. Interestingly, however, the mechanism of the splint's therapeutic effect remains unclear to science.

Conclusion: Curiously, SM experienced symptom improvement despite the absence of primary orofacial motor tics, or vocal tics. In addition to lending credence to the treatment modality, this case report may contribute to science's effort to better understand it. Within JRMS, we hope for a cross-disciplinary cooperation to trial oral splints in the management of other movement disorders.

Keywords: tic, tics, tourette, oral, orthotic, dental, splint

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Does Surgery Still Prevail in The Management of Breast Cancer Patients? Interpreting the Codes & Trends in Onco-Technology

**Prof. Bahadir M. Gulluoglu (Turkey)*

During the last 3 decades, due to the impact of systemic treatment, the role of surgery in breast cancer management has been de-escalated significantly. Meanwhile, less surgery did not bring worse survival and increased local relapse rates. Especially after introducing neoadjuvant systemic treatments (NST), the de-escalation in surgery became more apparent. As more effective targetted systemic agents were introduced into the clinical practice, pathological complete response (pCR) rates after NST were increased in breast cancer patients. Even in those patients with worst prognostic cancer subtypes such as triple negative cancers, survival rates were found to be excellent in patients who had pCR. With these advancements, the role of surgical treatment in breast cancer management is becoming more questionable over time. Nevertheless, even in patients with remaining tumors after NST, minimally invasive ablation methods such as cryoablation or RF ablation seem to be reasonable alternatives to open surgical excisions. The local relapse rates after minimal invasive ablations were found to be comparable to those after conventional surgery. The technological developments in biotechnology, genetic engineering, robotics, 3d-printing, artificial intelligence (AI) and quantum physics seem to bring new tools for the prevention and management of breast cancer. Such as the development of new personalized systemic agents would take a shorter time with the help of AI and the increased speed of computers. In this, quantum computing is expected to speed up AI work. Liquid biopsy seems to replace the conventional resection specimen pathology for disease staging and subtyping. CTC detection in form of DNA or RNA was shown that it may provide more precise detection and typing of the tumor. Even it may lead to the pre-emptive treatment of relapse after treatment. Genetic profiling also was found to be a determinant for loco-regional treatment decisions such as for minimal axillary management and omitting adjuvant radiotherapy after surgery. Also, genetic engineering and biotechnology would be integrated into screening methods as well as robotics technology and 3D printing would facilitate surgery and breast repair. Therefore, newer technologies are expected to improve survival and maintain quality-of-life in breast cancer patients in a more individualized manner.

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Immediate and Delayed Breast Reconstruction

Dr. Ali Abu Seene (Jordan)

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Quality Assurance in Breast Health Care: How to Organize in Practice

Prof. Bahadir M. Gulluoglu (Turkey)

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Surgical Benefits in Metastatic Breast Cancer

**Dr. Omar Abuelaish (Jordan)*

Systemic therapy still the cornerstone of treatment in metastatic breast cancer, the role of surgery as curative entity still a matter of debate whether is it palliation or does it have survival benefit is the main question.

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What did we learn from Cava Trial

**Prof. Cees Wittens (Netherlands)*

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Dysphagia Lusoria due to Aberrant Right Subclavian Artery, Diagnosis and Surgical Management

**Dr. Bashar Al Aanakrih (Jordan)*

Objectives: A case report of dysphagia lusoria due to aberrant right subclavian artery; surgical assessment, clinical and radiological diagnosis with surgical management outcome. **Methodology:** Our case is a 20-year-old woman presented to the vascular clinic at king Hussein Medical Hospital with a 3-year history of dysphagia for solid food. Upper gastrointestinal endoscopy showed a pulsatile compression to the esophagus. In addition, computed tomography demonstrated an aberrant right subclavian artery. So, she underwent right subclavian artery transposition to right common carotid artery.

Results: The right fourth aortic arch and the seventh intersegmental artery forms the right subclavian artery. Abnormal involution of the right fourth aortic arch and the connected right dorsal aorta forms an aberrant right subclavian artery. Consequently, the right subclavian artery is forced to the left side distal to the left subclavian artery and takes a retroesophageal course behind the esophagus. Only 5% have compression of the esophagus resulting in difficulty with swallowing, termed dysphagia lusoria. Moreover, This aneurysm may cause compressive symptoms (dysphagia, cough, dyspnea),thromboembolism, rupture, or dissection. Our case is a 20-year-old woman presented to the vascular clinic at king hussein medical hospital with a 3-year history of dysphagia for solid food. Upper gastrointestinal endoscopy showed a pulsatile compression in the esophagus. In addition, computed tomography demonstrated an aberrant right subclavian artery. So, she underwent right subclavian artery transposition to the right common carotid artery. On follow up visits, she reported a dramatical improvement of her symptoms after the uneventful surgery and she can tolerate solid oral intake without any symptoms.

Conclusion: Surgical treatment for symptomatic dysphagia lusoria is mandatory in some cases to relieve the symptoms of difficulty in swallowing for food

Keywords: Dysphagia lusoria, aberrant right subclavian artery. subclavian-carotid transposition, pulsatile esophageal compression

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Indications of May-Thurner Stenting

*Prof. Cees Wittens (Netherlands)

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The next Generation of Venous Stent

*Prof. Cees Wittens (Netherlands)

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Trauma System

Dr. Saud Alturki (Saudi Arabia)

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The Benefit of Pan CT Scan in Decreasing Morbidity for Blunt Trauma

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Innovation in Education

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Where we stand in Jordan from the National Trauma System

**Dr. Mahmoud Alodat (Jordan)*

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Home Sleep Apnea Testing

**Prof. Ahmed S. BaHammam (Saudi Arabia)*

The American Academy of Sleep Medicine (AASM) has proposed guidelines for using various types of sleep studies. Sleep studies have been classified into four levels; Level I: attended neuro-cardio-respiratory-muscular monitoring, Level II: Unattended comprehensive sleep study, Level III: unattended cardiorespiratory monitoring, and Level IV: Sigle or dual channel unattended sleep monitoring. According to the guidelines, Level III studies, which are also known as Home Sleep Testing (HST) or Out-of-center (OCC) studies, can be done in high-risk patients to verify the presence of sleep apnea. However, a negative test does not rule out OSA, and if the clinical suspicion is high, patients should be subjected to level I (in-lab attended) polysomnography.
However, when performing an HST, it must be ensured that:
- A trained sleep physician has evaluated the patient comprehensively. A report of the HST/OCC should be made in the background of the clinical evaluation.
- Sleep physicians must have access to the raw data generated out of HST/OCC.
- The patient has a high pre-test probability of having OSA.
- The patient cannot attend the laboratory because of immobility or critical illness.
- The patient has been educated regarding the placement of sensors by a trained sleep physician or sleep technologist. HST/OCC cannot be used if:
- The patient has congestive heart failure, neuromuscular abnormalities, or severe COPD that may compromise data quality.
- The patient has co-morbid or exclusively suffering from sleep disorders other than

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The New GINA Strategy for Severe Asthma Management and Prevention (2022 update)

**Dr. Raja AlKhasawneh (Jordan)*

The GINA Science Committee was established in 2002 to review published research on asthma management and prevention, The Science Committee normally meets twice yearly in conjunction with the American Thoracic Society (ATS) and European Respiratory Society (ERS) international conferences, to review asthma-related scientific literature.
The GINA Science Committee published the 2022 update which have some changes and additions
In my presentation I'll talk about the new GINA guidelines in severe asthma management and prevention step by step by:
- The long-term goals of asthma management from a clinical perspective are:
- Definition of controlled, uncontrolled, difficult to treat, and severe asthma
- Impact of severe asthma
- Assessment the difficult to treated, and severe asthma
- Investigate difficult to treated, and severe asthma
- Assess and treat severe asthma phenotype

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Predictors of mortality among Hospitalized Covid-19 Patients at Jordan University Hospital

**Dr. Khaled Oweidat (Jordan)*

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How to track CPAP adherence and improve compliance:
Recent updates

**Prof. Ahmed S. BaHammam (Saudi Arabia)*

Obstructive sleep apnea (OSA) is a disorder that is characterized by obstructive apneas and hypopneas resulting from the repetitive collapse of the upper airway during sleep, which is attributed to several causes that can be classified into anatomical factors such as maxillofacial structure changes or redundant soft tissues of the upper airway and physiological factors such as defects in upper airway muscles and function.
OSA is a serious medical illness. If left untreated, OSA increases both morbidity and

mortality. OSA has been shown to increase the risk of hypertension, stroke, and cardiovascular complications. Moreover, OSA increases the risk of motor vehicle accidents. Continuous positive airway pressure (CPAP) is the treatment of choice for OSA. It is an effective therapy that reduces morbidity and mortality; however, CPAP adherence remains a major obstacle. CPAP compliance has been reported to range from 20 to 84 %, depending on the design of the study, the definition of compliance, and the population examined.
CPAP is an effective treatment that reduces the risk of several complications if used regularly during sleep. However, patient adherence to CPAP therapy is a major challenge for the treating team. New technology allows the treating team to assess CPAP compliance and the presence of residual respiratory events or air leaks more accurately. Several factors have been associated with poor compliance, including side effects of the CPAP machine. Therefore, support, education, and behavioral therapy are needed to improve CPAP adherence among patients. Additionally, close follow-up of patients on CPAP therapy, particularly in the first few weeks of CPAP use, is essential to enhance CPAP compliance.

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Lung Cancer Screening, the Need for the National Programme

**Dr. Mohammad Hawari (UK)*

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Milestones of Vats: Programme at KHMC

**Dr. Hani Alhadeedi (Jordan)*

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Segmentectomy, Rational and Techniques

*Dr. Mohammad Hawari (UK)

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Approaching Complex Lung resection with Minimally Invasive Video Assisted Thoracoscopic Surgery

**Dr. Riad Amin (Jordan)*
Lung cancer is the leading cause of death among all cancer patients. its management is challenging and difficult.

with the progress and development of diagnostic tools as well as advanced therapeutics, success in cure this fatal disease is increasing and experience momentum is evolving tremendously.
Surgery is corner stone in treatment early and locally advanced tumor and help in increase overall survival.
Minimally invasive approaches is now the standard of care in early stages lung cancer and getting more popular and utilized frequently in advanced complex cases which can help to keep the standards of management rules as well as to improve the quality of patient's life and return to their normal life as soon as possible.
we will present the advantages of minimally invasive thoracic surgeries and its use in complex advanced case

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Robotic Thoracic Surgery Reality and Expectation

*Dr. Mohammad Hawari (UK)

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Dural Closure after Endoscopic Endonasal Surgery

**Prof. Joachom Oertel (Germany)*

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Pituitary Adenomas: Transsphenoidal V/S Transcranial Approaches or Both

**Dr. Raed Aljbour (Jordan)*

Introduction: Most pituitary adenomas are slow-growing and benign. However, as they grow big they can put pressure on nearby structures, Pituitary adenomas make up 10% to 15% of all tumors that develop within the skull. They are found in about 77 out of 100,000 people. In this study we will review pituitary adenoma cases were managed surgically by transsphenoidal V/S transcranial approaches or both, and what is the indication for each approach.
Materials and methods: This was a retrospective analysis of 24 patients with pituitary adenoma cases were managed surgically by transsphenoidal V/S transcranial approaches or both in the last three years, Patient age, gander, type of adenoma according to the size and hormone secretion, type of surgery transsphenoidal V/S transcranial approaches or both and outcome were considered in this study. Ethical committee approval was taken.

Results: Most of the cases referred to neurosurgery clinic either by endocrine or ophthalmic clinics, huge sizes pituitary adenomas were surgically managed due to their pressure to nearby stractures,12 cases were managed with transspenoidal approach two of them need more than one section. 8 patients managed by transcranial approach. 4 patients need both transsphenoidal and transcranial approaches

Conclusion: Pituitary surgery is a continuously evolving specialty of neurosurgery that requires precise anatomical knowledge, technical skills, and an integrated appreciation of pituitary pathophysiology, surgical approach in pituitary adenoma depends mainly in tumor size, cranial extension and invasion of skull base

Keywords: pituitary adenoma, surgery, transsphenoidal, transcranial.

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Long Term Follow Up After Endoscopic Spine Surgery

**Prof. Joachom Oertel (Germany)*

Background: Long term clinical outcome and repeat procedure rate for endoscopic tube based procedures have been investigated only by a few studies. Here we report our experience with tube based endoscopic procedures over 10 years.

Material and Method: Between January 2011 and December 2021, more than 350 consecutive MESS procedures have been performed. Two versions of endoscope holder which differ regarding the workspace were used. Patients charts were reviewed to assess pain levels, sensorimotor deficits, functional outcome, complication and the cause for repeated procedures. Patients were contacted for final follow-up to assess clinical outcome and reoperation via a standardized questionnaire including Neck disability index (NDI), Oswestry disability index (ODI) and Odoms criteria.

Results: Main indications were posterior cervical foraminotomy and lumbar procedures for disc herniation followed by lateral recess stenosis and synovial cysts. The mean follow-up for cervical and lumbar patients was 6 and 5 years, respectively. At final follow-up 69% and 76% of patients were free of arm- and leg pain, mean NDI was 10%, mean ODI was 12.4%. The repeated procedure rate at the index level was 13% at the cervical, and 10% at the lumbar spine of which 5% were for recurrent LDH. Overall 81.8% of cervical and 53.3% of lumbar repeated procedure was performed within the first year.

Conclusion: Tube based endoscopic procedures achieve high rates of pain relief and clinical success for the treatment of degenerative cervical and lumbar spine disorders.

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Surgical Management and Outcome of Large and Giant Intracranial Aneurysm

**Dr. Mohammed Barbarawi (Jordan)*
Khaled Alawneh; Suhair M.A Qudsieh; Ala` Barbarawi

Back ground: Large and Giant intracranial aneurysms are seen infrequently in the neurosurgery practice. Large aneurysms are defined as one greater than 10 mm and less than 25 mm while giant ones are greater than a 25 mm in diameter. Treatment of these lesions is associated with high morbidity and mortality rate, they usually present with mass effect, intracranial haemorrhage, stroke or seizures.

Material and Methods: We have operated on 54 patients with giant aneurysms at King Abdullah University Hospital. 33 cases were giant aneurysms and 21 large ones. 28 were females and 26 were males, mean age was 46.9 years. Most of aneurysms located in the anterior circulation 44 (80.6%) and 10 (19.4%) in the posterior circulation. Mass effect was the initial presenting symptom in about 78.7%; cerebral ischaemia in 8.3%, intracranial haemorrhage in 9.3% and seizures in 2.8%. Modified Rankin Scale was used to assess the patients neurologically pre and post operatively. Variable surgical techniques or endovascular embolization were used to treat these patients who were evaluated on a case by case basis, 32 cases (59.2%) were treated surgically for direct clipping or resection of the aneurysmal wall and aneurysmoraphy with clipping and average cross clamping time of 20 minutes. 22 (40.8%) patients underwent endovascular coiling of these 10 patients needed flow diverter stent.

Results: Excellent results was accomplished in 38 patients (70.4%), poor outcome was experienced in 10 patients (18.5%) most of them with posterior circulation aneurysm or poor condition preoperatively, the overall mortality was 11.1% as six cases died.

Conclusion: Although recent advances have improved the outcome but mortality and morbidity still high compared with other neurosurgical conditions. Several treatment strategies are available to manage these complex lesions as there is no single technique is effective in dealing with all large or giant aneurysms in different locations. Meticulous perioperative planning with surgical experience are essential to improve the outcome.

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Changing Trend in Thyroid Surgery

**Dr. Ayman Musmar (Jordan)*

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Experience of thyroid and Neck Dissection in KHMC

**Dr. Issa Mayyas (Jordan)*

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Causes of Hip Revisions (Our Experience in The Royal Jordanian Medical Services)

**Dr. Jamal Alshawabkeh (Jordan)*

Objective: To determine the causes of failure of primary total hip replacement (THR) and whether patient characteristics, underlying diagnosis, and type of primary THR were associated with the causes of revision THR.
Material and Method: We retrospectively reviewed all revision THRs in one referral hospital in Royal Jordanian medical services between 2012 and 2022. All medical records and radiographic studies were used to identify the causes of primary THR failure. Randomly selected primary THRs performed in the same period were used to compare with revision THRs to determine the risk factors for revision.
Results: This study included 250 THRs. The major reasons for revision surgery within 5 years (early failure) were aseptic loosening (29.6%), septic loosening (28.4%), and instability (22.2%).
Conclusion: Most THRs failed after 5 years and aseptic loosening was the most common cause of failure in the early period. Infection was a major cause of failure in the late period and overall, in both periods.
Younger patients at the time of primary THR were associated with a reduced risk for failure

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Pelvis Slavage Techniques, Updates and Tips

**Dr. Ghaith Abou-Nouar (Jordan)*
Dr. Sura Al Rawabdeh; Dr. Mohammad Alwan; Dr. Mahmoud Ataiwi; Dr. Ali Qdah; Dr. Ahmad Saleh

Objectives: The Pelvis is a complex body region that can be affected by Trauma and or Pathology, it is extremely important to understand the Anatomy and the different diagnostic methods and how to apply them in order to reach an accurate diagnosis, and to be familiar with the surgical updates in order to achieve the best results possible in regards to morbidity and mortality. Analysis and comparison of our results to the international published redults was performed.
Methodology: A retrospective analysis and comparison was performed between our data and results with the international published data and results.
Results: During this talk we will present our data and discuss our results to demonstrate how to hopefully achieve less morbidity and mortality in regards to Pelvis Trauma and Pathology.
Conclusion: Having good knowledge of Pelvis Anatomy, different diagnostic methods, surgical salvage techniques and updates along with the art of knowing how to and when to apply the knowledge can only achieve better results.
Keywords: pelvis, diagnostic methods, salvage tchniques, surgical updates

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Challenging Dx & Rx Abc with Unusual Features

**Dr. Ziyad Mheidat (Jordan)*

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Prediction of Quadruple Autologous Hamstring Graft Diameter in Anterior Cruciate Ligament Reconstruction Using Preoperative Anthropometric Measurements in Middle East Population

**Dr. Ashraf Omor (Jordan)*
Malek Mostafa Ghnaimat, MD; Mohammad Ahmad Abushahot, MD; Mohannad Ahmad Odat, MD; Mu'men Isoud Alshawish, MD.

Objectives: Background: Estimation of the final quadruple hamstring graft diameter in anterior cruciate ligament reconstruction could help surgeons to decide the type of graft and to be prepared for any additional procedures that might be needed to augment the unqualified grafts. We tried in this paper to investigate if there is any correlation between the preoperatively measured anthropometrics like height, weight, BMI index, and thigh circumference and the final diameter of the quadruple hamstring autograft in anterior cruciate ligament reconstruction. Hypothesis: Final Graft diameter would be influenced by Age, Thigh circumference (CM), Height (Metre), Weight (KG), and BMI index.
Method: Anthropometric measurements of 70 consecutive adults who underwent arthroscopic

ACL reconstruction in Queen Alia Hospital, Sport and Arthroscopy department between August-October 2021 were collected prospectively. The hamstring graft was prepared in a quadruple fashion and its final diameter was recorded intraoperatively. Multivariate linear regression was performed to assess the relation between quadruple hamstring graft diameter and the explanatory variables: Age, BMI Index, Height, weight, and Thigh circumference.
Results: Results: In multivariate analysis, age was the only factor that was associated with higher values of Graft diameter(MM). All other anthropometric measurements; Height (Metre), Thigh circumference (CM), Weight (KG), and BMI Index were not associated with the value of the final quadruple hamstring graft diameter(MM).
Conclusion: Conclusion: The Results of this study demonstrate that apart from age all anthropometric measurements have no obvious relation with the final quadruple hamstring graft diameter on a sample of patients from The Middle East Region. Our recommendation is not to rely on these preoperative measurements to decide the type of the graft and to be always prepared for any additional procedures to augment the unqualified grafts.
Keywords: Anthropometric measurements, Autologous hamstring graft diameter, anterior cruciate ligament.

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Outcome of Using Biceps Autograft in Reconstruction of Labral Defect in Recurrent Anterior Shoulder Dislocation

**Dr. Yousef Khair (Jordan)*
Ayman Mustafa MD; Ahmad Al Zoubi MD; Alaa' AL wekhyan MD; Ayman Al Mashagbeh PT; Wala'a Osama Al Tal PT.

Objectives: Recurrent anterior shoulder dislocation is a very common problem, which affects professional workers, athletes and military persons. Arthroscopic Bankart repair is the most popular technique used, but there is a high recurrence rate in patients either with labral tear or glenoid bone loss more than 25%The purpose of this study is to explain the technique that we used to reconstruct the labral defect in recurrent shoulder dislocation by using Biceps Brachii tendon as auto graft and its outcome.
Methodology :20 patients with history of recurrent shoulder dislocation underwent shoulder arthroscopy using the long head of Biceps as autograft in our department with average follow up 21 months (range,18 - 26 months) after the operation. All the patients had history of recurrent shoulder dislocation. We evaluated them according to clinical examinations (apprehension test and relocation test), and radiological investigations including X-ray and MRI and sometimes CT scan. we depend also on DASH SCORE.
Results: The patients who underwent arthroscopic surgery using this technique had a

significant improvement, pain free range of motion were normal forward flexion 170˚- 180 ˚, abduction 90˚, external rotation with abduction 90˚, with normal flexion of elbow, normal supination and pronation. Apprehension test post-operative was negative, and improvement DASH score 14.5 to 16.5. The patients return to do their daily activities normally.

Conclusion: Using Biceps tendon as autograft to cover the labral defect will do the same work of the labrum to form a bumper by deepening the socket so the ball will be in its place, for this reason we repair the capsule and the Biceps tendon to restore shoulder instability with less side effects when comparing with conjoined tendon transfer and it is a simple procedure.

Keywords: Recurrent Shoulder Instability; Bankart Repair; Biceps Brachii Autograft; Latarjet Procedure

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Preoperative optimization and risk satisfaction for minimizing Complications

**Prof. Berven Siguard (USA)*

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Up to Date in Scoliosis Surgery

*Dr. Firas Alhusban (Jordan)

The aims of the surgical treatment of adolescent idiopathic scoliosis is to improve the cosmetic and functional outcomes. Obtaining correction in the coronal plane is not the only important endpoint anymore. With better understanding of spinal biomechanics and the long-term effects of multiplanar imbalance, we now know that sagittal balance is equally, if not more, important. Better correction of deformities has also been
facilitated by an improvement in the design of implants and a better understanding of metallurgy. Understanding the unique character of each deformity is important. In addition, using the most appropriate implant and applying all the principles of correction in a bespoke manner is important to achieve optimum correction. In the last 20 years many advances in the surgical treatment of adolescent idiopathic scoliosis have been introduced and proved by evidenced based medicine their functional and cosmetic outcomes. In this presentation I will present the standard and up to date new surgical techniques which can treat any character of scoliosis deformity respecting more the principles of minimal invasive surgery in the growing and mild to moderate scoliosis. However severe and complex scoliosis still need more demanding preoperative planing and aggressive surgical techniques.

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Sacroilitis

**Dr. Fadi Hadidi (Jordan)*
Peter Horn; Tareq Kanaan; Qosi sabagh

Background: Lower back pain is a very common health problem amongst the population and a major cause of disability that affects work performance and wellbeing. Sacroiliac arthritis is a well-known cause of lower back pain. Sacroiliac Joint (SIJ) injections are a known modality of managing acute and chronic SIJ pain. These injections are generally used to diagnose and/or treat patients. There are two potential targets for sacroiliac joint injections; the periarticular (intracapsular) or the intraarticular spaces. The purpose of this study was to compare between these two approaches and their efficacy to relieve pain. Two centers participated in this study; Jordan University Hospital (JUH), Amman, Jordan and HELIOS Dr. Horst Schmidt Kliniken (HSK), Wiesbaden, Germany.
Methods: This study involved a total of 96 patients from both centers (45 patients from JUH and 51 from HSK), where they were initially seen in the outpatient departments, clinically diagnosed and divided into two groups according to the side of pain. Those who complained of right sided pain (46 patients) were given intra-articular injections while those who complained of left sided pain (50 patients) were given periarticular injections. The injections contained 1mL of 40mg methylprednisolone acetate with 1 mL of 2% lidocaine.
Results: The pain was evaluatedin the 96 patients at multiple intervals of time using the Numerical Rating Scale (NRS-11) as well as Verbal Rating Scale (VRS). Periarticular injections were found to be superior to intraarticular injections when compared directly after the injection (P=0.160 in Jordan, P=0.015 in Germany), one week after the injections (P=0.021 in Jordan verses P=0.001in Germany), one month after the injections (P=0.009 in Jordan verses P=0.00002 in Germany) and three months after the injections (P=0.003 in Jordan verses P=0.0002 in Germany).
Conclusions: Periarticular injections were significantly superior in relieving sacroiliac pain in comparison to intraarticular injection; from our study, we recommend the use of periarticular injection in the treatment of SUJ pain. We also recommend further prospective studies needed to confirm our findings

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Consideration of Complex surgery on Elderly patients with Spinal Deformity

**Prof. Berven Siguard (USA)*

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Revision Spine Surgery by Minimally Invasive Technique

**Dr. Firas Alhusban (Jordan)*

Revision lumbar spine surgeries are technically challenging with inconstant outcome results. Sagittal balance of the spine is becoming one of the most important factors in the assessment of spinal deformity. The literature is clear that patients satisfaction after lumbar spine surgery correlates with restoration of the sagittal balance. Sagittal imbalance can be corrected through circumferential fusion or variant complex spinal osteotomy which carries serious complications. Minimally invasive spine surgery is to achieve outcomes equivalent to those of open surgery while minimizing muscle
dissection, disruption of ligament attachment sites and collateral damage to soft tissues with less blood loss, less post-operative, shorter hospital length of stay and early
rehabilitation. In this presentation, I will emphasize over the role of minimal invasive surgery techniques in revision spine surgery. Many complex and challenging cases cases will be presented to explore intra-operative MIS and hybrid techniques
for treatment of failed back surgery.

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Spinal Deformity – The Appropriate Use for Surgery

**Prof. Berven Siguard (USA)*

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Technical Background and Optimized Patient positioning

**Prof. Traugott Skrbensky (Austria)*

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Management of Proximal Humeral Fractures Fixation using Minimal Invasive Percutaneous LCP Plate aiming device (MIPO technique): A Series of 20 Patients

Dr. Hashim Al Qudah (Jordan)

Introduction: Proximal humerus fracture fixation using plate osteosynthesis depends on the quality of the bone, design of the fixation devices and intra-operative soft tissue dissection. Using the open technique either deltopectoral or through Anterolateral or with Transdeltoid lateral approach is suitable for all cases especially the complex fracture patterns, with good results. The mentioned approaches would leave a prominent scar In the skin and deep tissues with some functional defecets. In This series, we evaluate the functional outcome of minimally invasive percutaneous plate osteosynthesis using locking compression plate (LCP- PHILOS) in proximal humerus fracture treatment.

Materials and Methods: In this series we reviewed 20 patients with proximal humerus fractures treated by minimally invasive percutaneous plate osteosynthesis using locking compression plate (PHILOS), this technique does not support the use of calcar screws to avoid injury to the axillary nerve. If these calcar supporting screws are needed, then a mini open technique to be used to avoid this nerve. There were 13 males and 7 females. The average age of was 49 years. All the patients were evaluated at four weeks, two months, four months, six months and 1 year following surgery.

Results: The patients in the series had the evidence of fracture union at an average time of 18 weeks. The average range of flexion was 135 degrees (90 to 150 degrees) and abduction was 115 degrees (90 to 145 degrees). We had superficial infection in 3 patients, one of them resolved with a short course of 4 days of iv antibiotics followed with 10 days of oral antibiotics. The second one needed incision and debridement followed up with suppressive antibiotics course, did not improve and continued to have pain mainly in the night so the plate removed then biopsy later on showed the presence of metastatic lung adenocarcinoma. The third one admitted for incision and debridement with antibiotics and improved. Excellent outcome in 15 patients, good and fair in two patients each**.**

Conclusion: Simple Proximal humerus fractures with good bone quality treated with minimally invasive percutaneous plate osteosynthesis (MIPO) using locking compression plate with minimal soft tissue dissection provides good functional outcome and early return of shoulder function. Evaluation of the results of using this technique in complex fracture pattern might need further studies with the addition of calcar supporting screws in a mini open manner to avoid injury to the axillary nerve.

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Labral Tear Refixation, Biomechanical Study

*Prof. Traugott Skrbensky (Austria)

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Epidemiology of Stress Fractures among Newly Military Recruits, A Retrospective Study

**Dr Malek Ghunaimat (Jordan)*
Hadeel Aljamaeen, RN; Duaa Alhawmdeh,RN

Background: Stress fractures have been increasingly noticed among newly recruited military personnel. Those fractures occur because of repetitive submaximal stresses to the bone over a period of time. Stress fractures carry wide spectrum of damage regarding the organization & the individual himself in a way that he may he or she may be disqualified from the military service. Our study aims to determine the risk factors, anatomical distribution, pattern of onset, preventive methods and disability patterns related to Stress fractures.
Methods: In our retrospective study, the data survey was conducted over the newly military recruits in Mu'ta University-Military division. Our survey was held to analyze the risk factors associated with increasing the risk of occurrence of such fractures as: duration of training before onset of symptoms, type of shoe wear used during training, body mass index of the recruit, Vit D & Calcium level, history of steroid usage, alcohol consumption or smoking and multi other factors. Our survey also elaborated the anatomical distribution for those stress fractures.
Results: 100 recruits were enrolled in our study, 51 of them were diagnosed with stress fracture. The most common involved bone was tibia being involved in 55 % of positive cases followed by the femur (35%). Average time of diagnosis was at the 6th week of beginning of training. All of positive cases showed low Vit D & Calcium level. 75% of positive cases didn't used the appropriate sport shoe wear.
8 recruits were disqualified from the military service army being a case of stress fracture, and femoral neck fracture was the most common cause of invalidation.
Conclusion: Stress fractures is considered a disabling injury which is faced by athletes and newly military recruits. The best approach to deal with such fractures is prevention. This can be done by gradual increase in the intensity of training, giving instruction for recruits to keep using suitable sport shoe while training, keep on Vit D & Calcium supplement and avoid smoking, alcohol & steroids. The most common cause which ended in disqualification of newly recruits was femoral neck fractures.

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Extensile Lateral Approach for Treatment of Posterolateral Tibial Plateau fractures Improves Exposure.

Dr. Fadi Al Rousan (Jordan)

Objectives: Tibial Plateau Fractures present with a wide variety of fracture orientations and complexity. The standard Lateral & Anterolateral Approaches to Tibia plateau fails to provide proper visualization of Posterolateral articular surface fractures, which makes reduction and fixation of posterolateral fragments very challenging and often unacceptable.

Methodology: In Royal medical services – Royal rehabilitation center, in the period of April 2021-June 2022, sixteen cases of tibial plateau fractures were associated with posterolateral bony comminution. All of which were operated through extensile lateral approach. We use the standard lateral approach with the patient in lateral position. Common peroneal nerve is isolated and protected, and the Lateral Collateral Ligament and Popliteus tendon were isolated in order to identify their origin and detach it with a bony block. After LCL origin detachment, retraction of the bony block will allow excellent visualization of the posterolateral articular surface.

Results: This approach reliably improves direct visualization of the posterolateral plateau. An excellent reduction was achieved in all sixteen cases and was assessed by CT scan that were managed through extensile lateral approach. All cases underwent a postoperative CT scan to further evaluate the quality of reduction.

Conclusion: Extensile lateral approach provides excellent access for associated posterolateral fragments of tibia plateau, which is reflected on the quality of reduction to guarantee good long-term results for such articular fractures.

Keywords: Tibial plateau, extensile approach

(188)

Bone Fracture Patterns and Distributions according to Trauma Energy

Dr. Ahmad Almigdad (Speaker)
Ayman Mustafa; Sattam Alazaydeh; Mu'men Alshawish; Mohammad Bani Mustafa; Hamza Alfukaha

Objectives: This study investigates the effect of injury mechanisms and energy on fracture patterns and distributions. Also, compare differences in bone fracture patterns based on injury mechanism, gender, and age.

Methodology: Three thousand and sixty-six admitted patients with bone fractures were

reviewed retrospectively regarding age, gender, and mechanism of injury. Fractures were located in eleven bones. However, the forearm, hand, leg, and foot were considered one bone, and the fracture was then subclassified according to the anatomic position within each bone. Trauma energy was classified according to the mechanism of injury into low-energy and high-energy injuries.

Results: Patients were more prone to injuries than females below fifty years and women above fifty years were more frequent, and a third of females' injuries occurred in the elderly. Simple falls represent two-thirds of the trauma mechanism. Scapular, clavicular, distal humerus, and shaft of long bones were more prevalent in males. In contrast, females had a higher frequency of proximal humerus, proximal and distal femur, distal leg, and thoracic spine.

Conclusion: The trauma's energy determines the bone injury's extent and nature. Knowing the trauma mechanism is essential to expect the extent of injuries and construct preventive measures accordingly.

Keywords: Biomechanics, Fracture, High-energy, Low-energy, Trauma

(189)

A Review of Fixation Modalities for Thin Lateral Cortex - Intertrochanteric Femoral Fractures

**Dr. Naser Shari (Jordan)*
Ahmad K. Almigdad (MD); Mohammad A. Alsaaideh (MD); Khalid A. Banimelhem (MD); Zaid W. Althunaibat (MD)

Objectives: There is an increasing awareness of the importance of the integrity of lateral wall of proximal femur, besides previous agreement on integrity of posteromedial portion of proximal femur, which was considered the most important prognostic indicator of fracture stability. This study aimed to compare outcomes of fixation modalities used to treat thin lateral wall intertrochanteric proximal femur fracture.

Methodology: In this retrospective study, seventy-five treated thin lateral cortex intertrochanteric fractures were evaluated radiologically at different follow-up intervals to measure outcome of different treatments. Dynamic Hip screw (DHS), Dynamic Condylar Screw (DCS), and Proximal Femoral Nail (PFN) were compared regarding healing, mortality, complications.

Results: Patients mean age was 76.75±11.37 years, and 61.3% of them had comorbidities. The three used treatments were similar regarding healing time, revision rate and mortality rate. One-year mortality rate was 12%. PFN maintained superior accepted position on follow-up. Although DHS showed excellent reduction on initial postoperative X-ray, less than half of fractures sustained accepted reduction on first follow-up secondary to medialization of shaft(32%) and Varus collapse(24%).

Conclusion: In fixation of thin lateral wall intertrochanteric fracture, PFN revealed superior results regarding reduction and lower complication rate than other modalities. Therefore, PFN should be used, and DHS and DCS should be avoided in this fracture pattern.
Keywords: Proximal femur lateral wall, Dynamic hip screw, Proximal femoral nail

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Treatment Delay Interval in Treatment of Musculoskeletal Malignant Tumors Patients at Royal Rehabilitation Center

**Dr. Mohammad Al-Alwan (Jordan)*
Fatima Al Tawahia RN; Haya Al-jahran RN; Osama Alkayid RN; Emran Alsmiaat RT

Objectives: The time interval from the first symptoms appear to the beginning of treatment is usually called treatment delay, and this affects the prognosis, patient's outcomes and survival rate. Treatment delay could be patient delay, referral delay and system delay intervals. The earlier the diagnosis of the musculoskeletal oncology patient is the higher chances of the removal of the primary tumor and reconstruction of the limb hence it would increase the survival rates and functional outcomes.
Methodology: In this study, we retrospectively analyzed 147 patients who presented with malignant Musculoskeletal Tumor in the Musculoskeletal Tumor department in Royal Rehabilitation Center (RRC) at Royal Medical Services between Jan 2016- Dec 2018.The data collected from operative notes documentation, patient files records and histopathology reports.
Results: We have found treatment delay mostly due to patient delay which is the time interval between the first symptoms appear to the first visit to a clinic for medical workup with mean treatment delay 193 days (96-247) while the mean for referral delay interval was 34 (16-43) days and the mean for system delay interval was 26 days (13-38).
Conclusion: We have found the treatment delay mostly patient related not referral delay nor system delay which could be due to the socioeconomic factors and lack of awareness of musculoskeletal malignant tumors which needs further studies to know the causes of patient delay in our population.
Keywords: Treatment delay, patient delay interval, referral delay interval and system delay interval

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Calcaneal Lengthening for Correction of Symptomatic Flexible Flat Foot in Children

Dr. Mahmoud Sbaihat (Jordan)

Objectives: Flexible Flatfoot (Pes Planovalgus) is undoubtedly one of the most common "deformities" evaluated by pediatric orthopedist. The mainstay of treatment is conservative with surgical procedure preserved for the symptomatic feet that failed non-surgical management. the purpose of this study was to evaluate the clinical, functional and radiological outcome of calcaneal lengthening osteotomy for the treatment of symptomatic flatfoot deformity in children.

Methodology: A prospective multi-centre study on 19 feet of 16 patients who underwent lateral calcaneal lengthening for symptomatic flatfoot in children in the period between March 2016 and August 2019. Inclusion criteria were symptomatic flexible flatfoot in children with failed non operative treatment and tight Achilles tendon. All patients met the inclusion criteria and were available for clinical and radiological follow-up.

Results: The percentage male were (62%), female were (38%). The mean age at time of surgery was 12 years old (9 – 15 years old), and their mean follow up period was 16 (12-23) months. The mean functional American Orthopedic Foot and Ankle Society (AOFAS) Ankle-Hindfoot score had improved from 43.45 (31-55) preoperative to 85.52 (68-92) postoperative at last follow up (P value < 0.001) using paired t-test as a significance test for evaluation of pre and post-operative AOFAS score.

Conclusion: The results of this study support the combination of lateral column lengthening and soft tissue reconstruction for treatment of Plano-valgus foot deformity. The adopted technique revealed satisfactory result in both children and adolescents.

Keywords: flatfoot, symptomatic, calcaneal lengthening

(192)

Shoulder Joint Remodelling after Open Head Reduction Surgery in Patients with Obstetrical Brachial Plexus Palsy

Dr. Haider Saudi (Jordan)
Razi Altarawneh MD; Deya-Aldeen Alrashdan MD; Mahmoud Sbaihat MD; Firas Ahmad Suleiman MD

Objectives: to study the radiological changes on the shoulder joint by computerized tomography in patients with Obstetrical Brachial plexus palsy who underwent open head reduction surgery.

Methodology: a retrospective study between 2014 and 2020, on 52 patients with Obstetrical Brachial plexus palsy who underwent open head reduction surgery, with a follow-up between 12 to 72 months. Axial CT scan done to all patients per-operatively and 12 months post-operatively to study the changes in the glenoid and the humeral head.
Results: all patients who underwent surgery had limitation of external rotation of the shoulder and positive trumpet sign and the CT scan shows posterior shoulder dislocation, post-operative CT scan shows reduced shoulder joints with clinical improvements concerning external rotation, but around 27% where unable to reach their abdomen.
Conclusion: open head reduction surgery reduces the dislocated shoulder joint; remodelling improves the glenoid dysplasia. Shoulder external rotation improved in all patients. Less than 30% of the patients may need internal rotation humeral osteotomy.
Keywords: Obstetrical Brachial plexus palsy, humeral head reduction surgery, glenoid dysplasia.

(193)
Posterior Only Correction of Severe Rigid Scoliosis

**Dr. Mohammad Obeidat (Jordan)*
Raed Wajokh. MD; Sami Al Rawashdeh MD; Omar Bashmaf MD

Objectives: To evaluate the safety and effectiveness of posterior only correction of severe rigid scoliosis.
Methodology: Between February 2014 and October 2018, 32 patients were surgically treated for severe scoliosis (more than 70 degrees) with posterior only correction using pedicel screws with a minimum 2 years' follow-up. All cases were classified according to Lenke classification. All cases were treated by the same medical operating team using free hand technique.
Results: This study included 32 patients (20 females and 7 Males). The mean age at the time of surgery was 13.7 years (range 11.3- 16 years). The mean duration of surgery was 289 +_ 39 min and blood loss was 1050 +_ 380ml. The mean correction rate for the cobb angle of major and minor curve was 71.2% and 67.7% respectively
Conclusion: Posterior only surgical correction of severe rigid scoliosis of more than 70 degrees using pedicle screw-rod system is safe and effective
Keywords: Scoliosis, Rigid, Posterior

(194)

Approach to Upper Limb Deformity in Cerebral Palsy

**Dr. Saab Mestarihi (Jordan)*

Objectives: Cerebral palsy defined as non-progressive central nervous system pathology associated with joint deformity, spasticity and muscl imbalance. This causes shoulder internal rotation, elbow flexion, pronation of forearm, wrist flexion and thumb in palm deformity. In this study various surgical releases at elbow and forearm, tendon transfers and repositioning at and hand were done with promising results with improvement of upperlimb function and daily living tasks. Surgical treatment is usualy indicated in patients with spastic joint contracture who cannot comply with daily activity

Methodology: Between 2017-2021 year, twenty on cases were done by same surgeon at different hospitals In RMS,mean age of patients was 9 years(3_22), with male dominance. Surgery done in staged method (2-3 stages) starting with common flexor origin release at elbow level and pronator teres +-rerouting to improve elbow extension, forearm supination and passive wrist extension. Stage two invoves tendon transfer mainly flexor carpi ulnaris to extensor carpi radialis brevis+-proximal row carpectomy.finally extensor pollicis longus rerouting with widening of first web spase. Mean period between surgeris was7 months. Various splints were used befor and after surgeris.

Results: Avarge follow up 15 months. All patients range of motion hand and elbow function markedly improved. Better gripping and hand controlling. Elbow rang of mtion improved by 40 of extention. Supination passive and active ROM improved 60 degrees. Wrist active extension up to 25 degrees. Thumb holding large objects and controlling improved. 4 patients with older age group (17-23year) all underwent proximal row carpectomy. 7 patients underwent EPL reroting a widening of first web space. Common pronater flexor origin release is avalid approch with low recurrance and resembls alternative for tendon lengthening of flexor tendons of forearm.

Conclusion: Comparision of preoparative and postoparative upper extremity functional use and range of motion showed significant improvement, with low complication rate. Implying that pateint and family are compliants with pre-and postsurgical protocols. Surgery markedly improves quality of life for these patients

Keywords: Cereberal palsy, tendon transfer, rerouting, common pronater flexor origin

(195)

Chronic Bilateral Knee Septic Arthritis: A Case Presentation

Dr. Hamed Al Sarhan (Jordan)

Objectives: Septic arthritis or as called as bacterial arthritis is an infection affecting synovial memebran.it is an extremely painful and considered as an orthopedic emergency. management of septic arthritis depend on drainage of all infected synovial fluid, administration of intravenous antibiotics, debridement of associated soft tissue infection and osteomyelitis if present, with early mobilization of the affected joint as soon as possible. Our patient was a 63 year diabetic woman, presented to the emergency department with sever bilateral knee pain , swelling and inability to walk for more than four weeks . Previously she had chronic bilateral knee pain , and diagnosed as bilateral osteoarthritis of the knee joints, and as a part of her conservative management she received bilateral knee intra articular platelets rich plasma(PRP) injections, then few days later she develop sever bilateral knee pain and she was treated as a case of osteoarthritis till she presented to our emergency department and diagnosed as a case of bilateral knee septic arthritis with bilateral proximal tibia osteomyelitis, and underwent surgical debridement and intravenous antibiotics till the inflammatory markers normalized and her symptoms resolved .

Methodology: Our patient was a 63 year diabetic woman, presented to the emergency department with sever bilateral knee pain, swelling and inability to walk for more than four weeks . Previously she had chronic bilateral knee pain , and diagnosed as bilateral osteoarthritis of the knee joints, and as a part of her conservative management she received bilateral knee intra articular platelets rich plasma(PRP) injections, then few days later she develop sever bilateral knee pain and she was treated as a case of osteoarthritis till she presented to our emergency department and diagnosed as a case of bilateral knee septic arthritis with bilateral proximal tibia osteomyelitis, and underwent surgical debridement and intravenous antibiotics till the inflammatory markers normalized and her symptoms resolved .

Results: Synovial fluid aspiration reveal thick pus and send for culture. Both knee MRI show bilateral tibia osteomyelitis surgical drainage done twice bilaterally Intravenous antibiotics for 4 weeks' Oral antibiotics for 3 weeks

Conclusion: Intra articular injections is a risk factor for septic arthritis especially in diabetic patients. Always think about septic arthritis whenever you see a patient with joint pain and swelling. osteomyelitis is a complication of delayed drainage of septic joint arthritis

Keywords: Septic knee arthritis Intra articular injections

(196)

Primary Ahmed Valve Implantation: A Surgical Option for Pediatric Glaucoma

**Prof. William Astle (Canada)*

Ahmed Valve surgery as a primary procedure is a viable treatment for congenital and pediatric glaucoma. Evidence demonstrates that primary Ahmed valve implantation for pediatric patients is highly successful. The surgical use of Ahmed valves as a primary procedure is a valuable tool that decreases the chance of multiple operations, decreases the incidence of potentially blinding complications, avoids successive swings in IOP, and decreases the need for post-op IOP meds. In addition, there are fewer amblyogenic factors to deal with, faster visual rehabilitation for these children, and less chance of long term permanent visual loss. The primary implantation of an Ahmed valve in both primary congenital glaucoma and developmental pediatric glaucoma is safe, effective, and minimally invasive. As technology and valve designs continue to improve and evolve over time, success rates with these complex pediatric glaucoma entities should improve even further. This presentation will discuss these issues, demonstrating that aqueous shunt devices like the Ahmed valve should be considered as a primary surgical procedure for pediatric glaucoma.

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IOL Implants for Children Under Age 1 Year: A "Safety" Problem?

**Prof. William Astle (Canada)*

There is now overwhelming literature, demonstrating the effective, safe use of PC IOLs in children requiring cataract surgery, under age one year. While most likely requiring a two-stage procedure, these children experience safe, straight forward procedures that rapidly and effectively restore their visual acuity and fusional ability. This presentation will examine why leaving these eyes aphakic leads to additional visual problems related to increased long-term potentially permanent visual loss, through worsening amblyopia, increased strabismus and aphakic glaucoma. This presentation will examine the plethora of supporting literature, clearly demonstrating that with a foldable PC IOL in children under one with cataracts, there is less amblyopia treatment required to achieve visual success, less strabismus encountered, and dramatically fewer long-term adverse glaucoma events occurring post-operatively. Future research into continued improvements in surgical instrumentation, on-going improvements in surgical technique, and future improvements in IOL design, will continue to help improve on the visual successes already achieved over the past 25 years. Primary intraocular lens implants in children under the age of 1 year are safe and effective long-term and should be considered as a standard surgical treatment for successfully improving vision in this complex group of patients.

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Visual Electrophysiology

**Dr. Samir El- Mulki (Jordan)*

Electrophysiological testing provides an objective and noninvasive method for visual pathway evaluation.
Complementary use of different electrophysiological procedures allows accurate characterization and localization of dysfunction.
EOG: The photoreceptor/RPE interface; ERG: rod and cone photoreceptor and inner retinal function; PERG: macular and retinal ganglion cell function; VEP: intracranial visual pathway function.
Electrophysiology enables distinction between disorders that may present with similar signs and/or symptoms and facilitates differentiation between benign and severe, progressive and stationary disorders Invaluable in suspected nonorganic visual loss.
Accurate electrophysiological phenotyping is likely to become increasingly important as genotyping increases and new therapies are developed.
This talk summarizes the electrophysiological findings in several common types of congenital and hereditary disorders in children, and outlines the role of visual electrophysiological testing in diagnosing these conditions during the assessment of the apparently blind child.

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New Thoughts On Amblyopia

**Prof. William Astle (Canada)*

Since its inception in 1997, the Pediatric Eye Disease Investigator Group (PEDIG) has sought to study basic amblyopia questions that had never been studied with large scale multicenter studies. This presentationwill review the most important of these studies, examining the effects of patching vs atropine penalization, and the powerful effect of glasses alone on various forms of amblyopia. New treatments for amblyopia including laser refractive surgery and other refractive treatments such as pIOL's will be discussed. By choosing appropriate treatments for amblyopia based on type of amblyopia and the age of the patient, success in treating amblyopia can be made even in older age groups. What has been learned through the PEDIG studies and an effective treatment approach for 2023, based on these studies, will be presented.

(200)
Albinism: New Thoughts on an Old Topic

**Prof. William Astle (Canada)*

This presentation will discuss the genetics of albinism, the clinical features of albinism, and the medical and surgical management of albinism. Diagnostic improvements such as OCT, as well as the successful use of glasses, strabismus surgery, laser refractive surgery, and intraocular surgeries can significantly alter visual outcomes in patients with albinism, not considered helpful in the past. Recent geo-political issues surrounding albinism will also be discussed.

(201)

Acute Acquired Comitant Esotropia after Covid-19 Lockdown

**Dr. Ismat Erefej (Jordan)*

The COVID-19 pandemic has changed our life dramatically. All students have turned to e-learning since then ,which means long time near work especially on smartphone; this increase the risk of inducement of sudden onset esotropia. Considerable number of children and teenagers with complaint of acute onset squint and or diplopia who presented to the Pediatric ophthalmology and strabismus Center at Queen Rania Hospital for Children and ophthalmology Department at Royal Medical Services. Diagnostic challenges of such cases as well as examination findings and management will be discussed.

(202)
Updates on Macular Hole and Epiretinal Membrane Surgery

**Prof. Amjad Hammad (USA)*

Macular hole surgery is a very successful retinal procedure that had evolved since it was introduced in 1994. We will discuss use of adjuvants including Kenalog/Triessence and ICG / membrane blue as well as different techniques of ILM peels. No face down vs short acting gas will be discussed.
Epiretinal membrane peels are a very common procedure and can be considered to be the bread and butter of retinal surgeons. Attention must be made to successful complete peels and different techniques will be shown and use of adjuvants as well as different tools.

(203)
Our Experience with Beovu in AMD

**Prof. Amjad Hammad (USA)*

Beovu and Brolucizumab is a newer anti-VEGF medication that has seen very limited use and penetration in the USA. There are side effect concerns about occlusive vasculitis which occurs in a small percentage of patients and is possibly devastating visually. However, in a small subset of patients it has great potential and is quite effective. We will present our small series of patients and our indications for using and results.

(204)
Combined Rhegmatogenous and Traction Retinal Detachment in Proliferative Diabetic Retinopathy: Surgical Approach and Prognosis.

**Dr. Mohd Y. Alhashki (Jordan)*

Advanced proliferative diabetic retinopathy (PDR) with combined tractional and rhegmatogenous retinal detachment (CTRRD) is a vision threating complication in diabetic patients with uncontrolled fasting blood sugar and HbA1c. Those patients are not compliant to the treatment and follow up visits at the retina clinic. They present to the surgical retina clinic as a referred case from medical retina clinics of different military and public hospitals across Jordan.
Surgical management with pars plana vitrectomy and silicon oil tamponade is the procedure to manage such cases. Adjunctive therapy with methotrexate intravitreal injection, 5FU and intravitreal Anti-VEGFs to improve the prognosis might be used.
This presentation will discuss the experience of managing combined tractional and rhegmatogenous retinal detachment at the Ophthalmology Department of King Hussein Hospital / Jordanian Royal Medical Services. This will include challenging cases, procedure, prognosis and the complications that have been encountered after pars plana vitrectomy.

(205)
Efficacy and Safety of Intra Vitreal Brolucizumab in Naïve and Previously Treated Wet Age-Related Macular Degeneration Patients

**Dr. Ahmed Khatatbeh (Jordan)*
Aysha AlQtaishat,RN; Mohammad Alrafayah,RN; Shatha Almomani, Optometrist; Dua' Al Drobi, Optometrist; Heba M. Aladwan,RN

Aim: to compare the safety and efficacy of intra vitreal Brolucizumab between naïve and previously treated eye with wet age-related macular degeneration.
Method: this retrospective study was conducted at the ophthalmology clinic in king Hussein Medical Center between June 2021 and September 2022. All patients who were diagnosed to have active wet age-related macular degeneration and received 3 monthly intra vitreal injections of Brolucizumab were included in the study. Patients with previous inflammatory eye diseases (uveitis) and patients with previous other forms of maculopathy were excluded from the study. The eyes were divided into two groups: group A are those who did not receive any intra vitreal injection for AMD (naïve) and group B: are those who received previous intra vitreal injection of anti-VEGF. The medical records of the patients were reviewed regarding their BCVA, central macular thickness (CMT), and IOP measurements at the time of injection (baseline) and at 1 week ,1 month,2 months and 3 months after the injection.
Results: 25 patients (25 eyes) with a mean age of 64.8 years were included in the study. There was no significant statistical difference between group A and B regarding mean age, baseline BCVA, CMT and IOP. The BCVA improved in group A from 0.12 to 0.35, 0.43 and 0.52 at 1st week, 1 month, 2 months 3 months after 1st injection. While in group B BCVA improved from 0.11 to 0.14,0.18, 0.23 and 0.18 at the same time intervals respectively. In group A, the percentages of eyes with free retinal fluid became 44.4% at the first week with subsequent improvement to 100% at 1 month, 2 months and 3 months after injection. In group B, the ratio of eyes with free retinal fluids was 6.3%,25%, 50% and 56.2% at 1st week, 1 month, 2 months and 3 months after the starting treatment
Conclusion: significant improvement in visual acuity and retinal fluid resolution was observed in naïve eyes compared to previously treated eyes with anti-VEGF.

(206)
Port System for Anti-VEGF Treatment: Early Experience

Prof. Amjad Hammad (USA)

The port system is an innovative medical device implanted surgically for long term anti-VEGF release. We will discuss technique and pitfalls and our early experience with it.

(207)
Managing post Injection Endophthalmitis

**Prof. Amjad Hammad (USA)*

Endophthalmitis remains one of the most devastating possible complications of intra-ocular injections. We will discuss incidence and prevention as well as current trends in management and early vitrectomy versus tap and injection treatment.

(208)
Prof. Ramesh Ayyala (USA)

The Future of Glaucoma Surgery: Where are we Headed?

**Prof. Ramesh Ayyala (USA)*

Glaucoma is multifaceted disease process. Every patient is unique and deserves individualized management strategy. For example, all patients with ocular hypertension cannot be treated the same with drops or SLT. Some of them are un responsive to these and still have IOPs greater than 30 mm HG. This subset will need some kind of surgical intervention (ex MIGS) while someone with similar pressures unresponsive to medications and laser but associated. with visual field loss may deserve some form of filtration surgery. The. various MIGS procedures that we commonly use along with various forms of filtration surgery will be discussed. The use of Glaucoma drainage devices (valved and non-valved) in different diseases (NVG, UG,TG etc) and tricks we use to enhance their success rate will be presented. In summary, this presentation will walk the audience through the different glaucoma surgeries, indications and tips to improve the success rate and will conclude with the brief look at the future.

(209)
Cornea and Glaucoma, All You Want to Know

**Dr. Mohannad Albdour (Jordan)*

Interaction between corneal diseases and glaucoma is of paramount important in ophthalmology which dictate both glaucoma and cornea specialist to cooperate and play in one team to unveils the secrets of diseases in common.
A lot of diagnostic tools in glaucoma integrate corneal properties in its analysis to yield a

comprehensive image and results to complete the understanding of glaucoma.
Therapeutic regimens for glaucoma can affect the cornea and add to patients suffer and struggle and double the trouble of glaucoma management.
Corneal hysteresis may add new definition to glaucoma diagnosis and treatment.
This presentation will concentrate on where cornea and glaucoma intersect, what surgeries need both teams to be present and how ocular surface disease make adherence and compliance of patients to glaucoma treatment a real challenge

(210)
Slow Release Drug Delivery Systems in Glaucoma

**Prof. Ramesh Ayyala (USA)*

For the 150 years, Glaucoma medications are generally applied to the eye as drops once or twice a day. These drops are associated with surface toxicity, dry eyes, punctate epitheliopathy, contact dermatitis, red eyes to name a few. Compliance is another major factor with daily application of drops. Durysta is the only FDA approved Slow release (SR) preservative free medication delivered into the eye as an injectable form. While our talk covers mostly Durysta, we will briefly talk about other SR therapies under investigation include: bimatoprost ocular ring (Allergan)), iDose® (Glaukos Corporation), ENV515 (Envisia Therapeutics) OTX-TP (Ocular Therapeutix) OTX-TIC (Ocular Therapeutix) and latanoprost free acid SR (PolyActiva). The final section will cover SR systems in development including slow release antifibrotic system (ElutiGLASS 1 & 2, I own patents on this technology) and HA based mmc injectable system (I own patents on this technology).

(211)
Structure-Function Correlation in Glaucoma: The Hood Report

**Dr. Mohammad Bilal (Jordan)*

This presentation summarizes the relationship between structural changes on RNFL swept source OCT and visual field changes on 24-2 and 10-2 tests. The Hood report is highlighted as a model for predicting visual field results from OCT results. A small series of cases is discussed proving the Hood report hypothesis.

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Lens and Glaucoma

**Prof. Ramesh Ayyala (USA)*

The anatomy of the eye plays a big role in the etiology of many glaucomas, especially those with compromised angles. A big lens in a small eye (nanophthalmos, microcornea etc), a subluxated or phacomorphic lens (trauma, microsherophakia), phacolytic lens (trauma or old age) etc will be discussed. Patients with acute angle closure glaucoma will respond best to lens extraction with goniosynechiolysis, while patients with chronic angle closure glaucoma and or Plateau iris syndrome will need Endocycloplasty a part from cataract extraction and goniosynechiolysis (techniques of different procedures we perform to achieve goniosyncehiolysis will be presented). Often times we combine these procedures with MIGS procedures to improve the surgical results. Management of nanophthalmos associated glaucoma and similar difficult but rare presentations will be addressed. Combination of cataract and glaucoma surgeries in patients with routine cataracts and. underlying glaucoma and tips to improve the success rate will also be discussed.

(213)
Sewing The Suit. Corneal Suturing Techniques

**Dr. Nancy Al Raqqad (Jordan)*

Objectives: to present various techniques of corneal suturing and wound handling in anterior segment trauma.
Methodology: various methods in detailed pictures will be outlined during the presentation
Results: strategy of anterior segment suturing including corneal wounds, transplantation, trauma, iris sutures will be highlighted.
Conclusion: knowledge and application of different techniques in handling corneal tissue and achieving best surgical outcomes.
Keywords: cornea, suture, keratoplasty

(214)

Changes of Patterns and Outcome of Facial and Ocular Trauma Among Children in Jordan

**Dr. Hiba Khraisat (Jordan)*
Ahmed Khatatbeh,MD; Enas Othman DDS; Ali Alawneh,MD; Samer Alawneh,MD.

Objectives: to explore whether there are any changes in the patterns and outcome of ocular and facial trauma among children between 1999 and 2019

Methodology: this is a retrospective study conducted at Royal Medical Services (RMS) military hospitals. the medical records of the patients who attended to RMS hospitals between 1st Jan. 1999 and 31st Dec.2019 suffering from eye trauma which required hospitalization were enrolled in the study and reviewed regarding age, gender, mechanism of trauma, severity of trauma, eye structures involved and visual outcome. The patients were divided into three groups based on the time of trauma; group A for injuries in the period (1/1. 1999-31 /12 2005), group B for the period (1/1/2006-31/12/2012) and group C for the period (1/1/2013-31/12/2019). The collected data was analyzed and compared to explore whether there is any change in the pattern and visual morbidity of eye injuries over time. The most frequent finding of eye injury was corneal wound in group A and B patients while in group C the most common ocular injury was Ecchymosis or sub-conjunctival hemorrhage.

Results: 3130 patients (3130 eyes) aged between 2 and 14 years (mean 7.11 ± 3.13). Male to female ratio was 2:1. 1864 patients (56.6%) were at 5 years of age or younger. The most common place of injury in the three groups was at the street. This ratio decreased from 64.0% in group A to 48.8% in group C. Stone was the commonest etiology of injury in group A (38.0%) while wood and fall were the commonest in group B (28.5%) and C (37.1%) respectively. Open globe injuries constituted 67.0% of patients in group A, 64.7% of patients in group B and 51.2% of patients in group C. At presentation normal or mild visual impairment was noted in (43.9%) of patients in groups C compared with only (7.5%) and (8.3%) of patients in groups A and B. Final vision of normal or mild visual impairment was reported in 37.1%,38.5% and77.5% of patients in groups A, B and C respectively.

Conclusion: recently, ocular injuries became less frequent and less serious than before with higher rates of closed globe injuries. There was dramatic increase in the rate of indoor injuries compared with outdoor ones which was mostly caused by falls with better initial and final visual outcome.

Keywords: Children, ocular trauma, patterns

(215)

Sutureless Glueless Pterygium Excision with Autograft

**Dr. Shadi Al Hrafsheh (KSA)*

Objectives: How to perform a pterygium excision with autograft without sutures and without glue.
Methodology: Illustrated in a video, a special technique is used to fix the conjunctival autograft in place without using sutures or glue after excision of the pterygium and following up to assure proper attachment of the graft.
Results: Comparable fixation was the result of this unique method to spread the conjunctiva and fix it in place, same as using many stitches but without the bothering irritation to the patients' eyes which may last for weeks, and same as using glue but without the need to provide this material especially in peripheral or rural hospitals.
Conclusion: Sutureless and glueless pterygium excision with autograft is an excellent choice decreasing the postoperative irritation of the sutures and giving the same result as suturing or gluing the graft.
Keywords: Sutureless, glueless, pterygium, excision, autograft.

(216)

Intravitreal Anti-VEGF: Discussing The When What, And Why in Our Experience.

**Dr. Shehab Al-Abed (Jordan)*
Lana Ahmad Al-Abed

Objectives: In our practice, different kinds of Anti-Vascular Endothelial Growth Factor (VEGF) intravitreal injections are considered an essential pillar in treating a broad spectrum of retinal diseases.
Methodology: We present some cases from our practice, discussing whether they should be treated with anti-VEGF or not and what anti-VEGF formula suits this case best.
Results: Cases presentation and discussions (see methodology)
Conclusion: Patients with retinal diseases should have a battery of different fundal imaging and investigations to attain the best treatment approach and decide whether to stay on the concurrent treatment provided for the patient, stop it, or switch it.
Keywords: Cases discussion, anti-VEGF, intravitreal injections

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Retinoblastoma and Uveal Melanoma in Jordan: Incidence, Demographics, and Survival (2011-2020)

**Dr. Mona T. Mohammad (Jordan)*
Mona Mohammad, MD; Yacoub A. Yousef, MD; Ibrahim Al-Nawaiseh, MD; Hala Mahafza, MD; Hadeel Halalsheh, MD; Mustafa Mehyar, MD; Reem AlJabari, OD; Khaleel Al-Rawashdeh, MD; Imad Jaradat, MD; Iyad Sultan, MD; Maysa Al-Hussaini,MD.

Objectives: Sufficient epidemiologic data about intraocular tumors in the Middle East is missing. We present an epidemiologic analysis of retinoblastoma (RB) and uveal melanoma (UM) in Jordan to aid national and regional strategies for improved ocular cancer surveillance and control

Methodology: A retrospective cohort of all Jordanian patients with diagnosed RB and UM over 10 years (2011-2020). Outcome measures included incidence, demographics, globe salvage and survival.

Results: Retinoblastoma (n=124) was more common than UM (n=82), and both had no sex predilection. The median age at diagnosis of RB was 15 months (6 and 28 months for bilateral and unilateral cases, respectively), and the mean age-adjusted incidence was 8.2 cases per million children per year for children aged 0-5 years (1/15620 newborn per year). Fifty-one (41%) had bilateral disease, and 18 (15%) had familial disease. Ninety- six (55%) eyes were group D or E (78% were T3/T4), and the 5-year survival rate was 96%. For UM, the median age at diagnosis was 45 years with an incidence of 1.39 new cases per year per one million populations. All (100%) had non-familial unilateral disease. Seventy-three (89%) had the tumor in the choroid, and 48 (58%) had an advanced tumor that had invaded the sclera or the orbit (T3/T4) tumor. Sixty-two (76%) were treated by I- 125 radioactive plaque, with globe salvage in 59 (95%); the 5-year survival rate was 85%.

Conclusion: In Jordan, RB is more common and has better survival rates than UM. Retinoblastoma in Jordan and Western countries is equal in terms of incidence, globe salvage, and survival, but UM in Jordan is much less common, with lower age at diagnosis, and better survival than UM in Western countries.

Keywords: Incidence, Jordan, Retinoblastoma, Survival, Uveal Melanoma

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Intravitreal Methotrexate Injection in Preventing and Decreasing the Development of Proliferative Vitreoretinopathy

**Dr. Fawaz H. Alzweimel, (Jordan)*
Mohammad A. Alshdaifat MD; Omar A. Alsaqour MD; Mohammad Alshami MD; Mohammad Ali Aldalabih MD.

Objectives: To study the efficacy of intravitreal methotrexate injection in the management and prevention of the development of proliferative Vitreoretinopathy (PVR) in high risk patients which leads to retinal re-detachment.
Methodology: This study was conducted at King Hussein Medical Center/ ophthalmology department on small sample of patients (pilot study). 15 patients presented with retinal detachment and high risk to develop PVR were included in this study. Five patients managed with PPV and silicon oil tamponade then injected with 8-10 series of 400 µg/0.1 mL intravitreal injections once weekly starting from day zero of the surgery.10 patients managed with PPV and silicon oil tamponade only.
Results: All Patients were followed up for 6 months post operatively. In the first group, four patients had no or very fine PVR and the retina was attached and one patient showed severe PVR and retinal detachment under silicon oil tamponade.in the controlled group 8 of 10 patients had PVR with subretinal fluid under silicon oil (detached retina).
Conclusion: Methotrexate intravitreal injection seems to be effective in preventing and decreasing the PVR formation in vitrectomized patients with high risk of PVR formation and retinal re-detachment.
Keywords: Methotrexate, Intravitreal injection, Proliferative Vitreoretinopathy, Retinal Detachment

(219)
Small Tectonic Corneal Graft Outcome for Corneal Perforation

**Dr Ahmad Alhusban (Jordan)*
Reham Al-asasfeh, RN; Hossam Al wedyan, RN; Rawan Al harahsheh, RN; Ahmad Alhmoud RN

Objectives: to investigate the effectiveness of small corneal tectonic grafts in case of small corneal perforation.
Methodology: this study was conducted at King Hussein Medical Centre, ophthalmology department. At the period between July 2021 and August 2022. Patients presented with acute corneal melting and small size perforation (< 3 mm full thickness corneal melting) whom underwent small corneal tectonic graft (3 mm diameter full thickness graft) were enrolled in the study. A 6 months follow up data were collected including: graft clarity, globe integrity and best corrected visual acuity.
Results: four patients (7 eyes) were included in the study. 3 patients had bilateral dry eye two of which had Graft versus-host disease and 1 Sjogren's syndrome. the last patient had unilateral melting due to herpetic eye disease. All patients presented with a corneal perforation between 1.5 -2.5 mm. A 3 mm corneal tectonic full thickness graft have been sutured using 10/0 nylon.

All patients had stable eye integrity, graft kept nearly clear. BCVA ranged between 0.1 and 0.7 on Snellen chart.

Conclusion: small (3 mm) full thickness corneal tectonic graft is an effective surgical option for small corneal perforation (<3 mm in diameter)

Keywords: Corneal perforation Tectonic Graft versus-host disease

(220)

Clinical Experience in Ahmad Glaucoma Valve Implantation (Model FP7) without Fixation of the Plate.

**Dr. Ghadeer Al-Humimat (Jordan)*

Objectives: To assess the clinical outcomes of implantation of Ahmad glaucoma valve (model FP7) with suture-less plate in cases with uncontrolled glaucoma

Methodology :22 consecutive patients with refractory glaucoma who have undergone Ahmad glaucoma valve implantation, without suturing the plate, were retrospectively reviewed. All the surgeries were performed by the same surgeon (G.A). Refractory glaucoma defined as intraocular pressure >21 mmHg despite using the maximally tolerated anti-glaucoma medications. Success was achieved when the postoperative intraocular pressure is ≤ 21 mmHg with or without using anti-glaucoma medications. The data that were collected: demographic data, type of glaucoma, preoperative and post-operative glaucoma medications, intra-operative complications, post-operative complications, and intraocular pressure during follow up visits (1 day, 1 week, 1-2 months, 3 months, 6months)

Results: 22 patients were included (16 rubeotic glaucoma, 2 pseudo-exfoliation glaucoma, 2 uveitic glaucoma, and 2 primary open angle glaucoma). Age range was 53 to 82 years. 14 females (64%) and 8 males (36%). There was no significant change in visual acuity before and after six months of the surgery. There was significant reduction in the number of eye drops. Postoperative complications included transient hyphema (2 patients), transient increased intraocular pressure (one patient). No tube related complications were observed, no choroidal effusion, and no retinal detachment.

Conclusion: Ahmad glaucoma valve (FP7) implantation with suture-less plate was safe and effective in refractory glaucoma. Further studies are needed to confirm our observation.

Keywords: Ahmad glaucoma valve, glaucoma, rubeotic glaucoma, sutureless

(221)

Special Features of Superior Oblique Hypofunction Due to Tendon Abnormalities

**Dr. Mohammad Al Eassa (Jordan)*
Joseph L. Demer, MD; Alan Le, PhD

Objectives: While most cases of superior oblique (SO) hypofunction represent contractile weakness due to denervation, sometimes the lesion is exclusively in the tendon. This study sought to distinguish clinical features of SO hypofunction due to tendon abnormalities from classical cases of neurogenic SO palsy.
Methodology: Clinical and magnetic resonance imaging (MRI) findings of 7 cases of unilateral SO tendon interruption or extirpation (by trauma or surgery) were compared with 11 cases of age matched unilateral SO palsy having intact tendons. We compared symptoms, torticollis, angles of misalignment in diagnostic positions and with head tilts, and fundus torsion in context of high-resolution, quasi-coronal and quasi-sagittal surface coil MRI in target-controlled central gaze and infraduction.
Results: Muscle bellies in neurogenic palsy were markedly atrophic ($P<0.0001$) but SO muscle bellies ipsilateral to tendon interruption tended to have maximum cross sections slightly larger but more posterior than normal ($P=0.08$). While both denervation and tendon interruption impair oculorotary function of the SO, interruption causes greater hypertropia in infraversion. Surgical tightening of all or part of interrupted SO tendons may have particularly gratifying effects.
Conclusion: Posterior thickening of the SO belly and large hypertropia in infraversion suggest SO tendon interruption that may guide a surgical strategy of tendon repair.
Keywords: extraocular muscle anatomy/histopathology/physiology; strabismus; superior oblique palsy; magnetic resonance imaging

(222)

Validation of IOP Measurement Using Tonometer AVIA Across Different Postures

**Dr. Mahmoud Alqudah (Jordan)*
Sana' Muhsen; Alexander Rabadi; Mahmoud Alqudah; Abdelrahman Obiedat; Liyana Owies; Ibrahim Alhawaniah; Sufian Abdel Hafez; Abdallah Al-Ani

Objectives: Tonometry is a fundamental procedure in the diagnosis and management of glaucoma. Different tonometers have been proposed but none are as accurate as the Goldman applanation tonometry (GAT). This study aims to examine the reliability of the Tonometer AVIA (TPA) in measuring intraocular pressure (IOP) across different postures.

Methodology: A total of 196 eyes were prospectively examined for IOP changes using GAT and TPA. IOP measurements were taken across different postures using the TPA. Reliability of measurements were compared using interclass correlation coefficients (ICC), while agreement was represented using Bland-Altman analysis. Pearson r coefficient measured correlation between BMI, RNFL, CCT, and IOP.
Results: Mean IOP differences were statistically significant between GAT and TPA for seated and supine patients (-2.1 ± 3.3 mmHg and -2.5 ± 4.0 mmHg, respectively). The ICC values for GAT with TPA among seated and supine patients were 0.79 (0.54 – 0.90) and 0.76 (0.48 – 0.87) indicating good reliability between the readings. Pearson R correlation coefficient found statistically significant positive associations between GAT and TPA at both seated and supine positions ranging from 0.626 (moderately positive) to 0.727 (highly positive). BMI, RNFL, and CCT did not significantly correlate with any IOP measurement at any position for all tools.
Conclusion: Good agreement exists between IOP measurements using GAT and TPA. However, the devices are not interchangeable and therefore cannot be used reciprocally in the same patient.
Keywords: Tonometer; Tonopen; posture; intraocular pressure; validation

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Cochlear Implant Candidacy (Expanding the criteria) for Both Children and Adults

**Mohammad Shaded, Aud (Australia)*

Cochlear Implantation has been proven to be the best hearing solution for people with moderate to severe and profound sensory hearing losses. According to WHO (2021), there are more than 430 million people currently suffer from some degree of hearing loss and need intervention. A significant percentage of those people have permanent severe to profound SNHL and are considered as Cochlear Implant candidates. However, according to several cochlear implant manufacturers' reports, the number of active cochlear implant recipients currently does not exceed one million. Numerous researchers looked at the performance predictions of cochlear implant users and studied different factors that contribute to their hearing performance. This included speech recognition and understanding in both quiet and noisy environments in addition to patients' overall satisfaction. Factors that contribute to CI success vary widely. For instance, one of the most important factors that impacts hearing performance is optimizing programming parameters. Holden et al. (2013) identified several factors contributing to better speech recognition in cochlear implant users. This included age at implantation, the duration of hearing loss and the duration of hearing aid use. Additionally, the depth of electrode array insertion and electrode positioning differences were investigated,

for example, the number of electrodes in Scala vestibuli as opposed to those in Scala tympani. Moreover, the positioning of electrode arrays closer to the modiolus wall was positively correlated with outcomes. Cognitive abilities were significantly and positively related to the outcomes. Unsurprisingly, age at implantation and cognition were highly correlated. Another element which makes a difference on hearing performance is the audiologist experience and knowledge of programming electrical parameters such as lower threshold levels and maximum comfort levels, pulse width, stimulation rate, mode of electrical stimulation, number of active electrodes and the selected coding strategy. We should know that speech perception and overall performance outcomes may differ among cochlear implant recipients due to map optimization and the selected coding strategy (Pasanisi et al., 2002; Psarros et al., 2002; Skinner et al., 2002a, b; Plant et al., 2002). There are thousands of cochlear implant clinicians worldwide with different backgrounds working with cochlear implant recipients. Those clinicians deal differently with these parameters due to different university programs, training access, experience and most importantly different cochlear implant programming standards in each country.
My cochlear implant programming workshop will explain, simplify and demystify the programming parameters for clinicians who already dealing with cochlear implant recipients.

(224)
Cochlear Implant challenging cases (Panel Discussion)

*Mohammad Shaded, Aud (Australia)

(225)
MRI imaging safety: the MR personal and THE Magnet

**Ali A-Radaideh, Phd, Rt (Jordan)*
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MRI imaging safety: the gradients and RF systems

**Ali A-Radaideh, Phd, Rt (Jordan)*

(227)
The Association between Using the Smartphone Duration with Body Mass Index (BMI)

**Feras Bani Salameh, Nut. Eng. (Jordan)*
Saleh AL-Yassin, Bsc.

Objectives: The purpose of this study is to evaluate the association between the duration spent on smartphone and the body mass index.
Methodology: This was a cross-sectional study for 127 healthcare staff using smartphone whom were interviewed at the dietary clinic at Princess Haya Bint Al-Hussein Military Hospital. During the period between July 2021 to September 2022. The healthcare staff age between 22-49 years with a mean value of 32.6 years, they were of both genders female 58 %(74) and male 42% (53). Female ages between 22 to 46 years with a mean value of 31.8 years, male ages between 22 to 49 years with a mean value of 33.7 years. Anthropometric measurements including height weight were taken for all Participants then the BMI was calculated, participants were interviewed and asked about duration of smartphone using, using smartphone applications to increase physical activity, physical activity, fast food intake while using smartphone. Data was analyzed by spss.
Results: The collected data showed that the mean value for weight, height and BMI for males was 79.5kg, 167.5cm , 28.4 kg/m² and for females was 68.1kg, 159.9 cm, 26.8 kg/m² respectively. Most of participants 46(36%) spent two hours daily on their smartphones. In addition to 32(25%) spent three hours, 36(28%) spent one hours. While only 8(6%) spent half hour daily. Smartphone applications to increase physical activity were used by 23(18%). However, 32(25%) of participants were physically active, 68(54%) were consumed fast food while using the smartphone.
Conclusion: Time spent using smartphones, lack of physical activity, and fast food consumption were associated with a higher BMI values. An increased BMI was more common among participants who spent two hours or more daily using smartphones. so its recommended to emphasize the importance of healthful diet to keep BMI values on healthy weight. To use smartphone applications which courage physical activity and reduce the sitting time while using smartphone.
Keywords: Body Mass Index (BMI), smartphone

(228)
An introduction in Sclera lenses

**Ron Beerten, Opt (Netherland)*

Worldwide there is a trend in increased application of scleral lenses for patients with irregular corneas and dry eyes. Sclera lenses are larger than traditional RGP lenses and bridge the cornea. They rest on the sclera. The cornea is protected in a bed of fluid. This offers excellent wearing comfort and optimal vision. Scleral lenses rapidly became the first choice in the medical application of contact lenses in irregular corneas and dry eyes in the western world. This lecture will cover:

1- The evolution in scleral lenses up to the current status.
2-The indication area of scleral lenses for various eye conditions
3-The basics in scleral lens fitting

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Scleral lens lenses in real practice: A series of case presentations

**Ron Beerten, Opt (Netherland)*

Scleral lenses are rapidly becoming the first choice in medical applications of contact lenses. They offer a great solution in patients with irregular corneas and dry eyes. In this lecture a series of clinical examples of successful sclera lens fittings will be presented, fitting pearls will be shared.

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Macrophages Responsiveness measured by light emitting protein pholasin as a potential predictor for blood biocompatibility

***Suzan Matar, Mlt PhD (Jordan)**

Effect of cold atmospheric plasma (CAP) on Neutrophils and Monocytes/ Macrophages Responsiveness Cold atmospheric plasma (CAP) exhibits various properties exploited by the generation of reactive oxygen and nitrogen species mediating the oxidative stress found in leukocytes. This is suggesting a beneficial role of CAP in treating chronic non healing wounds due to bacterial infections.
The aim of this project is to evaluate In vitro chemiluminescent screen to predict leukocyte ROS with bactericidal activity co-cultured with biological meshes in response to CAP against staphylococcal biofilms producer strains. Blood was obtained from Anthony Nolan Cord Blood Bank and Cell Therapy Centre at Nottingham Trent University/UK. Leukocyte viability before and after plasma treatment was assessed using Confocal Microscopy. Their cellular oxidation was measured by chemiluminescent kit from Knight Scientific, UK. Staphylococcal biofilms producing strains were co-cultured with hPBMCs which were seeded onto dressing discs with or without plasma treatments. Pholasin was placed into direct contact with the materials with continuous monitoring of chemiluminescence using a luminometric plate reader to measure the amount of ROS released during phagocytosis.

Results showed that cap treated multifilament trachea mesh stimulated the greatest ROS response from blood derived human leukocytes against Staphylococcal aureus biofilm producers when compared to multifilament- dermis and porcine meshes. Leukocytes treated with CAP emit chemiluminescence more efficiently and ingest staphylococcal biofilms producers at a much faster rate than leukocytes not treated with CAP.
In conclusion, CAP stimulation of leukocyte respiratory burst response to infection directs inflammatory dynamics which allows not solely for anticipation of immediate immunity fate but also predicts the interaction and association with numerous homeostatic and tissue repair in chronic wound infections.

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A rapid, non-invasive diagnostic test for urethritis

**Suzan Matar , Mlt phd (Jordan)*
Jan Knight

The essence of using ABEL™ (analysis by emitting light) test is to diagnose STD (sexually transmitted disease) and measure inflammation caused by white blood cells. The test has demonstrated to effectively identify individuals as positive who were later diagnosed to have known STD such as chlamydia, gonorrhoea, syphilis, genital warts and Herpes simplex virus. The objective of the project was to replace the invasive urethral smear test with a point-of-care instrument and associated reagents that would diagnose urethritis from the number and activation state of leucocytes from first catch urine specimens. Apparently, results showed that the ABEL™ test is effective at identifying individuals infected with chlamydia, identifying 94% of those who initially expressed symptoms and 83% of those who were asymptomatic. The test is also capable of identifying 100% of gonorrhoea cases accurately indicating 100% sensitivity. Crucially, the ABEL™ test also has the potential to reduce unnecessary prescription of antibiotics which could prevent emergence and exacerbate antibiotic resistance.

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Visual acuity outcome after fitting scleral contact lenses for advance k max in irregular cornea at therapeutic contact lenses in King Hussein Medical City

**Alaa Al Hazaymeh,Opt (Jordan)*
Ayyat Alwadi Opt, Anas Khdierat Opt, Duaa Alajarma Opt, Ruba Alquraan Opt

Objectives: to report the success rate visual acuity outcome when use scleral contact lenses in advance k max in irregular cornea.

Methodology: Fifty-four eyes were consecutively screen for enrollment in prospective study at the contact lens clinic in King Hussein medical city between march 2022-September 2022. All patients they have had their scleral contact lenses fitted successfully (scleral contact lens, is a large contact lens that rests on the sclera and creates a tear-filled vault over the cornea), each patient was given a refraction and corneal topography and use of experimental trial set scleral lenses (16.00 mm, 16.40 mm, 17.00 mm diameter). eyes were divided into two group 1- P.M.D group (20 eyes with pellucid marginal degeneration) from age 20- 64 years (mean 42 years) and k max(k max : maximum k reading) from 50.3-82 diopter (mean k max 66.15 diopter),ratio male in this is group 55% and ratio female in this is group 45,%, They were chosen at random. 2- K.C group (34 eyes with keratoconus) from age 16-45 years(mean 30.5 years) and k max from 50.9 - 89.1 diopter (mean k max 70 diopter) , ratio male in this is group 52% and ratio female in this is group 48,% They were chosen at random.

Results: 66.66% of patients with P.M. G, the visual acuity was less than 0.08 before fitting scleral contact lenses and 28.58% had the visual acuity of 0.1-0.3 and 0.047% the visual acuity was more than 0.3. The result after using scleral contact lenses became as follows : 1-71.43% visual acuity increased from 0.8-1.0, 2-14.28% visual acuity became 0.6-0.8, 3-14.28% visual acuity became less than 0.5. In contrast, 45.45% of patients with keratocouns had a visual acuity of less than 0.08 before using scleral contact lenses, 36.36% a visual acuity of 0.1-0.3 and 18.28% a visual acuity of more than 0.3. where the visual acuity became after using scleral contact lenses as follows : 1- 36.36% visual acuity from 0.8-1.0, 2- 33.3% visual acuity from 0.6-0.7, 3-30.3% visual acuity less than 0.5. Through this study , the results showed that the visual acuity when using scleral contact lenses of cases of irregularity in the surface of the cornea is very good in general . by comparing the two groups, we find that the visual acuity outcome in the first group is better

Conclusion: This study shows that scleral contact lens gives good result in terms visual acuity and are considered a visual aid that greatly enriches the need for corneal transplantion, we recommend the necessity of a periodic eye examination, especially for people who have a family history.

Keywords: K1: flat meridian of the anterior corneal surface, K2: steep meridian of the anterior corneal surface, km: mean keratometry, k max: maximum k reading.

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Impact of Mitochondrial Genetic Variants in ND1, ND2, ND5, and ND6 Genes on Sperm Motility and Intracytoplasmic Sperm Injection (ICSI) Outcomes

**Mohammad Alsmadi, Mlt Phd (Jordan)*

Sperm mitochondrial dysfunction causes the generation of an insufficient amount of energy needed for sperm motility. This will affect sperm fertilization capacity, and thus, most asthenozoospermic men usually require assisted reproductive techniques. The etiology of asthenozoospermia remains largely unknown. The current study aimed to investigate the effect of mitochondrial genetic variants on sperm motility and intracytoplasmic sperm injection (ICSI) outcomes. A total of 150 couples from the ICSI cycle were enrolled in this study. One hundred five of the male partners were asthenozoospermic patients, and they were subdivided into three groups according to their percentage of sperm motility, while forty-five of the male partners were normozoospermic. Genetic variants were screened using direct Sanger's sequencing in four mitochondrial genes (nicotinamide adenine dinucleotide hydrogen (NADH) dehydrogenase 1 (ND1), NADH dehydrogenase 2 (ND2), NADH dehydrogenase 5 (ND5), and NADH dehydrogenase 6 (ND6)). We identified three significant variants: 13708G>A (rs28359178) in ND5 , 4216T>C (rs1599988) in ND1 , and a novel 12506T>A in ND5 with P values 0.006, 0.036, and 0.013, respectively. The medians of sperm motility, fertilization rate, embryo cleavage score, and embryo quality score were significantly different between men showing 4216T>C, 12506T>A, 13708G>A and wild type, Mann-Whitney P values for the differences in the medians were < 0.05 in all of them. The results from this study suggest that 13708G>A, 12506T>A, and 4216 T>C variants in sperm mitochondrial DNA negatively affect sperm motility and ICSI outcomes.

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The benefits of performing core muscles exercises in addition to Kegels exercises on pelvic organ prolapse (POP).

**Shefaa Al-Zghoul, Pt (Jordan)*
Esra'a Yaseen Kareim; Areej Jaber AbuRoman; Othman Abdallah Al-Qatamin; Eman Ibrahim Aladwan

Objectives: To verify the benefits of performing core muscles exercises and Kegels exercises on improving pelvic organ prolapse (POP) symptoms.

Methodology: A grope of 50 women aged from (33-60) years. complaining of acute pelvic organ prolapse first time visiting physiotherapy clinic transformed from urogynecology clinic having the ability to contract their pelvic floor muscles (PFM) were invited, it was undertaken in the royal medical services in royal rehabilitation center physiotherapy unit from (march-august) 2022. Patients (PFM) power was evaluated by modified Oxford grading system, sings and symptoms was evaluated in our clinic. They were divided in to two equal groups A B both groups complaining of 32% grade 1, 40% grade 2,28% grade 3, having symptoms of (UI) and (POP). Intervention consisted of12 weeks of Kegels exercises only (A), Kegels in addition to core muscles exercise program (B). The protocol consisted of three initial sessions to learn how to perform the exercises correctly, followed by 3 months of exercise with weekly progression. The (PFM) power and symptoms were evaluated before during and at the end of the study.

Results: Group A According to modified Oxford grading system after 3months of Kegels 8% improved to grade 5, no (UI) or (POP) symptoms. 36% improved to grade 4, (UI) and (POP) symptoms improved (90- 80) %. 28% improved to grade 3, (UI) and (POP) symptoms improved (60-70) %. 24% grade 2, (UI) and (P0P) symptoms improved (30-40) %. 4% grade 1 symptoms remain the same. Group B 32% improved to grade 5, no (UI) or (POP). 40% improved to grade 4, (UI) and (POP) symptoms improved (90- 80) %. 24% improved to grade 3, (UI) and (POP) symptoms improved (60-70) %. 4% grade 2, (UI) and (P0P) symptoms improved (30-40) %.

Conclusion: Regarding to (POP) symptoms and OXFORD SCALE both groups presented improvement, however, performing core exercises in addition to Kegels was superior to among all.

Keywords: Pelvic organ prolapse Urine incontinence

(235)

Physical disability among chronic vestibular disorders patient (PPPD Persistent postural perceptual dizziness)

*Thra'a Alhyari, Pt (Jordan)
Haneen Aljaloudi; Madline Alomari

Objectives: To verify the physical activities resulting from vestibular disorders & their influence on the patient activity daily living. Vestibular disorder can be caused by damage to the peripheral or central components of the Vestibular system. PPPD: is a newly defined diagnostic syndrome that unifies key features of chronic subjective dizziness phobic posture at vertigo &related disorders.

Methodology: This study included 60dizzy patients since 1 year start from 9/2021 to 9/2022 in RJRC whoes received from dizzy clinic from ENT department &make our evaluation with DHI scale from first visit.

Results: Looking up activity, travel for bus or recreation & difficulty getting into or out of bed have the largest percentage of DHI score, which is lowest with vestibular rehabilitation: program

Conclusion: Physical disability among chronic vestibular disorder improved with vestibular rehabilitation programs

Keywords: DHI, PPPD, ADL, vest, disorder, physical disability

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Effects of Dietary Management on Amino Acid Profiles for Children with Methylmalonic Acidemia: a Clinical Trial

Reem Al-Qudah, MSc Nut eng (Jordan)

Ra'fat Ahmad Al-Khatatbeh, BSc Nutrition

Objectives: This study aimed to assess the effect of dietary management and intervention on improving plasma isoleucine (ILE), methionine (MET), valine (VAL), and threonine (THR) levels among Jordanian pediatrics with methylmalonic acidemia (MMA).

Methodology: This was a clinical trial study with a sample of 10 pediatrics with MMA (5 females and 5 males; mean age 5.1 years, age range 2-13 years) was recruited from the metabolic clinic at Queen Rania Al Abdullah Hospital for Children (QRAH) in the King Hussein Medical City, Amman-Jordan during the period of July to December, 2019. Patients followed a ILE, MET, VAL, and THR-restricted diet and special metabolic milk formula designed to compensate for the protein required for growth and development.

Results: Upon the dietary intervention, significant differences were seen. The mean values of ILE, MET, VAL, and THR decreased significantly after 3 months of intervention (169.92 to 69.55 µmol/L, 68.87 to 25.9 µmol/L, 433.9 to 169.3 µmol/L, and 214.53 to 116.68 µmol/L), respectively ($p \leq 0.05$).

Conclusion: Dietary intervention had positive impact on improving plasma organic acid levels among pediatrics with MMA.

Keywords: dietary restriction; MMA; isoleucine; valine; milk formula; metabolism

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Effect of vitamin D in vitro on T lymphocytes functions

*Saja Al Qatawneh, Mlt (Jordan)

Dr. Ammar Daoud; Dr. Hassan Al-kofahi

Objectives: To investigate the effect of the in vitro levels of vitamin D on the expression of the activation markers CD69 and CD25 by CD4+ and CD8+ T-cells following their stimulation

Methodology: five samples were taken from 5 healthy patients with vitamin D insufficiency, then PBMNCs were cultured with OKT3 (reagent stimulate T-cells) in three different

concentrations of vitamin D (10-6 M, 10-7M, 10-8 M),then the ratios of CD69+ and CD25+ within the CD4+ or CD8+ were analyzed by flow cytometry

Results: Vitamin D (1α, 25-dihydroxy vitamin D3) supplementation in vitro decreases CD25+ and CD69+ cells ratios in stimulated T lymphocytes, but the best concentration have a significant decrease in the ratio of CD69+ CD8+ expression was determined to be 10-7 M, after performing the statistical analysis by using GraphPad Prism 5.

Conclusion: The ratio of the expression of CD25, and CD69 on both was inhibited in the three concentrations but at 10-7 M was significant for CD69.

Keywords: CD (Cluster of differentiation), PBMNCs (Peripheral Blood Mononuclear Cells)

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A bibliometric review of the current landscape of carbapenem-resistant organisms in the Middle East

*Sereen Iweir, Mlt (Jordan)

Ruba Al-Haddadin; Julie Fischer

Objectives: Antimicrobial resistance (AMR) represents a growing public health burden, linked to 1.3 million deaths worldwide in 2021. Carbapenemase-producing/carbapenem-resistant organisms (CP-CROs) constitute a major AMR threat, especially in resource-limited settings. The aim of this review is to gain a better understanding of CRO/CP-CRO trends and distribution in the Eastern Mediterranean Region (EMR) and highlight areas for further investigation.

Methodology: A review of peer-reviewed literature published between January 2014 and December 2021 was conducted. Studies capturing molecular data on CROs and CP-CROs in EMR countries were included. Clinical, functional studies, and studies concerning displaced individuals were excluded. Analysis was performed using data aggregated from the included studies.

Results: A total of 182 articles were included. Iran accounted for the greatest share of published articles, followed by Egypt and Pakistan (39, 31, and 15, respectively). Only 1 study each in Oman, Bahrain, and Yemen met the inclusion criteria. OXA was overall the most prevalent carbapenemase-producing (C-P) gene in Enterobacter cloacae (50%), Acinetobacter baumannii (49.9%), and Klebsiella pneumoniae (47.9%) among tested isolates (50%N=108, 49.9%N=3275, and 47.9%N=4403, respectively). NDM was the most frequently reported gene for Escherichia coli isolates (expressed in 27.3%, N=828 of isolates). IMP was the most prevalent gene detected in Pseudomonas aeruginosa isolates (38.2%, N=804). The frequency of CP-producing isolates and genes expressed varied by country.

Conclusion: While some EMR countries publish regular, mostly cross-sectional, studies on CROs and CP-CROs, most lack regular and comprehensive data. There is a particular need for conducting national surveillance studies as they may provide valuable insights needed to inform targeted action plans.

Keywords: Antimicrobial resistance, carbapenemases, antibiotic resistance, CPE

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Severe Acute Respiratory Syndrome Coronavirus-2 (SARS CoV 2) Test Accuracy detection by Qualitative Reverse Transcription Polymerase Chain Reaction (qRT-PCR) Technique

**Alaa Alshawabkeh, Mlt (Jordan)*

Mohammad abuzaid; Mohammad diabat; Fayez Eskandarani; Ola mother Amaireh; Rima Nserat

Objectives: Severe acute respiratory syndrome coronavirus-2 (SARSCoV2) is a strain of corona viruses that causes a respiratory infection. The two main types of test detection are antibody serology-immunoassay (rapid-test) and the Qualitative real-time reverse transcription polymerase chain reaction (qRTPCR) using a nasopharyngeal swab. The study aims to evaluate the accuracy of COVID-19 testing methods by using qRTPCR and to evaluate the quality procedures followed in sample analysis.

Methodology: A one thousand patient swab samples were analyzed within a 24 hours on 28/11/2021, by the 3rdgene using a fluorescent PCR instrument systems as well as using the SARS-CoV-2 Nucleic-Acid Detection Kit (PCR-Fluorescent Probe Method).

Results: All positive sample results were double tested, and some negative samples were randomly retested as QC procedure. The retesting was performed using a different commercially available testing kit by using a different PCR analyzer and different laboratory technician. After data collection and statistical analysis, results showed the following: Out of a 1000 analyzed patient samples, the confirmed positive results were 76, the false positive were 6, the confirmed negative were 899 and the false negative (as a request for sending a new patient sample) were 19. The accuracy of true positive results was 94% and the accuracy of true negative results was 98%.

Conclusion: According to results obtained, this study confirmed the high accuracy of the analytical methods used in detecting SARS-CoV-2 at the coved-19 test laboratory (PILC/JRMC) and proved the efficiency of the quality standards followed within the laboratory.

Keywords: SARS-CoV qRTPCR respiratory infection

(240)

The long-term effect of breast feeding, on the nutritional status of pediatrics (Iron level, calcium level, vitamin D level and BMI readings)

**Mohammad Maalym, Nut.eng (Jordan)*

Alaa salem sbou; Ahmad Saleem Deeb; kareem dawood hassan; Amro khalil Maaytah

Objectives: To check out the nutritional status of (100) pediatric, who visit the nutrition clinic at queen Rania hospital for pediatrics, and determine the main effects of breast feeding on pediatrics.
Methodology: Laboratory tests (full chemistry tests and lipid profile) analysis, and personal interview with parents before doing questionnaire analysis for (100) patient within the age group between (2-6 years old), half of them were breast fed for at least one year, during the period from March 2022 to August 2022. A descriptive data analysis was used to find out the numbers which leaded us to the following results.
Results: seventy-four percent of the breast-fed patients had a (BMI) between 20-25 ,19% had a (BMI) higher than 25, and the rest (7%) had a (BMI) lower than 20. The other patients (bottle fed) had the following BMI results: 62 % (higher than 25), 20% (between 20-25), and the rest (18%) were lower than 20. The breast-fed patients had a serum iron level in blood as following: 78% (between 9-20 mcmol/L which is the normal range),20% (lower than 9mcmol/L) and the rest 2% (higher than 21 mcmol/L). breast fed patients had the following calcium levels: 82% between 8.5-10 mg/dL (normal range),15% were higher than 10.5 mg/dL, and the rest 3% were lower than 8.5 mg/dL. the other patients' results were as the following: 54% between 8.5-10 mg/dL,44% were lower than 8.5 mg/dL, and the rest 2 % were higher than 10.5 mg/dL. Vitamin D levels for breast -fed patients were as the following: 81 % of them were within the normal rang (higher than 20ng/ml),19% were lower than the normal range. The other patient results showed a 64 % with normal rang, and the rest (36%) were lower than the normal range.
Conclusion: Breast feeding is the healthiest services provided by mother to her children, it will previously affect the nutritional status for her child as the results show for a long time, and this healthy status will encourage a healthy life in his future.
Keywords: Body mass index: normal rang (20-25) Serum iron level: normal range (9-20 mcmol/L) Calcium in blood level: normal range (8.5-10 mg/dL) Vitamin D level: normal range (higher than 20 ng/mL

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The effect of ankle sprain on quadriceps and hamstring muscles strength

Dima AbuSoud (Jordan)
**Razeen Tawfeeq Al Amawi; Daed Mahmoud Al Thabateh; Zaid Mohammed Hamad Al Mfadi; Ayman Abd Al Kareem Al Mashagbeh*

Objectives: Acute ankle sprain is considered as one of the most common musculoskeletal injuries which causes pain during activities of daily living and sports participation. It may cause physical restrictions. This study was conducted to determine whether the quadriceps

and hamstring muscle strength could be affected in patients with acute ankle sprain.
Methodology: Twenty-seven patients participated in this study. Quadriceps and hamstring muscles strength was measured using digital handheld dynamometer. The affected limb was compared with the non-affected limb in the same patient to determine if there is a difference in muscles strength between both limbs. Paired t-test was conducted to determine if any significant difference was noted in quadriceps and hamstring muscle strength between affected and unaffected side with acute ankle sprain.
Results: There was no significant difference in quadriceps and hamstring muscles strength between affected and unaffected side. Acute ankle sprains do not affect the strength of the quadriceps and hamstring muscles; though chronic ankle sprains may affect the strength of knee muscles as it was mentioned in previous literature.
Conclusion: Acute ankle sprains do not affect the strength of the quadriceps and hamstring muscles; though chronic ankle sprains may affect the strength of knee muscles as it was mentioned in previous literature.
Keywords: ankle sprains, quadriceps muscle, hamstring muscle

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Incidence of Extended-spectrum B-lactamase in Esherichia coli isolate from urine samples in Prince Rashed Hospital

**Aymen Rababah (Jordan)*
Radwa A Alrdeasat; Kawther M Mofleh; Mohammad A Alqudah; Ahmed N Banat

Objectives: The aim of this study to determine incidence of B-lactamases in E.coli in urine samples in prince Rashed Hospital.
Methodology: This study was carried out in the Department of Microbiology, Prince Rashed hospital Jan 2021 to Dec 2021 urine sample (n=14400) were collected from clinical and departments. Isolated were identified in positive cultures by biochemical reactions, and by Vitek2 Compact. And sensitivity test by Kirby-Bauer disk according to (CLSI) guidelines and by Vitek2 compact and the (ESBL) producing bacteria were determinedby Double Disc Synergy Test (DDST) procedure.Then the antibiotics are tested.
Results: Bacterial growth was detected in (n=2880) 21 %. (n=988) 34% of E.coli (n=621) 63% showed B-lactamases in E.coli The susceptibility of E.coli to antibiotics were : Imipenem (99 %), Cefotaxime(41%), Cefazidime (50 %), Amikacin(98 %), Gentamicin(80 %,) Ciprofloxac(39 %), Ceftrixone(49 %).
Conclusion: E.coli Isolated in urine samples showed high rates of B-lactamases in E.coli The presences of B-lactamases in bacteria contribute the serious problem of antibiotic resistance which will lead to public health problems.
Keywords: E.coli :Escherichia Coli ESBL :Extended-Spectrum B-Lactamase DDST :Double Disc Synergy Test

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Impact of 3D-Planning and Technology on orthognathic surgery

*Prof. N.C. Gellrich (Germany)

Diagnosis-making and therapeutic decisions in standard orthognathic surgery cases as well as in complex craniofacial deformities were traditionally based on clinical evaluation, cast models and radiographs (OPT, lateral ceph) and are today enhanced by analyzing VOXEL-based datasets. Within this field there has been significant technology advancement that nowadays allows to interactively analyze, plan and simulate 3D-datasets of different modalities (MRI, CT, cone beam-CT), to create virtual blueprints, print biomodels or even manufacture patient specific splints or implants.

The treatment advances include even complex backwards planning from occlusal solutions, preoperative manufacturing of patient-specific implants, intraoperative navigation or intraoperative
control and image fusion with pre-op virtual models. Within this workflow 3D-surface scans can be implemented to contribute in terms of color and texture to the DICOM-based dataset imaging modalities. However, if it comes to clinical outcomes, then it will be on competent clinical judgement to include digital innovations according to the needs of the individual case.

The lecture demonstrates the influence of digital technologies to the workflow in modern orthognathic surgery and correction of craniofacial deformities. The modern interdisciplinary team has to face that this type of workflow is a huge chance to improve the interdisciplinary interface and knowledge exchange and allows quality control of all surgical steps through the whole treatment.
Furthermore, it will be outlined that despite modern technologies the final occlusion still can be defined best by physical models and that the metric changes of the facial skeleton are mainly based on clinical decision making.

A prerequisite for establishing such workflow is a robust imaging analyzing platform that allows integrating the above-mentioned ideas. 25 years of experience in computer-assisted planning and surgery show the improvements of these platforms and the set-up of a modern digital workflow leading to forseeable clinical results and to avoid pitfalls.

(244)

Digital Technology Applications in Dental Implant Therapy: Pearls for Surgical and Restorative Success

**Prof. Ibrahim Duqum (USA)*

Course Description

Digital technology is revolutionizing all aspects of life, and Dentistry in general and Dental implant therapy, in particular, are at the forefront of such innovations. This course will highlight the latest discoveries, workflows, and materials utilized in implant dentistry. All phases of therapy from planning, to the surgical and restorative protocols, will be discussed, supported by evidence-based protocols and documented clinical scenarios.

Objectives:

1. Highlight contemporary digital innovations in dental implant therapy
2. Outline workflows facilitating digital dental implant therapy from planning to execution
3. Define optimal outcomes for dental implant therapy assisted by various digital tools, workflows and materials

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Digital Prosthodontics era: An evidence-based update

Prof. Ziad N Al-Dwairi (USA)

The growing awareness of dental practitioners and laboratory technicians with digital technology, along with an increasing flexibility to combine parts of the digital workflow with conventional clinical and laboratory protocols have led to increased popularity of the use of direct or indirect digitization in the fabrication of dental restorations. However, there is insufficient literature to recommend the clinical use of one single technique or material. Therefore, this presentation will focus on the recent available evidence regarding:

1. The accuracy of different intra-oral scanners in fabrication of Porcelain laminate veneers
2. The mechanical properties of various brands of CAD-CAM and 3D denture base resins and
3. Mechanical behavior of recent monolithic Zirconia materials in inlay-retained cantilever fixed partial dentures using modified preparation designs

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Postoperative pain management in pediatric dental patients

Prof. Suhad Al-Jundi (Jordan)

Pain is defined by the International Association for the Study of Pain as an unpleasant sensory and emotional experience associated with actual or potential tissue damage. Acute pain is one of the most common adverse stimuli experienced by children, occurring as a result of injury, illness and medical / dental procedures.

Postoperative pain is a complex and challenging issue in pediatric population, especially with regards to day and short-stay surgery, where the responsibility for pain management sits primarily with the parents. A recent study investigating post-operative pain management protocols after dental treatment under GA found that ibuprofen was sufficient to provide pain relief for children who underwent restorative only treatment under GA, whereas ibuprofen was not effective to control postoperative pain in patients who had extraction as part of dental rehabilitation under GA1.

In general, non-opioid analgesics should be considered as first line agents for the management of postoperative pain, for greater analgesic effect, it is recommended to combine NSAIDs with acetaminophen for post-operative treatment of moderate to severe pain in children and adolescents.

Inadequate prescription of medication and insufficient administration of the prescribed medication are considered the main reasons for inadequate post-operative pain relief at home, in addition to the fact that Parents tend to under-medicate their children due to several factors such as fear of side effects, considering analgesics as addictive and thinking that children don't feel pain with the same intensity as adults.

This presentation aims to discuss mechanism of pain perception, as well as pharmacologic and non-pharmacologic management of pain in children with focus on office dental procedures and pain management after dental treatment under general anesthesia. It will also discuss pain assessment tools for children, and the role of parents in managing post-operative pain in the pediatric population.

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Management of severe Bimaxillary Protrusion with Mini Screw supported anchorage: Biomechanics, outcomes, and biology of MSI stability.

Prof. OP Kharbanda (India)

Bimaxillary protrusion cases have soft tissue, skeletal and dental aberrations altogether, presenting a therapeutic challenge for the orthodontist. The orthognathic surgical treatment is

equally challenging as it requires bi-jaw surgery, and many patients are unwilling, besides the cost and availability of expert surgeons. The presentation will deal with clinical evaluation and differential diagnosis of various types of bimaxillary protrusion, anchorage control, and biomechanics with miniscrew implant (MSI) supported appliance. The presentation will include series of treated cases with follow-up. The clinical concepts will be supported by evidence-based findings.

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Restorative and Surgical Management of Compromised and Missing Teeth in the Esthetic Zone

**Prof. Ibrahim Duqum (USA)*

Course Description:

This course will discuss the various treatment modalities for fractured and traumatized teeth in the esthetic zone. Modern treatment concepts such as submerged root therapy in combination with a tooth-borne dental prosthesis to resin bonded restorations to immediate and delayed implant-supported restorations will be presented in an evidence-based approach, highlighted with a wide spectrum of patient-based treatments. The course will emphasize both the surgical and restorative aspects of therapy, with a detailed presentation of materials and contemporary treatment protocols.

Objectives:

1. Compare and contrast treatment modalities for compromised teeth in the esthetic zone.
2. Comprehend the restorative and surgical elements for contemporary therapies to achieve esthetically pleasing and functional outcomes
3. Outline materials and techniques for dental implant restorations in the esthetic zone.

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Lecture Title: Neuropathic Pain after Endodontic Treatment

**Dr. Muna Al- Ali (Jordan)*

This lecture will touch briefly upon neuropathic pain from an endodontic point of view specifically the ones arising after endodontic management. Those troubling cases of persisting pain and/or numbness will be show cased, their cause and their management will be shown.

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Supragingival Minimally Invasive Preparations: When? Why? How?

**Dr. Nader Masarwah (Jordan)*

Minimally invasive dentistry is a philosophy that had been adopted early in 1970's. The objective of which is to minimize the amount of healthy sound tooth structure sacrificed in order to treat dental diseases or restore teeth. Primarily, minimally invasive dentistry addressed management of caries and cavity preparations. With more understanding of the pathological process of caries, management shifted towards treatment of the disease rather than drilling and filling of teeth.

Furthermore, the continuous development of Adhesive Dentistry and its applications, participated more in applying the concept of Minimally Invasive Dentistry. Nowadays, confidence in adhesive dentistry is increasing as more durable and reliable bonds are achieved. Also, bonding to variable dental tissues and different dental materials and restorations is possible now. More applicable bonding techniques, with less complicated steps are now introduced making practice easier.

Increasingly, the philosophy of Minimally Invasive Dentistry widened to include different dental specialties, like Endodontics, Periodontics and Prosthodontics, with the same target of more preservation of dental tissues during treatment.

The fast development and increased applications of ceramics in dentistry also resulted in more esthetic and conservative crown and bridge work. Unfortunately, newly introduced technologies in bonding and ceramic materials are still used along with traditional mechanically retained techniques. Unnecessary subgingival margins placement, overzealous tooth structure removal are still being practiced causing injuries to periodontium and dental pulp.

During this presentation, we will discuss the advantages of Minimally Invasive preparation for crown and bridge work, with more emphasis on less invasive supra gingival designs.

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Evolution, achievements and visionary outlook in reconstructive orbital surgery

**Prof. N.C. Gellrich (Germany)*

The aim of the presentation is to show the development of orbital reconstruction over the last 30 years: coming from bio-absorbable or soft reconstruction materials towards dimensionally stable, pre-formed and even patient specifically-designed implants in the orbit. By using modern ways of planning and fabrication, the export of STL-files allows to put a virtual patient specific model into a realistic form of an orbital implant thus resulting in a highly improved quality of the orbital implant. One way was to only modify the form of the

pre-formed or non-pre-formed titanium mesh. However, the up-to-date-technology is to use the laser-sintering method (SLM) to print titanium-based patient specific orbital implants of the desired shape and form with additional information for the vector and depth of insertion to allow design improvements towards functionalization and error prevention. Furthermore, intraoperative navigation could be used in severe cases to quality control the position of the implant in areas, that do not allow visual control.

Due to the fact, that by means of a complete digitally based workflow the achievement of a patient specific implant is feasible within a week, this method has entered clinical routine. By computer-based ways of modelling, the design of the orbital implant has now been advanced towards a metric-tool that in addition to the function of an orbital implant allows the surgeon to perform a much more straightforward approach together with or without intraoperative imaging and/or navigation by using even smaller approaches.

The presentation compares the different methods of achieving orbital implants by using different biomaterials and to demonstrate the benefit of the selective laser melting method, which now has become a routine technique for reconstructing especially complex orbital wall defects. However, clinical judgement for orbital deformity correction is key especially if it comes to posttraumatic secondary orbital corrections. Various clinical cases will demonstrate the innovations in modern orbital reconstruction.

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The success story of non-extraction treatment with non-compliance molar distalisation

**Prof. OP Kharbanda (India)*

The non-extraction treatment with conventional biomechanics utilizes non-compliance maxillary molar distalisation using a modified Nance button as the primary source of anchorage. The distal molar movement is associated with anterior anchorage loss of about 25%- 40%. The distal movement of the molars is accompanied by significant tipping. The most challenging aspect of treatment remains in stabilizing the distally positioned molars and using them as an anchorage for anterior retraction. The mini screw-supported molar distalisation is superior and offers a unique advantage of molar distalisation without or a negligible anterior anchorage loss. The net space available after molar distalisation can be used for em-mass retraction of the anterior segment, thereby improving aesthetics and occlusion. This presentation will encompass the case selection, planning and step-by-step protocol of intraoral distalisation using buccal TAD as anchorage. Author has evolved a protocol of buccal distalisation supported with TAD and K-Connector. This presentation will include case selection, appliance design and step-by-step treatment supported with treated cases as well as research conducted in this clinical field.

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Implant prosthetic treatment for soldiers with a history of profound periodontitis

**Dr Michael Lüpke (Germany)*

Epidemiological studies have repeatedly proven periodontitis to be highly prevalent. We can thus assume that profound periodontitis is just as widespread among soldiers of the German armed forces. The generally accepted opinion among scientists is that the bacterial dental plaque of the biofilm is the primary aetiological factor in inflammatory periodontal diseases such as chronic and aggressive periodontitis. Active treatment removes or reduces the pathogenic periodontal microflora and thus eliminates periodontal infection. That is why the aim of maintenance treatment at the end of active therapy must be to avoid reinfection and to thus stop periodontal destruction. Owing to special anatomical characteristics, the tissue surrounding endosseous implants is particularly susceptible to colonisation by pathogens from the oral biofilm. That is why aftercare is of key importance for successful treatment. Providing consistent aftercare to military personnel is a particular challenge. Training courses, relocations and deployments all mean personnel are often away from their home base while conditions on operations are rarely conducive to personal oral hygiene.
This presentation will outline the details of aftercare as well as document and discuss its success using the example of three soldiers over a period of more than 20 years. The patients had lost teeth as a result of profound periodontal disease. Masticatory function was restored with various implant prosthetic treatments and proved stable for a very long period of time thanks to appropriate aftercare. Further tooth loss could also be avoided.

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Role of Pediatric dentist in diagnosis of systemic diseases, A case report of Langerhans cell histiocytosis with oral manifestations

**Eman Hammouri (Jordan)*
Hala Sweidan; Omar AShokaibi

Objectives: To report a case of Langerhans Cell Histiocytosis due to mobility and premature exfoliation of primary teeth.
Methodology: A two-year-old male patient was referred to the pediatric dental clinic for treatment of oral ulcerations, bleeding gingiva, and difficulty in eating. Oral examination showed gingival necrosis, ulcerations, gingival oozing, as well as floating teeth. Head and neck CT scan displayed irregular destructive radiolucent lesions in the maxillary and mandibular bones with soft tissue component. Tc99m-MDP Bone Isotope scan showed

elevated radiotracer uptake within the mandible and maxilla. An incisional biopsy from the superficial alveolar bone lesion and surgical curettage was done for other bone lesions. Histopathological examination revealed gingival infiltration by sheets of large histiocytosis with coffee bean-like nuclei and typical and atypical mitoses in background rich with eosinophils, some lymphocytes foam cells, and plasma cells. The tumor cells are immune-reactive for S- 100 and CD1a

Results: Langerhans Cell Histiocytosis is a rare disease and oral manifestations might well be the key for diagnosis, which reflects the role of dentists in bridging the gap between other medical specialties in the diagnosis and management of systemic illnesses such as LCH.

Conclusion: Early recognition of Langerhans Cell Histiocytosis along with a collaborative medical-dental approach is important to treat and minimize complications.

Keywords: Langerhans Cell, Histiocytosis, Oral Ulceratiom

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Assessing Restorability of a Tooth to Restore or Not To Restore

**Dr. Mohammed Ammoush (Jordan)*

Objectives: Dental hard tissues are subjected to loss due to caries, trauma, faulty restorations. Regardless of the cause of such tissue loss, a proper diagnosis and management must be made to restore these teeth. Generally, the proper management and treatment in such cases is straight forward and doesn't require high skills to manage regarding the decision of the treatment options. On the other hand, dentists may encounter challenging cases were the decision must be made either to restore or extract such teeth based on the remaining coronal dentinal tissues imposing different clinical treatment options which are not based on much scientific evidence to support their decision.

Methodology: Reviewing the literature regarding restorability criteria and proposed indices from peer reviewed papers.

Results: Many indices have developed to minimize the clinical gap between contradictory opinions. these indices will be discussed to evaluate their effectiveness in achieving an evidence based decision regarding the clinical outcome of such cases.

Conclusion: The aim of this lecture is to discuss and educate the dental practitioners about the proper evaluation of dental hard tissue loss due to caries, trauma and restorations and proper management, treatment planning and possible outcome regarding prognosis relying on evidence based dentistry.

Keywords: indices, evidence based decision, tooth structure loss

(256)

Impact of Chronic Periodontitis on Pulp Sensibility Evaluated by Electric Pulp Tester

**Ali Hussein shibli (Jordan)*

Riyad M. Abuodeh; Lina K. Obeidat; Mo'ath Ghozlan; Tamara Alzoubi

Objectives: evaluate the impact of chronic periodontitis on pulp sensibility tested using electric pulp tester

Methodology :112 single-rooted teeth selected from 22 patients with chronic periodontitis who sought treatment at dental departments of RMS hospitals were tested. 10 male and 12 female patients with ages ranging from 30 to 70. Teeth were divided into two groups: group 1 alveolar bone loss without apical involvement (tooth apex not reached), and group 2 alveolar bone loss with apical involvement. Electric pulp tester was used to assess pulpal status by direct stimulation of sensory fibers.

Results: One hundred and twelve teeth that met the inclusion criteria were assessed in this study. Electric pulp tests showed a higher number of teeth with a negative pulp response for group 2 and a significantly higher number of teeth with a positive pulp response in group 1

Conclusion: pulp necrosis (negative response to electric pulp tester) due to periodontal disease did not occur unless the root apex is involved.

Keywords: chronic periodontitis, pulp necrosis, electric pulp tester

(257)

Hybrid maxillofacial pathological lesions, a case report

**Dr. Ahmad Altarawneh (Jordan)*

Objectives: Hybrid lesions are lesions consisting of an association of features from different pathologies.

Methodology: we report a 52-year-old male patient was seen complaining of swelling in the right lower region of the mandible

Results: Intraoral examination revealed a swelling extending from the right molar region to the left premolar region. expansion of both cortical plates was evident. The radiograph showed an ill-defined multilocular radiolucency. Incisional biopsy reported glandular odontogenic cyst After surgical resection of the entire lesion, the final histopathological report was Intra osseous mucoepidermoid carcinoma.

Conclusion: In my lecture, I will present our experience in the treatment of such cases in the Jordanian royal medical services

Keywords: Mandible, cysts, carcinoma

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Developing Class III malocclusions: diagnosis, challenges and treatment protocols.

**Dr. Anwar Rahamneh (Jordan)*

Objectives: to state and provide information that focusing on the diagnosis , main etiological factors and the main treatment protocol of developing class 3 malocclusion among children.
Methodology: We revised the literatures that focusing on diagnosis and treatment modalities of developing class 3 malocclusion and we try to summarize the main etiological factors and the main treatment protocol of this important problem based on the current latest evidence.
Results: The class 3 malocclusion occurs less frequently among orthodontic patient but it is considered a very important and annoying problem in orthodontic practice because of challenging treatment and the effect of this malocclusion for facial aesthetic. The globally reported prevalence of this malocclusion differ greatly among population with a wide range of expression depend on racial, ethnical and geographical regions of the studied groups.
Conclusion: he etiology of developing class 3 malocclusion is considered multifactorial and overlapping due to interaction of innate genetic factors with environmental distortion of normal growth and development of teeth and facial bones. The treatment of this malocclusion require accurate diagnosis and evaluation (family history, dental examination, functional assessment and radiographical analysis).
Keywords: class 3 malocclusion, evaluation, diagnosis, treatment protocols

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Prevalence of temporomandibular disorder symptoms among orthognathic patients in southern Germany

**Dr. Zaid Al Tamimi (Jordan)*
Amjad Al warawreh; Hazem khraisat; Winfried kretschmer

Objectives: This study investigates
the prevalence of temporomandibular disorder among patients before
and after orthognathic surgery, and the effect of orthognathic surgery on
each of the temporomandibular disorder symptoms.
Methodology: A sample of 100 German patients undergoing bimaxillary surgery for correction of craniofacial deformities, with ages between 17 and 58 years were interviewed and examined regarding signs and symptoms of temporomandibular at the time of surgery, and after one year of surgery
Results: A high frequency of relief was
found in the patients of temporomandibular disorder like reduced clicking, pain, crepitus.
On the other hand, few patients developed increase temporomandibular disorders.

Conclusion: Orthognathic surgery may not predictably treat or reduce the symptoms of temporomandibular disorder.
Keywords: Temporomandibular disorder, orthognathic surgery.

(260)
Orthodontic pre-surgical phase treatment of cleft lip and palate newborn babies

**Dr. Abdullah Al-Halholi (Jordan)*

Objectives: Treating CLP newborn babies as soon as possible, to enhance the aesthetic result.
Methodology: Starting the pre-surgical phase of treatment from day one by using special tape to approximate the lip segment together, after five to seven days impressions are taken to the upper jaw and then sent to the dental laboratory to construct the NAM appliance, which is delivered on the same day. patient is seen every week to activate the appliance by adding hard and soft acrylic, and most of the time need to trim the appliance to guide the alveolar segments to growth in the favorable direction.
Results: A better aesthetic result has been achieved by using the NAM appliances.
Conclusion: Better aesthetic results have been achieved by using NAM appliances.
Keywords: CLP: Cleft lip and palate. NAM: Naso-alveolar molding

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Current management of atrial fibrillation using cryoballoon ablation

**Prof. Kudret Aytemir (Turkey)*

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Coronary CTA and CT Pefusions Imaging

*Prof. Ramzi Tabbalat (Jordan)

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TAVI experience in QAHI, analysis and outcome.

**Dr. Hatem Al-Abbadi (Jordan)*
Aortic valve stenosis is a well-recognized valvular problem in the aging population. Transcatheter aortic valve implantation (TAVI) is becoming an increasingly popular treatment alternative to surgical aortic valve replacement for frail elderly individuals with symptomatic severe aortic valve stenosis , We analyze the recovery period from TAVI for 82 patients at

QAHI , with its complication , complications occurring during or after TAVI were hematoma and vascular access complications , acute renal failure , ischemic or hemorrhagic CVA , cardiac perforation with tamponade , PPM insertion , infection , sepsis , cardiogenic shock and LV suicidal phenomena , aortic regurgitation or residual stenosis , aortic dissection , light and general anesthesia side effects , upper and lower GI bleeding.
The annual number of treated patients increased three-fold during the study period from 2015 to 2022.
Variables independently associated with late discharge were co-morbidities associated with the patient.
Mortality rate was 9 patients from 82 patients (10.9%) with early mortality rate before hospital discharge 4 patients (4.8%), late mortality rate within 1 year post hospital discharge 5 patients (6.1%).

(264)
Current Management of Ventricular Tachycardia in Structural Heart Disease

**Prof.Dr. Hikmet Yorgun (Turkey)*

Ventricular tachycardias (VTs) are clinically relevant rhythm disorders generally in patients with structural heart disease. Due to the limited efficacy of antiarrhythmic medications, recent data highlighted the role of ablative therapy to decrease arrhtyhmia recurrences as well as ICD shocks. In this talk, current management of VTs in patients with structural heart disease will be discussed.

(265)
Three year experience of Primary PCI for acute STEMI at QAHI.
**Dr. Mohammad Holy (Jordan)*

In ST elevation myocardial infarction, rapid opening of the occluded coronary artery and restoration of blood flow by primary percutaneous coronary intervention (pPCI) has proven to be the most important therapeutic strategy as it has increased survival and improved prognosis and quality of life of patients more than any other remedy in the history of ischemic heart disease.
Based on that knowledge pPCI has become the treatment of choice for STEMI patients.
This study for analysis regarding PPCI at QAHI/RMS on 350 patients from 2020 to 2020 which found that male patient presented for PPCI was 86% , female patient 14% , age less than 60 was 65% , more than 60 was 35% , PPCI done in 86% , urgent ACB for surgical coronaries was 7% , ectatic coronaries was 3% , normal coronaries for further evaluation 4%

, LAD culprit vessel was 48 % , RCA 26%, CX 21% , RAMUS 5%,the results for acute early mortality within 1 day was 4% and the results for subacute early mortality till 30 days was 3% .

(266)
Ross Procedure, Past or Future

**Dr. Zohair Al Halees (KSA)*

Ever since Donald Ross introduced the Ross procedure in 1967, controversy existed surrounding the role of the procedure in managing aortic valve disease. Not many surgical procedures have been scrutinized in literature. Initially, the Ross procedure was doomed because of its intrinsic complexity and the potential of "converting" a one valve disease to a 2 valve disease! When excellent outcomes were reported in the 1980's and with the introduction of the full aortic root replacement, which is technically easier and forgiving, enthusiasm grew rapidly, probably too much of it! As the indications were broadened, problems started to appear, which resulted in a surge of manuscripts raising red flags. Suddenly, enthusiasm dampened significantly.

As experience accumulated, indications were refined and technical modifications were introduced, we see now a resurgence of the interest in the procedure. It should however be emphasized that not all aortic valve pathologies are suitable for the Ross procedure therefore, proper selection becomes of utmost importance. in pediatric age groups, including neonates and infants, the situation is different, as the options for that age group are limited and Ross procedure is often the best option.

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The Short- & long-term outcome analysis of neonatal Modified Blalock Taussig shunt created with or without Cardiopulmonary bypass support
**Dr. Zeid Makahleh (Jordan)*
Dr. Ashraf Fadel Moh'd

Objective: To evaluate the short- and long-term outcome of two different strategies in creating a palliative Modified Blalock Taussig Shunt in Neonates with cyanotic congenital heart disease who have duct dependent Pulmonary blood flow; either with the support of the cardiopulmonary bypass or without it through a median sternotomy.
Methods: We divided them into two groups:
Group A: patients who had their BTS created with Cardiopulmonary bypass; 98 patients

Group B: patients who underwent BTS without Cardiopulmonary bypass(off-bypass);58 patients

We reported the short- and long-term outcomes in both groups.

We pre-defined the short-term outcomes as follows: acute reintervention (in the same admission), need for inotropes, re-opening for bleeding, duration of mechanical ventilation, ICU and hospital stay, and mortality during the same hospital admission.

The long-term outcomes were defined as follows: rate of interval re-intervention, eligibility to proceed to second stage surgery, and the need for PAs augmentation with the second-stage surgery.

Results: there was no statistical significant difference between the 2 groups in regard to diastolic blood pressure by the end of the first 48 hours after surgery.

Group A required longer duration of inotropes and more days of ventilation with P value 0.098 and 0.067, respectively.

The mean ICU and hospital stay were 6.7 days and 9.2days, respectively, for Group A and 6.5 days and 8.8days, respectively, for Group B with P value 0.010 and P value 0.014, respectively.

Rate of re-opening was higher in group A 11 % (3/27), while it was 5% In Group B (1/19)

Early Mortality within the same admission:

-Group A 11% (3/27; Acute Renal Shutdown, Septicemia MOF, NEC)

-Group B 10% (2/19; acute occlusion of Shunt, MOF)

10 cases were initially started as off bypass then converted to on bypass because they didn't tolerate the procedure off pump.

The rate of re intervention was higher in group B. Group A had a better branch PA size and required lesser intervention for branch PAs in comparison to Group B

Conclusion: Avoiding Cardiopulmonary bypass in creating a BTS in neonates with ductal-dependent pulmonary flow might be a better Safer Practice, but I think we need a larger sample

Keywords: Modified Blalock Taussig Shunt (mBTS)

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Getting in right first time (Grift) in cardiology

*President of RCP Dr. Sarah Clarke

(269)

Adult ASD closure at JUH, heart team approach

**Ass. Prof. Amjad Bani Hani (Jordan)*

The incidence of congenital heart disease (CHD) is on the rise globally.1 Atrial Septal defect (ASD) is the second most common anomaly occurring in approximately 1.64 per 1000 live births (17.5% of all congenital heart diseases).1 Nearly 70% of all Atrial septal defects are of the secundum subtype. This is a sporadic incidence.2 It is usually asymptomatic during infancy and childhood and diagnosed incidentally. Most patients are expected to survive into adulthood when they become more symptomatic.3–5 The treatment of Secundum ASD has evolved over the last 2 decades. First, the surgical outcome of ASD repair through the classical median sternotomy (MS) approach has improved significantly becoming one of the safest operations,6,7 meanwhile two attractive strategies have been developed: minimally invasive cardiac surgery (MICS),
and transcatheter occlusion devices (TCC). Both offer excellent clinical outcomes, and rapid recovery. This necessitated the development of a team that treats the patient in the best available manner.

Jordan, a middle income developing country has a high incidence of congenital heart diseases, particularly atrial septal defects with rates of about 12.3 and 2.5 cases per 1000 live births respectively.8 This puts high pressure on health care resources, especially in a developing country with limited resources. A new adolescent and adult Secundum ASD service was set up at our unit in 2017 to offer patients either MICS or TCC. Before the setup of the heart team service,
the interventional cardiologist used to decide individually the therapeutic procedure of choice and refer the patients who need surgery for median sternotomy approach. This report describes our early experience in setting up this service using a heart team approach to facilitate decision making and ensure the best clinical outcome.

A retrospective observational study of 44 patients who underwent secundum ASD closure by transcatheter closure (TCC) or Minimally Invasive Cardiac Surgery (MICS) at JUH. Patients who were treated at an age of 14 years or older regardless of the age of diagnosis were included. SPSS and Microsoft Excel were used to analyze the data.

Results: A total of 44 patients with secundum ASD were treated during the period of (January 2015 and December 2019). The mean age was 34.1 (±14.3) years. Thirty-four patients underwent TCC, 9 underwent surgical closure and one had a hybrid procedure. We had no mortality and
2 minor morbidities. After a mean follow-up period of 13.2-/+13.6 months, most patients experienced improved symptoms, and there was a significant reduction of right ventricular dimension from 33.1 (±8.74) to 24 (±4.67) mm (p=0.0001).

(270)

Surgical Options for Ebstein Anomaly

**Dr. Zohair Al Halees (Jordan)*

Ebstein Anomaly is a rare cardiac malformation accounting for about 1% of all congenital heart defects. It was described in 1866 by Dr. Wilhelm Ebstein. It affects both sexes nearly equally. Life expectancy is limited. When diagnosis is made in infancy, the prognosis is worse. Severely symptomatic neonates present a serious challenge to the caring team. The anomaly is a malformation of the tricuspid valve which is characterized by:

- Adherence of the TV leaflets to the underlying myocardium.
- Downward displacement of the functional annulus
- Dilatation of the atrialized portion of the right ventricle with variable degree of thinning or hypertrophy
- Dilatation of the true TV annulus

The aims of surgery in Ebstein malformation include:

- Closure of any atrial septal defect
- Correction of any associated anomalies such as PDA, VSD, PS. If shunted, the shunts should be closed

1. Performance of any indicated anti arrhythmia procedure
2. Plication of the atrialized RV
3. Reconstruction / repair of the TV valve. When not feasible TV replacement
4. ? right atrial reduction

Many surgical techniques are available for TV repair in Ebstein anomaly. The most important will be described. However, the cone technique introduced by Dr. Da Silva, which results in a central flow through the TV orifice, with full coaptation of the leaflets is currently the technique of choice for most centers dealing with the problem including our center. It can be performed with low mortality and morbidity.

(271)

Transcatheter Closure of Sinus Venosus ASD-State of the art

**Prof. Ziyad Hijazi (Qatar)*

Transcatheter repair of sinus venosus atrial septal defect (SVASD) has become an alternative option to open heart surgical repair. Different operators used different techniques to implant a covered stent in the Superior Vena Cava (SVC) to close the SVASD and to redirect flow of the anomalous vein back to the left atrium.

The results of the procedure are good, however, there are potential significant complications related to stent stability in the SVC and potential migration of the stent that need to be addressed. Therefore, the technique is still evolving.
In this presentation, I will discuss:
1. Patient selection
2. Techniques of closure of the defect
3. Techniques to minimize stent migration
4. Outcome of the procedure

(272)
Interventional procedures in pediatrics and adults with congenital heart disease in Queen Alia Heart Institute

Dr. Issa S. Hijazi (Jordan)

(273)
Transcatheter Closure of Coronary AV Fistulas

Prof. Ziyad Hijazi (Qatar)

Coronary arteriovenous fistulae are uncommon abnormal connections between one of the coronary arteries and a heart chamber or another blood vessel, usually pulmonary vasculature or other venous vessels. Clinically significant fistulae may lead to ischemia of the segment of the myocardium perfused by the affected coronary artery. Therefore, closure of such fistulae is indicated. Transcatheter closure if feasible is recommended and can be achieved using different occlusion devices. This presentation discusses the clinical classification of fistulae and the interventional approach to eliminate such fistulae with some case examples. The availability of new coils and catheters render the interventional approach safe and effective.

(274)
Transcatheter Pulmonary Valve Replacement Using the Venus P valve

Prof. Ziyad Hijazi (Qatar)

Significant pulmonary valve regurgitation results in progressive right ventricle dilation that may lead to the risk of development of ventricular arrhythmias, right ventricle dysfunction and sudden death. Most patients post trans-annular patch

repair of tetralogy of Fallot will require a competent pulmonic valve at one point of their lives and most are not eligible for the currently approved Melody or sapien valves. The Venus P valve was designed in mind to the anatomical variations in these patients. The Venus P valve underwent 2 clinical trials: The Chinese FDA trial and the CE trial.
The CE trial enrolled patients with dysfunctional right ventricle outflow tract (usually severe pulmonary regurgitation) with valved conduit or a bioprosthetic valve. Surgical pulmonary valve implantation at an appropriate age may restore right ventricular function and improve the symptoms, however cardiopulmonary bypass and ventriculotomy needed for such operations may further impair the right ventricular function. Therefore, timing and indications for resurrection of a competent pulmonary valve are still controversial issues.
Assessment of pulmonary regurgitation severity is essential so that we can know who are the patients who will require valve implantation.The importance of EKG

(275)
Impact of single clamp versus double clamp technique on neurological outcome

**Dr. Sakher Al-Maayeh (Jordan)*
Razi Abu Anza, MD; Hassan S. Elqaderi, MD; Diana N. Alamro, RN; Manal S. Alsarairah, MD

Objectives: Aortic manipulation during coronary artery bypass grafting is an important cause of stroke in the peri-operative period. The method of aortic clamping had been hypothesised to have incremental effects on the rates of stroke after cardiac surgery. The aim of this study was to compare the risk of stroke and other important early outcomes in patients who had coronary artery bypass grafting using single aortic clamping (SAC) versus multiple aortic clamping (MAC) techniques.
Methodology: From January 2020 to December 2020, 219 (194 males, 25females) patients (SAC=110, MAC=109) underwent coronary artery bypass grafting at Queen Alia Heart Institute by two selected surgeons. The mean age in the MAC and SAC cohorts were (57.60 (32-75) vs 59.03 (39-73)) years, respectively. The primary outcome was early postoperative stroke rate, while the secondary outcomes were early mortality, atrial fibrillation and bleeding that required the patient being taken back to the operating theatre to secure haemostasis.
Results: Fewer patients in the SAC cohort suffered early stroke compared to the MAC cohort (3 (2.7%) vs 12 (11%), p=0.015). Furthermore, while early mortality was higher in the MAC versus the SAC, it was statistically insignificant (1 (0.9%) vs 6 (5.5%), p=0.065). Both techniques demonstrated comparable risks of postoperative atrial fibrillation and re-

exploration for mediastinal bleeding (6 (5.5%) vs 11 (10.1%), p=2.0) and (4 (3.6%) vs 4 (3.7%), respectively; p=1.00).

Conclusion: Aortic manipulation is an important cause of stroke and death after coronary artery bypass grafting. Neither technique for aortic clamping influences the risk of early mortality, atrial fibrillation and postoperative bleeding. However we think that single aortic clamping may carry lesser risk of stroke.

Keywords: Aortic clamping, stroke, mortality, bypass grafting, outcomes

(276)

Cardiac Amyloidosis

**Prof. Ramzi Tabbalat (Jordan)*

Most cases of cardiac amyloidosis are caused by either light chain (AL) or transthyretin (TTR) amyloidosis. ATTR was once thought to be a rare disease, but major advancements in our diagnostic capabilities have led to a notable increase in case discovery and paved the way for earlier diagnosis of the disease and the introduction of new effective pharmacological therapies. AL amyloidosis is associated with high mortality if not diagnosed early, and, ruling it in or out remains a top priority in the diagnostic workflow of any patient suspected with cardiac amyloidosis.

The Abdali National Amyloidosis Center (ANAC) was established as a center of excellence to care for such patients from diagnosis to treatment and beyond. It offers a unique and much needed service in the region.

Recognizing of the signs and symptoms of cardiac amyloidosis, the diagnostic workflow, and the available treatment options will be presented and discussed

(277)

Atherosclerotic cardiovascular disease, current and emergency therapies

**Prof. Eyas Al-Mousa*

(278)

Minimally invasive cardiac surgery

**Dr. Walid A. Abukhudair (KSA)*

Background. Over the past decade, there has been significant progress in the acceptance and development of minimally invasive cardiac surgery (MICS). We are reporting our 1500-patient, multi-center experience with MICS.

Methods. Between 2007 and 2022, a total of 1500 patients underwent minimally invasive cardiac surgery. The cases were all mitral valve repairs or replacements, and they included a large amount of rheumatic mitral valve disease. Major events included mortality at 30 days and other major complications. Patients were followed up for one year.
Results. The mean age of the patients was 57 ± 15 years; the mean ejection fraction was 55% ± 11%; performed through a mini-thoracotomy. All of the cases were accomplished through peripheral cannulation. The mean aortic cross-clamp and cardiopulmonary bypass (CPB) times were 80 and 120 min, respectively.
Conclusions. Minimally invasive cardiac surgery in our experience is an effective approach to mitral valve surgery, and has shown excellent operating time durations and outcomes. It was not linked to significant morbidity or mortality; however, long-term survival studies are required.

(279)
Left ventricular thrombus

Dr. Razi Abuanzeh (Jordan)

LV thrombus is a frequent complication of acute MI. However, it can develop due to several cardiac pathologies that favour the hematic stasis like LV aneurysms, cardiomyopathies, myocarditis, valve diseases and/or prosthesis. Systemic diseases (haematological or rheumatic) can also cause thrombus in the left ventricle.
It is can also be caused by rare syndromes like takosubo cardiomyopathy which is a temporary heart condition that develops in response to an intense emotional or physical experience. It's also known as stress cardiomyopathy or broken heart syndrome. In this condition, the heart's main pumping chamber changes shape, affecting the heart's ability to pump blood effectively.

Case presentation
41 year old male, athletic, HTN, smoker, received covid vaccination recently. Presented with recurrent variable chest pain, sometimes associated with S.O.B for the last few days prior to presentation after passing through social stressful conditions. No other associated symptoms. Examination was unremarkable.
Routine investigations for chest pain (CXR, ECG, CBC, LFT, KFT and cardiac enzymes) were all normal. ECHO showed left ventricular wall hypokinesia with large mass filling the ventricle. Coronary angiogram showed normal coronaries. Hematological investigation showed no systemic abnormalities.
Underwent open heart surgery and the mass was excised through aortotomy.
Histopathology showed that the mass was thrombus.

Conclusion
Intraventricular thrombus can develop despite of normal coronaries, valves or rhythm, and even without systemic coagulation disease.
Left ventricular wall abnormality is a major reason.

(280)
Minimally invasive direct coronary artery bypass grafting

Prof. Walid A. Abukhudair (KSA)

Background. Minimally invasive direct coronary artery bypass grafting (MIDCAB) with the internal thoracic artery can be used in primary operation to revascularize the anterior surface of the heart.
Methods. This multi-center experience included all patients with significant coronary artery disease in the left anterior descending artery. Coronary targets were grafted with the pedicled internal thoracic artery through a small left thoracotomy. Follow-up time was one year in terms of symptoms and major adverse cardiac and cerebrovascular events (MACCE).
Results. Between 2012 and 2022, 200 patients underwent internal thoracic artery minimally invasive direct coronary artery bypass grafting. Mean anastomosis time was 15 minutes. Two patients underwent conversion to sternotomy, one patient had to go on femoral cardiopulmonary bypass, and there were no deaths within 30 days after the operation. There was no incidence of 1-year MACCE in this population.
Conclusions. Minimally invasive direct coronary artery bypass grafting with the internal thoracic artery avoids the risks of sternotomy and cardiopulmonary bypass. There is no significant morbidity and mortality associated with patients undergoing the procedure. Continued follow-up is essential to evaluate long-term graft patency and patient survival.

(281)
Perioperative echocardiography of the right heart – state of the art and future developments

Prof. Harry Maguina (Germany)

The right heart plays a crucial role during various diseases. Recent research shows that right heart function is an independent predictor of worse outcomes. Evaluation of right heart function can be performed using various techniques, including invasive right-heart catheterization, cardiac MRI and echocardiography.

In the perioperative setting different echocardiographic techniques are applied. The visual assessment is typically used in emergency situations to rapidly detect right heart failure. The evaluation of the geometry of the right and left heart as well as the measurement of different diameters of the ventricles are performed in two-dimensional end-diastolic and end-systolic frames. M-Mode is typically applied to measure the movement of the tricuspid annulus reflecting longitudinal right heart function. Echocardiographic loops can be further assessed using speckle tracking techniques to analyze the deformation patterns of the right heart. 3D echocardiography allows bed-side evaluation of volumes and right ventricular ejection fractions. Based on the 3D volumetric data recent developments allow a more detailed assessment of cardiac deformation pattern is possible. In future the fusion of the volumetric results and the cardiac deformation patterns might have the potential to give further insights into right heart function.

(282)
Managing a trauma airway

*Prof. Peter *Groom* (UK)

(283)
Wireless spinal cord stimulation

**Prof. Andrea Trescot (USA)*

(284)
Damage Control Anesthesia

**Dr. Muaweih Ababneh (Jordan)*

Over the last 10 yrs., a new addition to the damage control paradigm has emerged, referred to as damage control resuscitation (DCR). This focuses on initial hypotensive resuscitation and early use of blood products to limit or halt the progression of the lethal triad of acidosis, coagulopathy, and hypothermia. Involves postponing of definitive repair or fixation until the patient has been adequately resuscitated.
Damage control surgery (DCS) is a concept of abbreviated laparotomy, designed to prioritize short-term physiological recovery over anatomical reconstruction in the seriously injured and compromised patient. DCS shifts the focus from anatomical to physiological restoration. The role of the anesthesiologist in the damage control approach to the patient is of utmost importance and can have a profound impact on the patient's ultimate outcome.

The anesthesiologist is vital in overseeing the process of fluid resuscitation to optimize hemostasis and long-term survival. Another critical role of the anesthesiologist is prevention of a second hit caused by recurrent shock. It is essential for any anesthesiologist who cares for unstable trauma patients to know and understand the concepts of damage control anesthesia. Damage Control Anaesthesia (DCA) should include assisting the non-trauma surgical team recognise and appreciate the magnitude of haemorrhage and understand the need to maintain a dynamic plan.

The aim of DCA must remain primarily the arresting of the lethal triad whilst ensuring cardio-respiratory stability as well as adequate analgesia and sedation.

DCA has four phases, Phase one in the emergency department, phase two in the operating room, phase there and phase four in the definitive surgery. The role of the anesthesiologist in damage control trauma care is that of resuscitation consultant

Most of the goals of DCA are part of the duties of trauma anaesthetist. DCA will have profound positive effects on morbidity and mortality.

Damage control means to avoid "operating the patient to death," a way of limiting prolonged surgical procedures that increased blood loss, and with it the potential for hypothermia, coagulopathy, and acidosis.

The "second hit" produced may lead to fatal exacerbation of traumatic brain injury (TBI), to the systemic inflammatory response syndrome, to the development of acute lung injury, or to early sepsis.

When one thinks about how many of these variables are under the control of the anesthesiologists it becomes obvious that anesthetic management may be as critical as surgical management in achieving the best possible patient outcome.

(285)
Pulmonary hypertension

**Prof. Hassan Alnuaimat (USA)*

(286)
Anesthetic Management of ICU Patients

**Dr. Imad Swaiss (Jordan)*

Intensive care patients are critically unstable, and going to an operating theatre for any reason increases their mortality and morbidity rate, both of which are already high.

Challenges for these specific cases start from cannulation, airway maintenance, hemodynamic control, and complications of the procedure itself.

In this talk, a close look at these problems, solutions and future planning
for these cases will give an idea to pave the way for better patient care.

(287)
Radio frequency ablation and chronic spine pain

** Prof. Andrea Trescot (USA)*

(288)
Transesophageal Echocardiography in non-cardiac surgery

**Prof. Harry Maguina (Germany)*

Transesophageal echocardiography (TEE) is a standard tool for the diagnosis and management of cardiovascular diseases. TEE also expands the hemodynamic monitoring armamentarium of anesthesiologists and intensivists. As a semi-invasive and quickly available technique TEE is also used for emergency diagnostics, guidance of interventions and surgeries.
Up to date, intraoperative TEE during non-cardiac surgery is applied in various fields including general surgery, vascular and neurosurgery. Typical findings in emergency situations are hypovolemia, right heart dysfunction and signs of myocardial ischemia. An emerging field of TEE application is the guidance of stent placement in aortic interventions. In aortic dissection TEE helps to correctly identify true and false lumen. In neurosurgical cases that need to be operated on in a semi-sitting position, TEE can detect smallest amounts of air entering through open venous vessels and help to avoid pulmonary air embolism.
Taken together, TEE offers a good safety profile and enhances intraoperative anesthesiologic care.

(289)
ECMO support for respiratory failure

**Prof. Hassan Alnuaimat (USA)*

(290)
Human factors and the prevention of unrecognized esophageal intubation

** Prof. Peter Groom (UK)*
This talk will define the scale of the problem of unrecognized esophageal intubation and how a robust Human Factors approach to the problem can prevent its occurrence; the “shared airway approach”. The importance of horizontal hierarchy in the operating theatre, the CUS challenging tool and the PUMA unrecognized esophageal intubation cognitive aid will be discussed.

(291)

The Oxygen Dilemma: Can Too Much O2 Kill?

**Dr. Muaweih Ababneh (UK)*

Oxygen is vital for life—without it, severe brain damage may ensue in as little as three minutes. So doctors routinely treat traumas such as Acute coronary syndrome or stroke by providing patients with more oxygen. Mounting evidence suggests, however, that resuscitating with too much of the gas may actually have a harmful effect. The culprit in brain damage may not be a lack of oxygen but rather its reintroduction into the body.

Researchers reported that resuscitating baby mice with pure oxygen caused more brain damage and cerebral palsy–like coordination problems, as compared with mice that breathed air during resuscitation.

"Many think oxygen doesn't hurt and you can give as much as possible to make up for a deficiency.

Oxygen is a drug. This seems like a strange statement to most people as we breathe in oxygen with every breath we take. However, the amount of oxygen we breathe in through room air is only 21%, the rest is made up mostly of nitrogen. When people are critically ill or have chronic lung disease, they often require additional oxygen to properly oxygenate the blood and tissues. In extreme cases a patient may require 100% oxygen.

Like all drugs, too much can be harmful and dangerous. There is still debate as to how much oxygen is too much oxygen. We do know however, high concentrations of oxygen over a period of time cause an overproduction of free radicals in the lungs. If unchecked, these radicals can severely damage or kill lung tissue. If left for a prolonged period of time the patient can suffer permanent lung damage. The general rule is that a patient should be on the least amount of oxygen necessary to keep their blood-oxygen levels high enough to properly supply the tissues and organs.

Lance Becker, professor of emergency medicine at the University of Pennsylvania School of Medicine and director of its Center for Resuscitation Science*, who similarly showed that cells were much more likely to die after being re-exposed to oxygen than they were when deprived. In fact, Becker explains, physicians do not know how much is too much or whether administering extra amounts actually benefits patients at all.

So why would treating injuries with a molecule that fuels life actually do the reverse? Evidence suggests that pumping in too much oxygen too quickly can strip the molecule of a single electron, creating a free radical. Free radicals, linked to rapid aging, are highly reactive with other molecules, including vital DNA and proteins, the destruction of which can damage or kill cells.

Treating with too much oxygen, therefore, could increase the production of free radicals and make a bad situation even worse. The key is to find that "sweet spot," the optimal amount to give a person so he or she can recover with minimal damage.

(292)
ECG interpretation for the anesthesia

**Prof. peter groom (UK)*

(293)
Airway Management during CPR & ICU

**Dr. Imad Swaiss (Jordan)*

Having passed BLS, ALCS, trauma courses, etc., one issue is constantly in common, together with patients in intensive care, that is Airway Management. Having already high-risk patients needing CPR, whether in an ICU setting or elsewhere, necessitates the skills of airway management at the very start. During this talk, different airway procedures, starting from the basic to the most recent new advances are discussed, reminding everyone of the importance of this aspect in high-risk patients, without which a grave outcome is unfortunately expected.

(294)
Pain management for palliative patients

**Dr. Mohammad Shawagfeh (Jordan)*

(295)
Neurological complication in cardiac surgery

**Dr. Odai Al Momani (Jordan)*

(296)
Late versus Early tracheostomy In ICU

**Dr. Qasim Khanmaiseh (Jordan)*
Dr.Abdalah Alserhan

Objectives: To determine the prober time of performing tracheostomy in intensive care unit for patients needs mechanical ventilation, the requirement of sedations and ICU stay.
Methodology: After obtaining of our local respected ethical committee acceptance, on the period between 2018-2020, in the biggest ICU in the region, and other attached hospitals of Royal Medical Services in Jordan. Two groups were designed, A and B. In the A group, early percutaneous tracheostomy was performed, within less than 4days of admission, and in the B group late procedure was administered, after 14days or more. The need of sedation which was made by the using algiscan device on scale from 1 to 10, muscle relaxants, by train of four (TOF) and ICU stay depending on the date of admission and the discharge dates were analysed carefully.
Results: In A group, fifty-eight patients adults, males and females aging from eighteen to 75 years old were taken in this study the observation of the needs of all types of sedations including the supplement of muscle relaxants when needed, in comparison with the B one were decreased to minimal requirement, the doses of 3mg of morphine were enough to keep patients calm which leads to decrease the occupying time of ICU bed.
Conclusion: Performing percutaneous tracheostomy among the ICU patient is required as early as possible when trial of early weaning is expected to be difficult or impossible or when long stay of the patients in ICU is needed.
Keywords: Tracheostomy, Sedation, |Muscle Relaxants

(297)
New Approach in the Management of HAP/VAP in Critically Ill Patients (MSD)
**Prof. Ahmed Mukhtar (Egypt)*

(298)
Women's gynecological healthcare: A global call reaction

**Prof. Ranee Thaker (UK)*

(299)
Does menopause influence health in Midlife?

**Prof. Mary Ann Lumsden (UK)*

(300)
How to personalize IVF journey: for simulation

**Prof. Alberto Vaiareli (Italy)*

(301)

Screening and prevention of preterm birth in twins: a new ISUOG Guideline

**Prof. Asma Khalil (UK)*

(302)

Prevention and management of stress urinary incontinence

**Prof. Uwe Torsten (Germany)*

The status of a stress urinary incontinence (SUI) in women is rather common; the mean annual incidence of UI in general has been reported to range from 1% to 9%. In general, it increases with age; up to 75% of women over 65 report urine leakage. So SUI has an impact on health although it is not being associated with increased mortality, but with a decreased quality of life. It may lead to urinary dermatitis, perineal infections and an increased risk of falls, especially during night time. In the end, an increased caregiver burden and a decreased personal independence might result from SUI.

Continence is maintained at the level of the bladder neck by the proximal urethral sphincter and the proximal urethra. Normal bladder holds urine because the intraurethral pressure exceeds the intravesical pressure. In case these mechanisms show malfunctioning, the underlying pathophysiological process may be analysed by a voiding diary, pelvic examination and determination of postvoid residual on ultrasound plus the analysis of urodynamic findings which are: Involuntary leaking of urine in the presence of raised intra-abdominal pressure and in the absence of detrusor activity.

Conservative options like pelvic floor or Kegel exercises with or without support of TENS devices and topical application of estrogen gels on the anterior part of the vagina in postmenopausal patients are less invasive and are generally the first line approach, but their response is usually dependent on patient compliance.

Surgical options should be considered, if SUI is refractory to conservative approaches. There exist a variety of methods: Mesh sling procedures: TVT, Burch Colposuspension, non-mesh autologous slings or urethral bulking agents.

(303)

Investigation and management of abnormal uterine bleeding

**prof. Mary Ann Lumsden (UK)*

(304)

Management of obstetric anal injury

**Prof. Ranee Thaker (UK)*

(305)

Anomalies in twins: management dilemma

**Prof. Asma Khalil (UK)*

(306)

Management of borderline line ovarian tumors

**Dr. Isam Lataifeh (Jordan)*

Borderline ovarian tumors (BOTs) represent an independent disease entity among epithelial ovarian cancers (EOCs), officially classified by the International Federation of Gynecology and Obstetrics (FIGO) in 1961 and by the World Health Organization in 1973. Currently, three terminologies are used to describe these tumors: borderline tumor, tumor of low malignant potential, and atypical proliferative tumor. BOTs are characteristically difficult to diagnose using preoperative radiological methods, exhibit inconsistencies in expression of tumor markers, and are often inaccurately identified using frozen sections.

Although it is agreed that complete surgical resection of the tumor is the best curative method for BOTs, there are no clear-cut answers and much debate regarding the extent of surgery, the need for fertility preservation in the treatment of young women, the use of laparoscopic surgery, and the use of postoperative chemotherapy and infertility treatments

(307)

Updates on HRT

**Dr. Abeer Annab (Jordan)*

(308)

Fertility preservation for medical and social reasons

**Prof. Alberto Vaiarelli (Italy)*

(309)

Vaginal surgical procedures in complex pelvic floor disturbances

**Prof. Uwe Torsten (Germany)*

Dr. Rami Al Shwyiat

The common pelvic floor disorders like pelvic organ prolapse, urinary and fecal incontinence should be diagnosed by both standardized questionnaires and standardized description of the findings in the physical examination. Mostly, a surgical approach of treating a relapse should only be chosen, if conservative treatment options failed. A surgical approach has to take into account its present and future impact on the anterior, middle and posterior compartment of the pelvic floor. The options of a vaginal repair will be discussed.

(310)

Maternal mortality in Jordan

** Dr. Maher Maaita (Jordan)*

(311)

Thrombocytopenia in pregnancy

**Dr. Amer Gharaibeh (Jordan)*

(312)

Insulin resistance and obesity among infertile women with different polycystic ovary syndrome phenotypes

**Dr. Moamar Al-Jefout (Jordan)*

Nedal Alnawaiseh & Aiman Al-Qtaitat

Objectives: This study aimed to examine the prevalence of different PCOS phenotypes among infertile women with PCOS and to investigate the prevalence of insulin resistance and obesity in different PCOS phenotypes compared with infertile women without PCOS.
Methodology: This cross-sectional observational study was carried out in Karak City in the southern part of Jordan from January 2012 to April 2015. A total of 219 consecutive, untreated women presenting with initial diagnosis and treatment of infertility due to different causes, including PCOS, were recruited. A standardized form was used to take a medical history and physical examination, with hormonal profile and ovarian morphology.
Results: Insulin resistance (IR) was observed in 83.6% of women with PCOS and in 46.3% of women without PCOS ($p < 0.001$). IR was significantly associated with PCOS only among women with central obesity ($\chi 2 = 35.0$, $p < 0.001$) and not for the normal category ($\chi 2 = 4.04$, $p < 0.058$). Among women with PCOS, the most common phenotype was type I (50.3%), type III (29.6%), type II (14.5%), and type IV (5.7%).
Conclusion: To our knowledge, this is the first Arabic study to report PCOS phenotypes. PCOS Type I classical and full-blown severe PCOS phenotype is the most common; this accords with other studies. IR is highly prevalent among women with PCOS and is associated with waist circumference and BMI

Keywords: PCOS, Insulin resistance, infertility, obesity, PCOS phenotype

(313)

The impact of hookah on anti-mullerian hormone level

**Dr.Tariq Irtaimeh (Jordan)*
Dr. Amal Dubais; Dr. Nancy Alfayez

Objectives: The aim of our study is to determine if smoking hookah has an effect on ovarian reserve by measuring the serum levels of Anti- Mullerian hormone
Methodology: cross-sectional study was performed at the fertility clinic at Prince Ali Hospital, in the city of Karak, Jordan. Two hundred healthy women within the 20 to 35 years' age range, were chosen from those attending the fertility clinic. AMH serum levels were checked on one occasion on day 2–4 of the menstrual cycle. Data was collected from November 2020 to July 2021. The serum levels of AMH of 100 smoking hookah women were compared to the other non-smoking hookah women and results were analysed by Chi-square and independent samples T-result
Results: total of 200 hundred women were enrolled in the study. The mean age of the participants was 29 ±0.6 years. The mean AMH level was (2.29 ± 0.106 ng/mL) in hookah non- smokers compared to (1.5 ± 0.126 ng/mL) in hookah smokers. P values ≤ 0.05 were considered statistically significant. There is a considerable variation in Anti-Mullerian hormone levels between smokers and non-smokers.
Conclusion: Hookah smoking has a significant effect on serum Anti-Mullerian hormone levels.
Keywords: Hookah, ovarian reserve, smoking, anti-Mullerian hormone

(314)

Exploring Maternity Healthcare Providers' Perspectives on Maternal Upright Positions during Second Stage of Labor: Qualitative Study

**Dr.Insaf Shaban (Jordan)*
Ohood Murshed Alsehimi

Objectives: The birth of the baby is an exceptional experience for the mother and the whole family. It is crucial that the women's opinions during maternity care are valued, especially during labor, is a crucial factor in providing respectful maternity care. This study aims to identify barriers to adapting an upright position during the second stage of labor in Madinah and what are the strategies necessary to overcome these barriers.
Methodology: A qualitative study was performed at Maternity and Children Hospital, Madinah (MMCH), Saudi Aribia, the study sample consisted of a non- probability convenience sampling of 18 health care clinicians. Data collection was done through face-to-face semi-structured interviews with the consenting healthcare providers.

Results: The following core themes emerged: policy, safest way, doctors set the rules, midwives' hesitancy to assume responsibility, uncooperative, uninformed women, and the way forward.

Conclusion: This study concludes that irrespective of all the evidence supporting the upright position in the second stage of labor, many healthcare providers continue to practice the lithotomy position in accordance with the cultural and routine norms. Many healthcare providers prefer the lithotomy position for their own convenience, disregarding other birth positions as well as the women's preferences and desires.

Keywords: Upright position; Health care providers; Qualitative

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BMT in hemoglobinopathies

** Prof. Merli Pietro (Italy)*

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HeadSmart Jordan: can we make a difference by raising awareness?

**Dr Nisreen Amayiri (Jordan)*

David Walker; Raed Marashdeh; Eric Bouffet; Asem Mansour

Objectives: Pediatric brain tumors are commonly diagnosed late, particularly in LMIC. Inspired by HeadSmart campaign in UK and funded by MyChildMatters program and KHCC, we launched our HeadSmartJordan campaign to raise the awareness of the Jordanian public and health care practitioners about pediatric brain tumors' symptoms to facilitate earlier diagnosis.

Methodology: We held awareness lectures to the medical students, residents, and health care practitioners, in addition to school teachers. We made several public awareness posters and videos, and designed several public interaction activities, and media and social media interviews to explain the symptoms of brain tumors in children. We retrospectively evaluated our campaign related activities.

Results: During the initial two years of the campaign, we held >60 awareness lectures to the health care practitioners (two to those caring of refugees at the UNHCR and the UNRWA centers) and participated in seven national medical conferences. These lectures were attended by >3000 participants. In collaboration with the medical universities in Jordan, we managed to integrate an awareness lecture in the academic curricula of the medical students. We distributed >3000 awareness posters and >300,000 awareness pocket cards to 107 hospitals, and 485 medical centers (including 26 centers caring for refugee). In addition, we held >60 awareness lectures attended by >3000 school teachers. We produced eight awareness short videos (including two survivors' stories) that were shared on different social media platforms.

We arranged three awareness days of direct interactions with the public in the big malls, two cycling activities and a walkathon; covering wide geographical areas in Jordan. We also launched a bilingual Head Smart Jordan website (headsmartjordan.khcc.jo, in English and Arabic language) to be a valuable resource for the public and the health care practitioners about symptoms of brain tumors in children.

Conclusion: We sensed limited knowledge about pediatric brain tumors' symptoms among the health-care practitioners and public. Though it was feasible to do many awareness activities, more engagement is needed. Future campaign sustainability is important as the ultimate-goal of earlier diagnosis of pediatric brain tumors in Jordan, will need years to achieve.

Keywords: Awareness, HeadSmart Jordan, Brain tumors, Children

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Acute Lymphoblastic Leukemia in children: Queen Rania Children's Hospital Experience

**Dr Mousa Qatawneh (Jordan)*

Tania Ogeilat MD; Mustafa Haji MD; Moath Altarawneh MD,; Maher Mustafa MD

Objectives: To analyse the frequencies of clinical and laboratory risk factors and cytogenetic abnormalities in Jordanian children with acute lymphoblastic leukemia and their response to therapy.

Methodology: A retrospective analysis of 116 pediatric acute lymphoblastic leukemia cases diagnosed and treated in Queen Rania Hospital for Children between January2015 and December2019. Children were diagnosed by bone marrow aspirate microscopic examination and flow cytometry. Cytogenetic anomalies were detected using fluorescence in situ hybridisation. Descriptive analysis was given for the age, gender, acute lymphoblastic leukemia immune phenotype, cytogenetic anomalies, initial white cell count, and initial response to chemotherapy. These variables were correlated in frequencies with each other and with response to treatment in order to detect high risk groups and characteristic patterns.

Results: The ages ranged from 3 months to 14 years with a peak age group of (0-4) years and almost equal gender distribution. B-cell acute lymphoblastic leukemia was diagnosed in 104 (89.7%) cases, while 12 (10.3%) were of T-cell lineage. CD10 negativity was detected in 10 cases (9.6%), high white cell count in 18 (15.5%), t (12;21) in 15 (14.4%), t(9;22) in 4 (3.8%) and 11q23 rearrangement in 3 infants (2.9%). A poorer response to therapy and higher mortality was detected in T-cell subtype, infancy, older age, high white cell count, presence of t (9;22) and 11q23 rearrangement, and slow responders to initial chemotherapy. The 5-year event-free survival rate for pediatric ALL exceeds 80% in developed countries. Our ALL patients in Jordan had a comparable rate of 82% as well as superior treatment outcomes compared to many developing countries.

Conclusion: Identifying adverse prognostic factors of the most common pediatric leukemia allows for tailoring chemotherapy protocols, closer monitoring of high risk groups to improve treatment outcomes.

Keywords: Acute lymphoblastic leukemia, ALL, cytogenetics, t (9;22), 11q23

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BMT in malignancies

**** Prof. Merli Pietro (Italy)***

Allogeneic hematopoietic stem cell transplantation (HSCT) is a potentially curative treatment for many malignant disorders of childhood (first, high-risk acute leukemias). This can be obtained thanks to the combination of intense preparative radio/chemotherapy and the graft-versus-tumor (GvT) effect. Notably, improvements in transplant techniques obtained in last decades, including progress in high-resolution donor typing, choice of conditioning regimen, graft-versus-host disease (GvHD) prophylaxis and supportive care measures have continuously ameliorated overall transplant outcome. Additionally, recent successes using alternative donors, especially haploidentical ones, have extended the potential application of allotransplantation to most patients. Moreover, the importance of minimal residual disease (MRD) before and after transplantation is being increasingly clarified for many diseases and MRD-directed interventions may be employed to further improve disease-free survival after transplant. In parallel with these advances, continuous refinements in chemotherapy protocols, obtained in large, cooperative, multinational, prospective studies, as well as the development of targeted therapies and immunotherapies may redefine the indications for HSCT in the coming years.

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Bleeding in children with inherited factor deficiency: our single center experience in Jordan.

**Dr. Mais Jazazi (Jordan)*

Ruba Alhazaimeh; Mousa Qatawneh; Omaiema Aljarrah; Moath Altarawneh; Alaa Alqasem; Maher Mustafa

Objectives: Diagnose and treatment of inherited bleeding disorders in children secondary to deficiency in single or multiple coagulation factor is of great importance and represent a challenging issue in developing country like Jordan. The prevalence of bleeding disorders varies in different countries and their ethnic groups, and still we have a shortage in documentation of these disorders related to diagnostic labs, variability of clinical presentation, family history of similar bleeding tendency with some denial and ignorance about the seriousness

and importance of early detection to prevent major bleeding conditions. Inherited factor deficiency (IFD) refer to Bleeding disorders occur when one or more factor are missing or decreased from the blood, preventing the normal blood clotting formation. Inherited means that the person was born with the deficiency and will have it for the rest of his or her life. They may also pass it onto their offspring's.

Methodology: The result of 72 patients with inherited factor deficiency who were diagnosed and followed at Queen Rania AL-Abdullah children hospital in the Pediatric Hematology department in the period between 2015 and 2021, were retrospectively studied in regard to the frequency, diagnostic test, presentation and management plan.

Results: In these (72) patients, majority of patients 36 (50%) were hemophilia A, 5 (6.9%) were hemophilia B, 6 (8.4%) were von Willebrand disease (vWD), and the remaining 25 (34.7%) were rare bleeding disorders. The median age of the patients at the time of diagnosis was 3.5 years. Seventeen patients (23.6%) present with major bleeding, 45 (62.5%) with minor bleeding and 10 patients (13.9%) were asymptomatic, 35 (48.6%) of them diagnosed by similar family history,39 (54.2%) are from consanguineous parents, and 23 (31.9%) incidentally founded in the preoperative laboratory studies.55(76.4%) of patients are males and 17(23.6%) of them are females. Treatment principles for bleeding or pre-operative preparation in these clotting factor deficiency are based on what is deficient and replacement of it to achieve the hemostatic level required to form clot and maintain it stable, we have either specific factor concentrate like factor VIII in hemophilia A, Prothrombin>complex>concentrate (PCC) or fresh frozen plasma (FFP) and cryoprecipitate (CRYO).Patients with hemophilia A or B, factor 7 deficiency given the factor concentrate, patients with factor X deficiency and vitamin k dependent factor deficiency given the PCC complex, patients with VWD we will have the factor concentrate in our department soon in the coming period, and finally the remaining rare factor deficiency like factor XIII, factor V and fibrinogen we use FFP or CRYO. In this study, we are going to present the prevalence, diagnostic approach, follow-up, treatment modality of various bleeding history, preoperative preparation and the challenges we face.

Conclusion: The variety in clinical presentation of IFD lead to significant diagnostic and therapeutic Challenges, sharing our experience in treating patients with inherited factor deficiency will help to improve diagnose and management of these bleeding disorders especially in countries with limited resources and facilities.

Keywords: Inherited factor deficiencies, prophylaxis, treatment, bleeding disorders.

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Overview of FMF

**Prof Mohammad Al Rawashdeh (Jordan)*

(321)
Approach to patients with abnormal LFT

**Prof. Mohamad – Iqbal Migdady (UAE)*

(322)
Celiac disease: what pediatricians need to know

**Prof. Mohammad Al Rawashdeh (Jordan)*

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Fecal calprotectin in clinical practice

**Prof. Mohamad – Iqbal Migdady (UAE)*

(324)
Pre and postnatal exposure to pollutants and lung disease in children

**Prof. Costanza Barazzone Argiroffo (Switzerland)*

(325)
Pediatric complicated pneumonia

**Ass. Prof. Enas M. Al-Zayadneh (Jordan)*

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Pediatric sleep study (Polysomnography)

**Prof. Costanza Barazzone Argiroffo (Switzerland)*

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Factors Influencing Dexamethasone Requirement in Covid-19 Hospitalized Children

**Dr Alia Alkhlaifat (Jordan)*

Dr Nasser Eyadeh Banikhaled (MD); Dr Nuseibah Soud Alramadina (MD); Dr Aseel Farah Nimri (MD); Dr Ann Farah Nimri (MD)

Objectives : To assess the factors influencing dexamethasone requirements in COVID-19 hospitalized children and the benefit of early use of steroids on the outcome**.**

Methods: This study was retrospective. From October 2020 to February 2022, 100 hospitalized children who tested positive for COVID-19 PCR at Queen Rania Hospital for Children were respectively evaluated to detect those who received dexamethasone during their hospital stay.

Results: Of 100 pediatric patients infected with COVID-19, 24 received dexamethasone. The median age was 21 months (ranging from one month to 13 years), and 13 (54%) of the patients were male. Additionally, six patients (25%) had underlying diseases and co-morbidities. The in-hospital oxygen support included a simple face mask (16 patients, 67%), high-flow nasal cannula (5 patients, 21%), and nasal cannula (3 patients, 12%); additionally, none of these patients required mechanical ventilation. The mean number of days spent on oxygen support was 4.46 ± 3.13 days (males 5.92 ± 3.4, female 2.73 ± 1.68). The mean number of days of treatment with dexamethasone during the hospital stay was 6.17 ± 2.58 days (males 7.23 ± 2.89, female 1.75 ± 4.56). The mean length of stay in hospital was 6.92 ± 3.97 days (males 8.54 ± 4.56, female 4.73 ± 1.69).

Conclusion: This study demonstrated that the mortality of COVID-19 is less in the pediatric population. Notably, the males had longer hospital stays than females; furthermore, those who required oxygen supplementation, as well as those who received dexamethasone, spent more days hospitalized than females. The administration of dexamethasone to patients with severe COVID-19 pneumonia within 24 hours of oxygen supplementation can be helpful in reducing the rate of mechanical ventilation.

Keywords: dexamethasone, COVID-19, oxygen supplementation.

(328)

Every newborn is equal: bottlenecks and strategies in the health-care system, National survey on the care of newborns with hypoxic-ischemic encephalopathy.

**Dr. Eman Badran (Jordan)*

Ala'a AL-Qhaiwi; Maryam Al Jammal; Rafeef Qawasmeh; Ahmad Rawajbeh; Waseem Alhaj; Abdallah Elqunj; Mohammad Askar; Maryam Al Jammal

Introduction: Hypoxic ischemic encephalopathy (HIE) is a terrible condition, and the only neuroprotective treatment now available to treat HIE is therapeutic hypothermia (TH). In 2017, Jordan created and disseminated a national guideline for new-born identification and care to treating physicians. The goal of this cross-sectional study is to examine the current HIE practices of associated physicians in Jordan.
Methods: Participants completed a self-administered survey. Seventy participants in total were contacted; 57 of them responded, and 38 of them manage this situation. Awareness of national guidelines, as well as HIE diagnosis, management, patient transfer, and therapeutic-hypothermia (TH) usage, were the primary outcomes.
Results: One third of responders were unaware of national HIE guidelines. The majority (70%) started TH with servo-controlled cooling equipment, assessed blood glucose in the first 6 hours, used the Apgar score to assess the infant's state at birth, performed first-hour postnatal blood gas, and performed Sarnat staging to determine severity. TH is continued for 72 hours in 63.2%. The technology used to measure brain activity ranged in difficulty from moderate to low.
Conclusion: Significant gaps exist in available resources. To address Jordan's fourth cause of death, a Quality-Based-Healthcare System is needed in Jordan

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Short-Term Complications and Mortality of late Preterm Infants

**Dr. Raeda Al Ghananim (Jordan)*
Moh'd Salameh,MD; Nisreen Alhmaiedeen, MD; Ziad Khalifeh,MD; Mohammad Al-hassan, MD

Objectives: To identify the short-term complications and mortality of late preterm infants (34 0/7-36 6/7 weeks gestation) comparing to term infants (37 0/7-41 6/7 weeks gestation) who were admitted to the neonatal intensive care unit (NICU) and special care nursery (SCN) at King Hussein Medical Center (KHMC).
Methodology : This study was a retrospective chart review of all late preterm and term infants who were born at KHMC in Jordan and admitted to NICU and SCN of KHMC from January first 2018 to December 31st, 2018. The authors formulated a data sheet for late preterm and term infants that contains the following information; Clinical characteristics of each late preterm and term infants admitted to NICU and SCN including gestational age, birth weight, gender, mode of delivery, maternal diseases around the time of delivery like preeclampsia, diabetes, and prolonged rupture of membranes (PROM). Morbidities involving both groups were documented including respiratory distress syndrome of newborn (RDS), transient tachypnea, hypoglycemia, hypothermia, jaundice needed phototherapy, sepsis,

feeding problems, requirement of ventilation, surfactant, length of admission, and death.
Results: The total number of deliveries was 9195 singleton live births during the period of study. Term babies' birth rate was 90.8 %(8352) and preterm babies <37 weeks gestation birth rate was 9.2 %(843). The birth rate of late preterm infants was 5.5% (510) out of them 252 babies admitted to NICU and SCN. Late preterm infants compared to control group (term infants) had obviously more statistical significant complications such as RDS (P=0.000), transient tachypnea of newborn (P=0.001), hypoglycemia, (P=0.001), hypothermia (P=0.010), jaundice needed phototherapy (P=0.001), feeding problems (P=0.000) and sepsis (P=0.001). Late preterm infants with respiratory distress required more respiratory support with nasal continuous positive airway pressure (nCPAP) (p=0.000) and mechanical ventilator (p=0.001). Surfactant given to 12(4.7%) late preterm babies compared to 3(0.7%) term babies. Hospital stay was longer in late preterm infants and mortality rate was also significantly higher among late preterm infants (t691=7; p= 0.000).
Conclusion: Late preterm infants had increased duration of hospital stay, significant neonatal morbidity and higher mortality in comparison to term infants.
Keywords: Late preterm infants, short-term, complications, mortality

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Transient against permanent type neonatal diabetes mellitus patients.

**Dr Asmaa Al Quraan (Jordan)*
Dr.Abdel razzaq Alyasin (MD), Dr. Hadeel Alqurini (MD), Dr Sondos Harahsheh

Objectives: Neonatal Diabetes Mellitus (NDM) is a very rare form of diabetes mellitus presenting early in life which can be attributed to genetic defects in insulin secretion or synthesis in most cases. Some have considered the term NDM to be a misnomer and have suggested the alternative term of monogenic diabetes of infancy. Neonatal diabetes can be classified into transient (TNDM) seen in up to half the cases and permanent (PNDM), which requires lifelong treatment. of all cases with neonatal diabetes, 45% have a transient form, 45% have a permanent form and 10% are a syndrome or have pancreatic aplasia. The aim of this study to clarify the neonatal diabetes mellitus and differentiate between transient and permanent NDM.
Methodology :All children diagnosed as having permanent neonatal diabetes mellitus between 2014 and 2019 in Jordan at Queen Rania Al Abdullah Hospital for Children were included in the study. We carried out a whole-exome sequence for a patient presenting with permanent NDM.
Results: During the last six-year period (2014-2019), 25 neonates were hospitalized with neonatal diabetes mellitus 14 cases (56%) of whom were female and 11 cases (44%) male. We divided the patients into 2 groups: transient neonatal diabetes mellitus 15 cases (60%) and permanent neonatal diabetes mellitus 10 cases (40%).

Conclusion: Permanent neonatal diabetes is most commonly due to activating mutations in either of the genes encoding the two subunits of the ATP-sensitive potassium channel. In most of these patients, switching from insulin to oral sulfonylurea therapy leads to improved metabolic control.

Keywords: Diabetes Mellitus, neonates, Transient, Permanent, insulin, sulfonylurea

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Growth retardation: Common and uncommon causes

**Prof. Jorg Oliver Semler (Germany)*

Evaluation of height is a primary assessment tool for physical well-being in children. Interpretation of data depend on the correct measurement (standing or lying) and the use of adequate reference curves correlated for sex, ethnicity and underlying chronic disease. Additional to height other auxiological measurements like armspan, sitting height and head circumference are relevant to assess skeletal development. In cases where height gain and growth velocity are not adequate for predicted final height – based on height of parents – further assessments are required.

As first step proportional or disproportional short stature needs to be differentiated. Further diagnostic pathways differ depending on proportionality of the patient.

Most common cause for proportional short stature is a retardation of skeletal maturation. This will prolong the time of growth but will lead to a final height within the genetic target range and is often accompanied by a delayed pubertal development. Other rarer cases of proportional dwarfism are malnutrition, psychosocial stress, chronic inflammatory diseases and endocrine disorders like hypothyreodism and growth hormone deficiency. In addition several syndromic diseases like Turner-Syndrome or mutations in the SHOX-gen can cause a proportional short stature.

If the patient is affected by disproportionality the reason is a skeletal dysplasia in most cases. Most common is achondroplasia caused by mutations in the gene FGFR3 or different kinds of spondylo-epiphyseal dysplasia. Diseases affecting bone stability like osteogenesis imperfecta or juvenile osteoporosis can also cause a disproportional short stature.

In this talk the practical approach for growth assessments and the different reasons for short stature (from common to rare) will be discussed. Additional information will be given on hereditary skeletal diseases causing short stature.

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Experience in Pediatric Rehabilitation in our Center "Queen Rania Rahabilitation Center" in Cologne, Establishing a New Concept.

** Prof. Eckhard Schönau (Germany)*

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Medical therapies in children with rare bone diseases

**Prof. Jorg Oliver Semler (Germany)*

The life of a bone is characterized by 3 steps. The processes of bone formation by osteoblasts is influenced by muscles activity and can be impaired by genetic defects. The mineralization of osteoid with phosphate and calcium, requiring vitamin D and alkaline phosphatase can be impaired by life style, chronic diseases and rare hereditary diseases. The final step of bone resorption (remodeling) via osteoclasts is triggered by parathyroid hormone and can be influenced by immobility or chronic medications.

During the last few years, new, specific drugs have been investigated and approved in many countries for children and adolescents with rare skeletal diseases. Bone formation and an increase of growth can be stimulated in children with achondroplasia by using "Vosorotide"during childhood as long as growth plates have not fused. Mineralization can be improved by "Burosumab" in children with X-linked hypophosphatemic rickets and with "Asfotase Alpha" in children with hypophosphatasia impairing activity of alkaline phosphatase. Finally, bone resorption could be reduced by the use of bisphosphonates as an off-lable treatment. New antiresorptive drugs like "Denosumab" have been investigated in other diseases like Osteogenesis imperfecta. Because of a high risk of side effects the use of denosumab in children can not be recommended currently.

During the presentation, different hereditary bone diseases and new therapeutic options will be discussed. In addition, other drugs which are currently investigated will be presented and discussed in the context of a risk – benefit assessment.

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Thyroid cancers in children. KHCC experience over 10 years.

**Dr. Sima Kalaldeh (Jordan)*
Taleb Ismail

Objectives: overview of KHCC experience with children with thyroid cancers perspective data.

Methodology: comparative data review to I international figures in relation to diagnostic pathways Pathology review of the medical records and treatment options and outcomes in children diagnosed with thyroid cancers

Results: surgical and medical treatment outcomes will be outlined and discussed extensively Our figures are I keeping with worldwide data and prognosis is closely comparative.
Conclusion: The outlook in childhood thyroid cancer is favorable given early diagnosis and structured aggressive treatment early.
Keywords: thyroid cancers children radioactive iodine total thyroidectomy

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Clinical, Endocrine and Neuroimaging Findings in Girls with Central Precocious Puberty

**Dr. Abdelrazaq Alyasin (Jordan)*
Daniela Fava; Andrea Calandrino; Maria Grazia Calevo; Anna Elsa Maria Allegri1; Flavia Napoli; Roberto Gastaldi; Giuseppa Patti; Emilio Casalini; Marta Bassi; Andrea Accogli; Abdel Razaq Ahmad A. Alyasin; Antonia Ramaglia; Andrea Rossi; Mohamad Maghnie; Giovanni Morana; and Natascia Di Iorgi.

Objectives: To investigate the frequency of brain MRI abnormalities in girls diagnosed with CPP and the relationship between maternal factors, their age at presentation, clinical signs and symptoms, hormonal profiles, and neuroimaging findings.
Methodology: Data were collected between January 2005 and September 2019 from 112 girls who showed clinical pubertal progression before 8 years of age who underwent brain MRI.
Results: MRI was normal in 47 (42%) idiopathic (I) scans, 54 (48%) patients had hypothalamic-pituitary anomalies (HPA) and/or extra-HP anom¬alies (EHPA), and 11 (10%) had brain tumors or tumor-like conditions (BT/TL), including 3 with neurological signs. Associated preexisting dis¬orders were documented in 16. Girls with BT/TL had a higher LH peak after GnRH test (P = 0.01) than I, and those older than age 6 years had a higher craniocaudal diameter of the pituitary gland (P = 0.01); their baseline FSH and LH (P = 0.004) and peak FSH (P = 0.01) and LH (P = 0.05) values were higher than I. Logistic regression showed maternal age at menarche (P = 0.02) and peak FSH (P = 0.02) as BT/TL risk factors.
Conclusion: MRI provides valuable information in girls with CPP by demonstrating that fewer than half have a normal brain MRI and that few can have significant intracranial lesions after the age of 6, despite the absence of suggestive neurological signs.
Keywords: precocious puberty, MRI; hamartoma; glioma, astrocytoma

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Short Stature: Evaluation and Management

**Dr. Hadeel Alqurini (MD)*

Dr. Abdalrazzaq Alyassen (MD); Dr. Hadeel Alqurini (MD); Dr Asmaa Al Quraan (MD)

Objectives: Short stature (SS) is defined as a height below the 3rd centile or height >2 standard deviations (SDs) below the median height for that age and sex according to the population standard. SS is divided into three types: Familial Short stature, Constitutional Short stature, and pathological SS. Early diagnosis and assessment of SS can be suggested by physical examination, family history, radiology examination, and laboratory investigation including genetic causes. Our objectives in this study were to determine the causes, types, and treatment of SS.

Methodology: A retrospective study includes 242 patients with ages between 5 and 14 years old, who visited The endocrine clinic of Queen Rania al-Abdullah hospital for children (Amman-Jordan) from June 2017 to DEC 2019. Clinical data were analyzed in terms of gender, birth weight, Parent stature, Height velocity, Bone age (BA), and chronological age. We classify the patients with SS into two groups: proportionate SS, and Disproportionate SS. All patients underwent: a full blood count, kidney function test, thyroid function test, tissue Transglutaminase antibodies, insulin-like growth factor -1 (IGF-1), left wrist x-ray, and observe the height velocity for at least 12 months. All-female patients who not explained short stature by investigation and some patients with Disproportionate Short Stature underwent karyotype and skeletal survey.

Results: A total of 242 patients with SS have been studied of these 124 (55.11%) were males and 120 (44.89%) were females. Normal variant SS (36.1%) [CGD (21.02%) and familial SS (15.09%)] were most common causes of SS, followed by endocrine causes (30.09%), low birth weight (<2,5kg) (8.52%), chronic systemic diseases (7.38%), metabolic bone diseases (5.68%) and malnutrition (5.1%). Miscellaneous causes contributed to 6.25%, which comprised Down Syndrome, Russell- Silver Syndrome, achondroplasia, and Noonan syndrome.

Conclusion: The most common cause of SS in males was constitutional growth delay followed by hypothyroidism, miscellaneous causes, systemic diseases, low birth weight, familial SS, GH deficiency, malnutrition, and panhypopituitarism. Familial SS, Turner syndrome, and hypothyroidism accounted for common causes of SS in females.

Keywords: Short stature, Familial, Constitutional, Endocrine

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2 years old male with nephrogenic diabetes insipidus

**Dr. Sondos Harahsheh (Jordan)*

Objectives: I want to report a case of 2 years old male Who had been diagnosed with nephrogenic diabetes insipidus by water deprivation test

Methodology: A 2 years old male recurrent visit to emergency room at Queen Rania hospital with polyuria, polydipsia, recurrent hypernatremic dehydration and failure to thrive

Results: By examination the child height and weight were below third centile, was dehydrated By labs had hypernatremia, hypokalemia,hypercalcemia, CAlcium : creatinine ratio in urine was high Urine osmolality low ,serum osmolality high Renal us showed medullary nephrocalcinosis Brain MRI showed faint posterior pituitary spot By water deprivation test the patient showed no response to minirin administration

Conclusion: Diabetes insipidus have two types Cranial and nephrogenic Water deprivation test helps in diagnosis and differentiation between these types

Keywords: Nephrogenic nephrocalcinosis

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The leadership role of nursing in the transformation of the healthcare sector

**Howard Catton, RN (UK)*

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Applications of non-invasive cardiac mapping

**Ali Rababah (Jordan)*
Mahmoud Obeidat

Objectives: Non-invasive cardiac mapping has proven its effectiveness in clinical practice. This article describes the clinical applications of non-invasive cardiac mapping.

Methodology: The electrical activity of the heart was recorded from 252 surface electrodes applied to the patient's torso. Afterward, the geometries of the heart and torso were obtained by performing a thoracic CT scan. The inverse problem was solved to compute the epicardial potentials from the body surface potentials and geometrical information. The reconstructed epicardial potentials were used to help localize sources of cardiac arrhythmias and guide ablation therapy in patients with atrial fibrillation (AF), ventricular tachycardia (VT), or premature ventricular contraction (PVC). In addition, predicting successful outcomes in cardiac resynchronization therapy is possible using the reconstructed epicardial potentials.

Results: In Erkapic and Neumann study, the Non-invasive cardiac mapping technique identified whether the PVC origin is (RV) or (LV) in 95.2% of the cases. Furthermore, the localization of the PVC origin within the ventricle was more accurate than the 12-lead ECG method in 95.2% of the cases. Another study has shown that non-invasive cardiac mapping provided more information about electrical desynchrony in patients with heart failure than the traditional 12-lead ECG method.
Conclusion: The validation studies of non-invasive cardiac mapping suggest the adoption of this technique in clinical practice. The usefulness of this approach has been highlighted in two main applications; guiding ablation therapy in patients with PVC and predicting the outcome in cardiac resynchronization therapy.
Keywords: Non-invasive cardiac mapping, ECG imaging, cardiac resynchronization therapy, PVC

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Enriching Healthcare Through Technology in Jordan

**Omar I Ayesh (Jordan)*

Objectives: In 2020 Covid19 has forced healthcare providers worldwide to make fundamental changes to its operations and use of digital technologies. The Jordanian digital transformation program in healthcare started in 2009 when Jordan decided to invest in an effective and affordable health IT System in all of its public sector healthcare system. The successful deployment of the national e-health program, Hakeem at 208 sites as part of integrating the public hospitals, medical centers and clinics, indicated that a clear national strategy is available for the different healthcare sectors in order to reach the goals of having such a successful program (NHS VistA, 2013, Ayesh 2019, EHS 2022).
Methodology: This study is based on strategic analysis of the existing technologies, the review of academic literature and over 25 years' personal experience of the author at the Jordanian healthcare sector. It will focus on the national digital transformation program that is planned to cover the different healthcare providers in Jordan.
Results: The use of the proper digital technologies has reshaped how patients are interacting with healthcare providers. The Jordanian national digital transformation program can improve patients' outcome, reduce errors, and can be efficient, effective, evidence based, patient's centric and equitable to all patients in Jordan.
Conclusion: One major step towards enriching healthcare services is the operational improvements with the objective of optimizing efficiency and containing costs, while improving quality of services. Operational measures would include the use of the latest technologies such as analytics, artificial intelligence (AI), machine learning and telemedicine.

Technology is seen as a key enabler to improve healthcare processes due to its potential of providing rapid access to information at the point-of-care.
Keywords: Digital Transformation Analytics Artificial Intelligence

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Online Learning during COVID-19 Pandemic: Nursing Students' and Faculty Satisfaction in Jordan

**Dr. kholoud Al Matar (Jordan)*
Dua'a Al Tamimi, RN,MSN; Abla Habeeb-Allah,RN, PhD; Rana Al-Rawashdeh,RN,PhD; Ghadah Al Bader, RN,MSN

Objectives: To determine the satisfaction level among nursing students and faculty members regarding online education during Covid-19 at Princess Muna College of Nursing (PMCN).
Methodology: This study was conducted among nursing students and faculty members at PMCN in Amman. A consecutive sample of all students (N=223) and faculty members (N=24) who met inclusion criteria was recruited. The '' Online Instructor Satisfaction Questionnaire (OISQ) and the "Online Course Students' Satisfaction Questionnaire (OCSQ) were used to assess satisfaction of both students and faculty members with online education during COVID-19 pandemic.
Results: Overall online learning satisfaction among students and faculty was high with a mean score 4.45(0.65), and 2.77 (0.94) respectively. The highest mean score for the students was 4.50(0.69) for the technology domain, while institutional related factors was for Faculty members with mean 2.87(0.83). Independent t-test results revealed no significant differences in the faculty satisfaction regarding their demographics
Conclusion: Hopefully, the findings of this study will encourage educational institutions and policy makers to adopt online learning, as an integral part of the teaching process beyond the period of pandemic.
Keywords: online learning, COVID-19, satisfaction, Jordan

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Characteristics, risk factors, clinical presentation, and treatment of Hemorrhoidal Disease: results of A Cross Sectional Study in Princess Haya Military Hospital

**Rania A. Al Najadat (Jordan)*
Ghassan T. Al-sweaiti; Samir A. Al-daradkeh; Mohammad A. Al-qudah; Mohammad A. Al-doud

Objectives: To evaluate socio-demographics, risk factors, clinical manifestations and treatment options in patients diagnosed with hemorrhoidal disease
Methodology: We performed a retrospective study on 184 patients, presented to the surgical

clinic of Princess Haya Hospital between May 2018 and December 2019, with symptoms of hemorrhoidal disease. Social demographics, potential risk factors, presenting symptoms and treatment outcomes were evaluated for each patient. These data were analyzed and described by SPSS

Results: A cross sectional study of 18-months duration was conducted on 184 patients, who presented to our clinic with hemorrhoidal symptoms. 146 patients out of all patients were males and 38 were females. People between the ages of 20–39 years most frequently report symptoms of hemorrhoids. We found that 30.4% were overweight and 18.5% were obese. Constipation was present in the majority of patients while many of them had also chronic cough. Unhealthy dietary habits were observed in about 80% of patients, while 56.5% had a poor physical exercise routine. Anal pain and grape-like masses through the rectum was seen in majority of the patients while 25% of them had bleeding during defecation.Conservative treatment has shown to be effective in 44.5%, especially for minor grades and uncomplicated hemorrhoids. Surgical management was needed in the rest of patients in the form of rubber band ligation or excisional hemorrhoidectomy.

Conclusion: Hemorrhoids are a quite common surgical problem in the general population. Constipation seems to be a major contributing factor. However, other potential risk factors are not yet proved. Proper assessment based on history and physical examination helps directing treatment options.

Keywords: Hemorrhoid, Risk factor, Diagnosis, Treatment

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Knowledge, attitudes, and practices towards tuberculosis in Jordanian university students

**Alaa Tarazi (Jordan)*

Anas H. A. Abu-Humaidan; Alaa AlTarazi; Yazan Hamadneh; Ahmad Al-leimon; Obada Al-leimoon; Muhammad Al – jahaleen; Dima Awajan; Nader Alaridah

Objectives: Tuberculosis (TB) is a leading cause of death from a single infectious agent worldwide. Around one-third of new TB cases are thought to be undiagnosed and untreated, emphasizing the need for TB awareness to minimize transmission and initiate early treatment. Data regarding the knowledge, attitudes, and practices (KAP) toward TB among Jordanians is lacking but requires attention given the recent migration spells to Jordan from neighboring countries.

Methodology: A descriptive cross-sectional study was conducted from May to June 2022. An online questionnaire was developed following world health organization (WHO) recommendations for TB KAP surveys and was distributed to Jordanian university students.

The questionnaire documented sociodemographic data and measured participants' KAP toward TB. Descriptive and analytic statistics were used to report KAP levels and highlight relevant sociodemographic factors associated with better KAP.

Results: 602 participants completed the survey; most were females (60.8%), in their first 3 years of school (84.3%), and from a healthcare field of study (57%). Most participants would take correct measures if they suspected being infected, yet around 41% were not confident that masks are appropriate in preventing airborne diseases. Students in healthcare specialties had significantly better KAP scores and identifying as a smoker was associated with a lower practices score.

Conclusion: University students displayed satisfactory KAP scores, focus should be aimed at informing students from non-healthcare fields on TB transmission routes and treatment options.

Keywords: Tuberculosis, KAP, Infectious diseases, university students, Jordan

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Psycho-Behavioural Response of Residents in Al-Nasr Camp during Covid-19 Pandemic: A Cross-Sectional Study

**Huda Baidoun (Jordan)*

Dr. Israa Alrawashdeh; Hasan Mihyar; Merie Almadani; Marwa Qaddoura; Issa shari; Maysam Obeidat; Faris Marj.

Objectives: This study aims to measure the prevalence of depression, anxiety and stress levels in AlNaser camp in Jordan Amman during the pandemic of COVID19. Finding the relationship between the Mental situation and social demographics, behaviors and the pandemic's socio-economic effect.

Methodology: This cross-sectional designed study has included 372 participants of the camp's residents. Data was collected using an interviewer administered questionnaire that captured general demographic parameters, socio-economic, behavioral effects of pandemic and integrated the DASS scale (Depression Anxiety Stress Scales-21) which is 21 item standardized questions to assess the depression, anxiety and stress. the Data were then analyzed using SPSS version 25 for descriptive and inferential statistics.

Results: Mental health records were bad. The data showed no significance association between the level of income and the mental state at 95% confidence interval, even though the level of income across the participants was low, as 67% of residents have low income. However, the data showed statistical significance in mental status in the participants that stated that have persisting COVID symptoms after the initial 2 weeks' period. Most of residents don't feel afraid of Covid-19 but they are careful.

Conclusion: Overcrowded camps such as AlNasr camp suffer from elevated levels of

Depression, Anxiety, and Stress. They suffer from low economic and academic status. They would benefit greatly from organized counseling programs, raising awareness about mental illness and work toward unstigmatizing them in such communities.
Keywords: COVID 19, DASS, Depression, Stress, Anxiety

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Smoking Cessation Mobile Apps in Arabic Language: Quality and Content Analysis

**Mo'men Dalalal'ah (Jordan)*
Hasan Khasawneh MD; Obada Khayyat MD; Alameen Alsabbah MD; Seif Almakhadmeh MD; Ola Soudah PhD.

Objectives: Mobile apps can help people stop smoking and reduce their dependence on nicotine. However, no studies have been conducted to evaluate the content and quality of smoking cessation apps available in Arabic. Our aim was to analyze the content and quality of smoking cessation apps available in the Arabic language compared to apps in the English language.
Methodology: Apple Store and Google Play were searched. The 5 A's, behavioral interventions, and pharmacological therapy counseling were used to assess content compliance with the Clinical Practice Guideline for Tobacco Treatment. Two app quality scales were used, the Mobile App Rating Scale (MARS) and the Multidimensional App Quality Assessment Tool for Health-Related Apps (AQUA).
Results: We identified 10 apps, 5 in Arabic and 5 in English. No app ultimately applied the 5 A's strategy, overall compliance rate ranged from 20% to 60%. For behavioral intervention, only 20% of apps in Arabic use it compared to 80% of apps in English. Pharmacological treatment counseling was not mentioned in all evaluated apps. The overall quality score of the MARS scale was comparable for apps in Arabic and English (3.61 vs 3.73). Meanwhile, the AQUA score was better for apps in English than for apps in Arabic (3.73 vs. 3.23). Major weak domains in Arabic apps were user engagement (2.32/5), visual design (2.75/5), and security (3.1/5) compared to apps in English (3.36, 3.7, and 4.1, respectively).
Conclusion: Implementing all components of clinical practice guidelines in smoking cessation apps may improve the quality scores.
Keywords: Smoking cessation, mhealth, digital health, app quality, apps in Arabic

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Gender Differences among Jordanian Rheumatoid Arthritis Patients: A Cross-Sectional Study

Dr. Mazen Al Zo'ubi (Jordan)

Objectives: Rheumatoid arthritis (RA) is a chronic, debilitating disease that, if left untreated, causes joint breakdown and disability. There have been few RA studies in Jordan, and there is minimal data on gender differences among Jordanian RA patients. The goal of this research was to discover gender disparities among RA patients in Jordan.

Methodology: Patients who visited the rheumatology outpatient clinic at King Hussein Hospital in The Jordanian Royal Medical Services were enrolled in the study using a cross-sectional design between April 2022 and August 2022. The participants' demographic data (age and gender), comorbidities (smoking status, diabetes mellitus, hypertension, dyslipidemia, and obesity (measured by Body Mass Index)), and disease-related characteristics (use of disease-modifying antirheumatic drugs, age at diagnosis, disease duration, disease activity (measured by DAS28-ESR), and serology status) were gathered. P-value < 0.05 was considered significant difference.

Results: Women constituted most of the sample (78.5%), whereas the ratio for men was 3.65:1, and this constituted a significant difference between the sexes, p-value of 0.00. The age mean for the sample was 46.8+11.4 years, and no significant difference between the genders' age means. Males were significantly more smokers and had a higher rate of dyslipidemias, p-value 0.00 and 0.02 respectively, while females were more likely to be obese, p-value of 0.02. No significant differences between the sexes in disease-related characteristics were found.

Conclusion: Females are the predominant RA patients. Gender is a differential factor in comorbidities in patients with rheumatoid arthritis, but it does not affect the factors related to the disease itself.

Keywords: Rheumatoid arthritis, Gender differences, Jordan

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Mediastinal Bronchogenic Cysts: Clinical Presentation, Diagnosis, and Treatment Outcomes

Mohammad Alshatnawi (Jordan)
Prof. moaath alsmady; Basil alBakri; Mohammad Sunuqrot; Ali AlNa; san

Objectives: Bronchogenic cysts are rare mediastinal tumors caused by foregut malformations.

Although surgery remains the definitive form of diagnosis and treatment, we can reach a diagnosis by imaging modalities. This retrospective study aims to analyze our experience with bronchogenic cysts while discussing the demographics of patients, patients signs and symptoms, the cysts complications, surgical approach for resection and surgical out comes for this studies patients.

Methodology: This is a retrospective descriptive cross-sectional study that reviewed the medical records of 12 patients who were formally diagnosed with bronchogenic cysts by histopathology and treated surgically between 2010 and 2020. We reviewed the medical records of all patients, including age, location of the cyst, symptoms, complications, imaging techniques, and surgical interventions.

Results: In total twelve bronchogenic cysts cases were included. eight mediastinal cysts (two of which were intrathymic) and four intraparenchymal cysts. One patient was asymptomatic and the remaining 11 were symptomatic. The most common symptoms were chest pain, dyspnea, and cough. 4 cases suffered from severe bronchogenic cyst complications, of which 3 cases had pneumonia and 1 case had atelectasis. The longest axis of a bronchogenic cyst ranged from 2cm to 11cm (mean = 4.52cm). All 12 patients underwent complete surgical resection of the cyst without postoperative complications or recurrence.

Conclusion: Although bronchogenic cysts are rare, they should be considered in the differential diagnosis of mediastinal tumors. In both symptomatic and asymptomatic cases, complete surgical resection is the best option to prevent future recurrence and complications, such as malignancy.

Keywords: mediastinum; bronchogenic cyst; thoracotomy

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Diagnostic Molecular Laboratories Challenges during early COVID-19 pandemic in Jordan: A Qualitative Study.

**Hasan Khasawneh (Jordan)*
Arwa Qaqish, Ola Soudah, Mariam M. Al-Omari , Manal Mohammad Abbas , Mu'ath Al-Ajaleen , Feras Abu-Ali , Rana Said, Mahmoud Ghazo

Objectives: After a remarkable pandemic-driven expansion of molecular diagnosis all over the country, this study aimed to determine major challenges faced COVID-19 diagnosis in governmental and private hospitals of Jordan as reported by medical laboratory specialists and to determine strategies applied by Jordanian hospitals to face these challenges.

Methodology: A semi-constructive questionnaire was used to determine the major challenges that faced COVID-19 diagnosis in governmental and private hospitals of Jordan as reported by

medical laboratory specialists who worked in the molecular diagnosis of COVID-19. Sixteen telephone-based interviews were conducted during the active spread of COVID-19 cases from June to December 2021. Interviews were audio-taped and then transcribed verbatim. Thematic analysis of the transcribed narratives was conducted using an open coding line by line to develop themes and related subthemes.

Results: Qualitative analysis of interviews revealed major challenges limiting the full utility of molecular testing capacity to include shortage of trained staff, shortage of reagents, problems in communication between laboratories and MOH, and complex administration. Solutions to these problems were promptly undertaken by training staff and re-allocating already trained staff, adopting a 24-hour working model, excluding reagents and kits from import curfew restrictions, digitalization of sample labeling and result release, and creating a digital network to engage diagnostic, surveillance and infection control sectors. Beyond that, participants expressed the need to expand RT-PCR diagnostic tests to include other pathogens and cancer diagnostics.

Conclusion: The successful establishment of new RT-PCR units and expansion of already established ones to cover every governorate in the country is considered an exceptional success of the Jordanian ministry of health (MOH) and must be maintained after COVID-19 is over. Challenges faced by such expansion during the spread of the pandemic were promptly tackled and solved. Still, the development of a strict continuing professional development system (CPD) system and the use of RT-PCR for diagnosis beyond COVID-19 should be accomplished for maintaining high healthcare standards in the country.

Keywords: COVID-19, Molecular diagnostic, laboratory capacity, pandemic response.

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Rehabilitation Services Provision during early phase of COVID-19 Pandemic in Jordan

**Dr. Rami Abu-Qaiyyas (Jordan)*

Dr. Abdul-Aziz Jelani; Dr. Muneer Daabes; Dr. Marwan Taher

The first phase of the COVID-19 pandemic in Jordan started in March. The Ministry of Health produced a "National COVID-19 Preparedness & Response Plan 2020" lacking the proper integration of rehabilitation services. Rehabilitation bodies in Jordan called for the preservation of provision of rehabilitation services during the curfew period.

On the community level, rehabilitation doctors participated in the front-line teams for screening, renewing the prescriptions and medication delivery. Also, rehabilitation doctors participated in provision of care for people in the quarantine areas.

Telerehabilitation was activated, a hotline was announced on all platforms, including people with disabilities so that rehabilitation specialists can respond to any query around the clock. Whenever the situation required visual assessment, a video call was made providing proper advice and exercise teaching or a mobile team provided the services directly. The maintenance of Orthosis/Prosthesis was also provided.

On Tertiary Care level, Inpatient cases were provided full scope of rehabilitation services. The scope of rehabilitation included respiratory rehabilitation to patients with mild, moderate and improving COVID-19, the Neurorehabilitation for stroke cases, and post operational orthopedic cases.
Rehabilitation specialists were active in public awareness all kinds of media especially on proper exercise regimens at home, pain reduction techniques, breathing techniques for post COVID, maintenance of health of back, joints and limbs during the curfew.
Rehabilitation also continued online lectures, scientific days and conferences. Strong communication channels were maintained with rehabilitation and health organizations worldwide including WHO and ISPRM.

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COVID-19-induced limb ischemia, a report of two cases

**Dr. Muneer Daabes (Jordan((*
Dr. Rami Abu-Qaiyyas; Dr. Abdul-Aziz Jelani; Dr. Marwan Taher

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What have we learnt from over 50 years of breast implant surgery?

** Dr. Paul Harris (UK)*

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Changing pattern of breast reconstruction methods in Jordan: my experience in two large medical centers

**Dr. Samhar Weshah (Jordan)*

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Breast reconstruction

**Dr. Khaldoun Haddadin (Jordan)*

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New developments in aesthetic breast surgery

**Dr. Paul Harris (UK)*

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The expanding range of techniques needed to achieve breast reconstruction for all

Dr. Paul Harris (UK)

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Correction of Secondary Cleft Lip Deformities encountered at the Royal Jordanian Rehabilitation Center: Surgical Approaches and Review of Cases

Dr. Mohammed AL-Bdour (Jordan)
Ala saleem Jumean; Faisal ALzaben; Hamzeh Ababneh; Mutaz Aljader

Objectives: Cleft lip is common congenital anomaly in our population. It imposes serious psychological and social disturbances in both children and their families. With the great evolution of pre surgical orthodontist management and the continuous rejuvenation in surgical techniques, primary cleft lip repair with primary rhinoplasty has become the keystone of successful management. Unfortunately, secondary deformities may persist due to severity in the primary deformity or lack of proper techniques in management. In this review we present our approach and current practice at the Royal Jordanian Rehabilitation center
Methodology: This is a retrospective study of 80 patients with secondary cleft lip and nasal deformities who were classified and surgically treated from January of 2014 to January of 2021. Surgical technique included a hybrid combination of multiple modalities. For secondary cleft lip deformities, total lip repair revision with conversion to inferior triangle technique in unilateral cases, total revision with variant techniques in bilateral cases and local flaps rearrangement, dermal fat grafts, fat grafts and nano-fat grafting for both groups were performed. For secondary nasal deformities, open septorhinoplasty was performed in adult patients and semi-open tip plasty in children. Average follow up period was 3 year
Results: The age of the patients ranged between 3 to 24 years (mean age 13 years). Pediatric to adult patients ratio was 1:2, male to female ratio was 1:1, ratio of unilateral to bilateral deformity was 6:1. The most common presenting motive for surgery was psychosocial disturbances. The most common form of deformities were nasal deformities and white roll/ vermilion mismatch. 51.3% of the patients had a combination of three or more deformities and were managed with total lip revision
Conclusion: Secondary cleft lip and nasal deformities are not uncommon after primary cleft lip repair. A wide range of deformities can address and a combination of deformities might be the problem to encounter in the same patient. Different surgical options are used with a

hybrid combination of multiple techniques may be needed and tailored individually. Still the best management of these secondary deformities is prevention. This is ideally achieved as a multidisciplinary team work at the time of initial surgery, where the plastic surgeons and the orthodontists play the major role

Keywords: secondary cleft lip deformity, cleft lip, cleft lip repair, cleft lip revision

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Shape of Philtral Column in Jordanian Population for its Application in Geometric Cleft Lip Repair

**Dr. Odai Sayegh (Jordan)*
Reham Adel Hijazeen,BDS; Mohammed Nayef AL-Bdour,M.D; Walaa Maher Al Jaabary,BDS; Mohammed Fahed Alshobaki,MD; Hamad Ammar, MD

Objectives: The definitive goal of plastic surgery in congenital craniofacial anomalies is to create symmetry and reach near normal aesthetic appearance. Comprehensive knowledge of normal facial shape and aesthetic subunits will help surgeons in their preoperative strategies for success. Lips are the cornerstone in facial appearance and the philtrum represents its central aesthetic subunit. Since measures and topography of normal facial appearance vary among different races and communities, several studies have delineated the variations in philtral morphology in different communities. In this prospective study, performed by pediatric dentists and plastic surgeons, we delineate the different morphologies of philtrum in normal Jordanian pediatric population which will have practical applications in cleft lip surgery.

Methodology: This was a prospective study in 200 Jordanian children (106 males, 94 females) of less than 14 years of age presented to dental pediatric clinic at King Hussein Medical Center, without any craniofacial anomalies or trauma. Ethical committee approved the study, and consent forms were signed by the parents before taking photos of the children. All medical photographs of each participant in 3 views (frontal, basal and lateral) were taken using a Samsung S6 edge plus digital 16 mega pixels camera (Samsung South Korea). The photographs were analyzed blindly by three plastic surgeons, to determine the shape of philtrum for each participant using following points: 1. The peaks of the Cupid's bow (cphi–cphi) 2. Origin of philtral column at each side(cphs-cphs) Photos were analyzed using MS Paint program for photos (Microsoft Paint for Windows 7). Our classification of the morphology of philtrum was based on modifications of A. Mori et al. in Japanese children: Type 1 triangular, type 2 parallel, type 3 concave and type 4 flat(Fig.2). Limitations to this study include: The quality and limitations of two-dimensional photographic assessments compared to three dimensional photogrammetric systems, its sensitivity to the angle at which the photograph is

captured and the position of the subject, however, it's cost-effective and noninvasive in terms of facial shape evaluation especially if high-resolution medical photography is used. Also, another limitation is the need for three-dimensional photogrammetry or lasers system for accurate anthropometric distance measurements, and if there are true morphological changes in correlation with the age of each subject.

Results: The most common morphology of philtrum was type 1- triangular, observed in 92/200 (46%) children. The least common morphology of philtrum was type 4- flat, observed in 7/200 (3.5%) children.

Conclusion: The definitive goal of cleft lip surgery is to obtain near normalcy in function and aesthetics, keeping in mind that facial morphology varies among different races, we hope that the results of our study delineate the different morphologies of philtrum shape in Jordanian children and will be a synergistic tool for our surgeons in their preoperative markings and planning.

Keywords: Cleft lip, Cleft lip geometric repair, Philtrum, Philtral columns, and Upper lip subunits

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Cleft Lip Management Protocol at the Royal Jordanian Rehabilitation Center

**Dr. Mohammad Alshorman (Jordan)*
Mutaz Aljader, MD; Khalid Ali El-Maaytah,MD; Bashar Reyad EL-Momani PDS; Nidal M. EL-Soud, MD; Alaa Saleem Jumean, MD; Mohammed Nayef AL-Bdour, M.D

Objectives: In this study we present our experience and current practice at the Royal Jordanian Rehabilitation center which were based on successful centralization of cleft lip care with strict commitment to rules of modern cleft multidisciplinary care.

Methodology: This is a retrospective study of 100 patients with cleft lip/palate who were classified and surgically treated in our cleft unit from January of 2014 to January of 2018. Pre surgical orthopedics (nasoalveolar molding – NAM- and taping) were applied in 98% of the cases. Surgical technique included both Chang Gung cleft lip nasal repair

Results: The geographic distribution of deformity was highest in the north of Jordan followed by the middle and south (48%:44%:8% respectively). The age of the patients at the time of operation ranged between 3 And 6 months (mean age was 3.5 months). Male to female ratio was 72%:28%, ratio of cleft lip: cleft lip/palate (CL:CLP) was 52%:48%, ratio of unilateral to bilateral deformity was 80%:20%, ratio of complete to incomplete deformity was 56%:44%. Morbidity consisted of 3 cases with stich sinuses and minor dehiscence and two cases of pneumonia. There was no mortality. The most common secondary deformities were vertical nostril collapse in 23% of the patients, hypertrophic scarring in 10% of the patients, excess

vermillion deformity in 5%, wide prolabium in 2% and vermilion border mismatch in 2%.
Conclusion: Centralization of cleft lip care with multidisciplinary and inter disciplinary decisions between cleft team members led to the dramatic improvement in total care. Achieving near normalcy in the shape and function of the cleft patients is the definitive goal with decreasing the number and complexity of subsequent procedures.
Keywords: Cleft lip, Cleft lip care, Cleft lip management protocol, Cleft lip repair

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Perforator Flaps, From Revolution to Clinical Applications

*Dr. Mohammad Alshobaki (Jordan)

Perforator flaps have revolutionized the field of reconstructive plastic surgery by allowing novel therapeutic options with minimal functional cost to the patient. Perforator flaps have the advantages of reduced donor-site morbidity, versatility to accurately replace the components required at the recipient site. Their development has followed our understanding of the blood supply from a source artery to the skin, which has been achieved because of landmark studies by Manchot, Salmon, Milton, Taylor, Hamdi and others. In this presentation I provide a short literature review of the development and current clinical use of perforator flaps in different parts of body. These flaps include imap, piap, licap, picap, tdap, sgap and igap. When we consider the spectrum of new donor sites, and the precision of flap design that is offered by perforator flaps, it becomes evident that the potential of this new technique has not yet been reached.

Objectives: In this presentation I present my experience and current practice in reconstruction of defects resulted from acute trauma and elective surgeries in different parts of body by using perforator flaps at the Royal Jordanian Rehabilitation center.

Methodology: This presentation evaluated cases operated in one year after my microsurgery fellowship between 2021 to 2022. 15 cases were operated using preoperative markings of flaps, identification of perforators vessels by CT scans and handled Doppler US, COLUOR DOPPLER US and ICG.

Results: in 13 cases there were good results without failure nor infection were noted in these cases. In 2 cases there was flap failure and a redo was done with good results.

Conclusion: by defining perforator as a avessel perforating an envelope of a target tissue to be transferred, all emerging useful flaps such these cases it is appropriatly applied and it is important for microsurgeons to perform these less invasive sophisticated reconstructions.

Keywords: imap inferior mammary artery perforator flap, picap posterior intercostal artery perforator flap, licap lateral intercostal artery perforator flap, tdap thoacodorsal artery perforator flap, sgap superior gluteal artery perforator flap, igap inferior gluteal artery perforator flap, Dieap flap deep inferior epigastric artery perforator flap.

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Ectopic nasal septum neuroglial tissue, the first case reported in Jordan: a case report

**Dr. Hamza Ababneh (Jordan)*
Mohammad albdour; Ala jumaian; Alhareth Azaizeh

Objectives: Ectopic neuroglial tissue or heterotopic brain tissue is a rare congenital condition in which benign neuroglial cells can be found outside the central neurological system. Neuroglial heterotopia is challenging to diagnose based only on clinical examination and radiology tests; hence, it is confirmed by histopathological examination. The differential diagnosis in such lesions could be a dermoid cyst, pilar cyst, or lipoma. Our case is reported in the Royal Jordanian Rehabilitation Center Amman- Jordan in a 19-month-old boy with a mass lesion in the dorsum of the nose that has been since birth who underwent surgical excision under general anesthesia for what is considered a congenital dermoid cyst which the final histopathology report confirmed that it was an isolated nasal septum neuroglial heterotopia as a first case reported in Jordan.

Methodology: Neuroglial heterotopia is a rare congenital condition that could be found in an extracranial site and lacks connection with the subarachnoid space, Heterotopia is defined as a cluster of normal neurons in an abnormal location, Ectopic brain tissue is a rare developmental abnormality that usually has no effect on neurological development and sometimes it is associated with other congenital deformities or anomalies such as cardiac anomalies and cleft palate. The prognosis of ectopic brain tissue is good, meaning it lacks the ability to invade neighboring tissue or metastasize. In the literature ectopic neuroglial tissue is reported in the nose, and less commonly in the tongue, pharynx, respiratory system, and sacrococcygeal region. The treatment for neuroglial heterotopia is surgical excision to improve the aesthetic appearance and function. in our patient, the mass was in the dorsum of the nose that is very noticeable, that is surgical intervention is important to prevent any vision disturbances in the future and improve the aesthetic appearance before the child established his facial memory and social connections with other children in the preschool and school period.

Results: Head and neck subcutaneous nodules are common with a long list of differential diagnosis for such lesions, an interdisciplinary team approach is needed to achieve better patient satisfaction, quality of life, and proper care, and decrease the chance of complications. And special attention should be directed toward lesions that present since birth such as in our case and the need for appropriate preoperative investigations and consultation if needed.

Conclusion: Ectopic neuroglial tissue or neuroglial heterotopia is a rare benign congenital mass that is thought to be due to the sequestration of neuroectodermal during development which has no intracranial connection. The overall incidence of congenital masses is 1 in

20 000 to 40 000 live births; hence, proper preoperative assessment with the appropriate imaging modality to guide the surgical approach is crucial, with the aid of histopathology examination to diagnose such masses.

Keywords: ectopic neuroglial tissue, congenital facial mass, dermoid cyst

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4 years' experience in the anatomic subunit cleft lip repair: analysis of 100 consecutive cases

**Dr. Mutaz Aljader (Jordan)*

Mohammed N. Al Bdour, Lamees Arabiyat, Faisal Saud Alzaben, Mutaz Nasser, Mutaz Aljader

Objectives: The anatomical subunit approximation is getting more popular in the field of unilateral cleft lip repair. However, results are still being in discussion literature since the original article. The aim of this article is to address the experience using this surgical technique

Methodology: This Study evaluated cases operated from 2016 to 2020. One hundred consecutive cases were included. All of those cases were operated using Fisher anatomical subunit technique

Results: The Anatomical subunit approximation technique can be applied among all types of Cleft lip regardless of the degree of severity. Correct Anthropometric measures were achieved in all cases. The lip markings based on anatomical land markers rather than dimensions naturally adjust across the spectrum of cleft lip.

Conclusion: The anatomical subunit approximation technique for unilateral cleft lip repair produces pleasant and desirable results among all types of clefts. There is a little change in outcome with experience. The preoperative markings require the identification of many landmarks, most of these are standard anthropometric points that are used for analysis of cleft deformity. Long-term results still need more evaluation.

Keywords: Craniofacial Clefts, Cleft lip, Unilateral Cleft lip, Fischer technique, anatomical subunits

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Case report: Isolated Giant Plexiform Neurofibromatosis of upper limb in 20 year old girl

Dr. Ahmed Shahda (Bahrain)

Mutaz Aljader, MD; Ala; Saleem Jumeian, MD; Yasmin Alsaidat, MD; Ahmad Musleh Mahasna, MD; Ghidaa Samer Maswadeh, MD

Objectives: Literature review of neurofibromatosis in upper limbs Case Report: Isolated Giant Plexiform Neurofibromatosis of upper limb in 20-year-old girl

Methodology: Descriptive data of clinical path: from first presentation, diagnosis and treatment of this isolated Giant Plexiform Neurofibromatosis of upper limb in 20-year-old girl

Results: Case report: Isolated Giant Plexiform Neurofibromatosis of upper limb in 20-year-old girl

Conclusion: Case report: Isolated Giant Plexiform Neurofibromatosis of upper limb in 20-year-old girl

Keywords: Neurofibromatosis Type 1 Von Recklinghausen's disease Upper limb reconstruction

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History and basic science of hypospadias

Prof. Ahmad Hadidi (Germany)

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Thoracoscopic Resection of Mediastinal Masses in Infants and Children.

Dr. Ahmad AL-Raymoony (Jordan)

M.daajah MD.; W. Mefleh MD; A.Ibrahin MD.; G.Kasawneh.MD.

OBECTIVE:

To evaluate the feasibility and effectiveness of Video-Assisted Thoracoscpic Surgery (VATS) in diagnosing and treating mediastinal masses in infants and children including benign, malignant or inflammatory processes.

METHODS:

A retrospective study has been designed at Queen Rania Hospital for Children in Amman, Jordan. Medical records of 45 patients aged between 5 months to 14 years who presented with mediastinal masses between February 2010 and June 2021 has been reviewed. 14 patients were presented with anterior Mediastinal mass and 31 patients presented with posterior Mediastinal mass, classified by radiological investigations.

Demographics, preoperative radiographic evaluation, surgical techniques, complications, days of hospital stay and two years of postoperative follow up all have been evaluated in this study. Patients were positioned in a prone or supine position, the operation was performed under general endotracheal anesthesia, with single lumen tube. Three trocars were used with port diameters ranging from of 3 and 5 mm. Time of surgery went between 12 to 170 minutes.

RESULTS

While the final tissue diagnosis was reached in all patents via the VATS, complete surgical excision was performed in only 33 patients. All children were extubated immediately post operation and chest drain was inserted in all patients but removed after 24 hours have passed. Hospital stay was ranged from one to 5 days. The histopathological result showed different diagnosis like foregut duplications in eight patients, Ganglioneuromas in nine patents, Neuroblastomas in seven patients, lymphomas in eleven patients, 4 teratomas, 3 sarcomas, and 3 other lesions.

CONCLUSION:

Thoracoscopy is a safe and effective method to diagnosis and treat anterior and the posterior mediastinum masses in infants and children. Patients who had the surgery completed via VATS had the benefits of reducing postoperative pain, short hospitalization, short recovery times and good cosmetic result when compared to open thoracotomy patients.

KEYWORDS: Thoracoscopy, Mediastinal mass, infants, children, minimally invasive surgery.

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Current types of hypospadias

**Prof. Ahmad Hadidi (Germany)*

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Evidence based medicine in pediatric surgery involved

**Prof. Mohammad Alomari (Jordan)*

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Management of hypospadias complication

**Prof. Ahmad hadidi (Germany)*

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Open pyeloplasty in children with ureteropelvic junction obstruction (our experience at Queen Rania Al-Abdullah Hospital for children)

**Dr. Waseem Al-Mefih (Jordan)*
Ahmad Al-Raymoony, Gaith Khasawneh, Ahmad Abu Qurah, Adnan Bawaaneh

Objectives: The objective of our study was to examine and evaluate our experience at King Husain Medical Center with open pyeloplasty using Anderson–Hynes technique in the management of children with ureteropelvic junction obstruction (UPJO) regarding outcome, complications, failure, and success rate.
Methodology: A retrospective study was done at King Husain Medical Center from April 2015 to October 2018. 47 children who were diagnosed to have UPJO underwent an open Anderson–Hynes pyeloplasty. Demographic data, results, outcome and complications were analyzed to report our results regarding open Anderson–Hynes pyeloplasty.
Results: 47 patients underwent an open Anderson–Hynes pyeloplasty. Nearly, 15 patients were female and 32 were males with male to female ratio are 2:1. Patient's age ranged from 2 months to10 years with mean age of 3 years. In 28 cases (60%), pyeloplasty was done on left side versus 17 cases (36%) on right side and bilateral sides in 2 cases (4%). All patients were followed from 6 to 24 months. Success rate was 92%. Failure of surgery with recurrent PUJ obstruction occurs in 4 cases (8%), all of them u
Conclusion: Open pyeloplasty using Anderson–Hynes technique has a high success rate with minor complications and excellent results regarding improving renal function and resolving symptoms. It is the best choice in re-do surgery with success rate reaching 100%.
Keywords: Hydronephrosis; pyeloplasty; ureteropelvic junction

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A Neonatal Huge Immature Retroperitoneal Teratoma: a case report

**Dr. Mohammed Almulaifi (Jordan)*
MD Salim Masadeh ,MD Hazem Haddad , MD Aya abu hawilah , MD Mosa Alqatawneh , , MD Ahmad alraymoni

Objectives: Abstract: Teratomas of extragonadal origin are extremely rare. Extragonadal Teratomas are usually found in centrally located organs. Symptoms are related to their mass effect and highly depend on tumor location. Omental Mature Teratoma is the commonest site of extragondal teratoma. Surgery is the treatment of choice. Chemotherapy is considered in Immature Teratomas with advanced stage. A case of unique age, site and size of presentation is presented here.

Methodology: Mature Teratomas and seminomas are the two most common histological types of germ cell tumors. Originating from the third pharyngeal pouch, germ cell tumors can manifest with different clinical and radiological features. Germ cell tumors are almost always found in gonads. Abdominal or retroperitoneal extragondal germ cell tumors comprise around 5% of all germ cell tumors . Omentum is the most common extragonadal site of Mature Teratomas . As surgery is the mainstay of treatment.
Results: Mature and immature Teratomas usually originate from the ovaries. Immature Teratomas develop from germ cells derived from mature gonad. Extragonadal Mature Teratomas are rare tumors developing outside gonadal organs. Extragonadal Teratomas located in greater omentum, anterior mediastinum, retroperitoneum, and the pineal and suprasellar regions have been reported. Extragonadal Teratomas mainly affecting centrally located organs are explained as a result of reproductive cell migration.
Conclusion: Retroperitoneal extragonadal Teratomas are uncommon tumors. Centrally located (Midline) organs are affected more with extragonadal teratomas due to germ cell migration cycle in embryo. Symptoms depend on tumor location. Surgical resection is the treatment of choice. Chemotherapy is reserved for advanced stages and immature tertaomas. Antenatal screening can detect abnormal fetal masses before delivery. Antenatal detection allowed better delivery preparation and earlier intervention.
Keywords: Keywords: Teratoma; Retroperitoneal Mass; Neonate Abdominal Mass

(370)
Laparoscopic management of impalpable testis: A Single Center Experience

**Dr. Amer Al Ibrahim (Jordan)*
Ahmad Abo Gora MD, Salim masadeh MD, Hiba Alabadi MD, Bahaa Abdulla MD.

Objectives: To illustrate our experience on Queen Rania Al Abdulla hospital for children in the management of impalpable undescended testis according to the diagnostic laparoscopic finding
Methodology: We performed a retrospective data analysis of the medical records of 108 patients who underwent diagnostic laparoscopic for intraabdominal high testis in our department from august 2015 to February 2019 according to the findings we decide how to go for the definite procedure with the best outcomes.
Results: The total number of children who underwent laparoscopy is 108 patients, however 18 have bilateral impalpable testes. One third of them was right sided and two third was left side impalpable testis. Then we classify the patients according to the presence of testis intraoperative, 55 testis have vas and vessels passed through the ring for which we explore the inguinal area. Furthermore, 51 has orchidopexy with good size testis and 4 testis underwent

orchiectomy as the testis was atrophied. On the other hand, we found 16 atrophied testis intraabdominal for this we did laparoscopic removal. For the 55 viable testis 50 of them underwent first stage Fowler_stephens procedure and the remaining 5 testis underwent primary laparoscopic orchidopexy.

Conclusion: Laparoscopic exploration of the impalpable testis is the cornerstone in the management and treatment of impalpable testis. Wise decision can be made easily according to the site, size and the presence of vas and vessels.

Keywords: impalpable testis, laparoscopic management, orchidopexy

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The Safety and feasibility of adapting Tubularized Incised-Plate urethroplasty for distal hypospadias in a day-case setup

**Dr Munir Al-Ghazawi (Jordan)*

Raed Al-Taher ; Hebah Alshahwan; Saja Abdelhadi; Farah Abu Abeeleh ; Rayan Al-Armouti ; Mohammad Rashdan ; Marzouq Amarin

Objectives: As Enhanced Recovery Concepts (ERCs) are being implemented in the management of pediatric surgery patients including repair of distal hypospadias, whose patients are usually hospitalized for several days postoperatively for pain control and observation for early complications, the need to study the effect of dealing with tabularized incised-plate arthroplasty (TIPU) patients in a single-day admission basis as opposed to a several-days admission manner rose, which is the aim of this study. In this study, we are assessing the feasibility of shifting to the single-day admission manner in TIPU cases in terms of post-operative complications, post-operative pain control, readmissions rate, and the effect on the overall hospital costs.

Methodology: The data of patients who underwent hypospadias repair using TIPU techniques from January 2017 to December 2018 was collected. During the first year, patients underwent TIPU surgeries in the several days' admission manner. In the second year, the pediatric surgical team shifted toward the active implementation of enhanced recovery concepts in management of pediatric surgical cases, including TIPU patients, which call for single-day admissions for these patients.

Results: A total of 60 patients' data was collected. First group (several-days admission) had 23 patients, and the second group (single-day admission) had 37. Post-operative pain was minor and comparable in both groups (1.83 ±0.72 out of 10 in first group versus 1.62 ±0.72 in the second group). Also, pain control was easily achievable using simple analgesics, with pain control level in the first group being 8.30 ±0.70 out of 10 and 8.11 ±1.51 in the second group, with no significant difference. None of the cases in both groups developed intra-operative

nor early post-operative complications. The overall in-hospital costs were not statistically different between the two groups.

Conclusion: Distal hypospadias repair in a day-case setting is safe and feasible, as there was no increase in postoperative complications, ER revisits, readmissions, or reoperations. Overall hospital costs had not been shown to be less in comparison to the several-day admission manner of dealing with TIPU patients.

Keywords: Pediatric Surgery, Hypospadias, TIPU, Enhanced Recovery Concepts

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The Impact of Misinformation on Propagating the COVID-19 Pandemic.

**Prof. Salah Qutaishat (USA)*

Description:

Worldwide, the total number of COVID-19 cases exceeded 600 million with more than 6 million deaths. It is widely accepted that the virus effectively spread despite the implementation of various public health mitigation measures. Not surprisingly, diagnostic tests and vaccines were developed in record time. Unfortunately, misinformation evolved at a similar rate, which ultimately created public confusion and mistrust in the medical establishment.

This presentation aims to discuss the public health mitigation measures that helped reduce the impact of COVID-19 on the global population. In addition, the main factors that led to the significant morbidity and mortality associated with this pandemic will be presented. Finally, the types and sources of misinformation and how to address them in the medical community will be discussed.

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Importance of influenza vaccine

**Dr. Zeyad Bataineh (Jordan)*

Influenza one of the most common infectious diseases it is highly contagious airborne disease that occurs in seasonal epidemics and it is serious public health problem affect approximately 5-10 % of the population

Vaccination remains the most effective method of mitigating the harmful healthcare and social effects of influenza, while vaccine reduce the risk of flu illness by between 40% 60% among the overall population during the seasons.

Each flu season, researchers try to determine how well flu vaccines work as a public health intervention. Estimates of how well a flu vaccine works can vary based on study design, outcome(s) measured, population studied and type of flu vaccine.

Trivalent vaccines containing two A viruses and one B virus are currently available. However, given the co-circulation of both B virus lineages (B/Yamagata and B/Victoria), (Quadrivalent vaccines) have recently been developed. The new quadrivalent vaccines constitute a great advance, in that they can offer broader strain coverage.

Keywords: Influenza , Outcome.

(374)

Learning to Live with COVID-19

*Dr. Mohannad Al Nsour (Jordan)

COVID-19 created unique challenges in our lives that were unforeseeable and unimaginable ever before. Fundamental changes spared almost no aspect of our lives from education and health to industries and global trade. These drastic changes resulted in increased poverty, a contracted global economy, and further gaps between high- and low-income countries. Now that we are transitioning beyond the acute phase of the Pandemic, we are at a sensitive time. we must learn how to live with this new reality. While sustaining needed response measures, ensuring good quality of care for those with "long COVID," and operationalizing lessons learned to prevent and prepare for future pandemics are important aspects, there is also a grave need to adapt and integrate health systems in our region in a manner that will allow us to manage and live with this new reality in the long term. Our health systems must have access and equity at their core, emphasize intersectoral communication, coordination, and collaboration, and go across national boundaries to bring about regional and global solidarity. We need resilient health systems that not only advance the notions of universal health coverage (UHC) and health security but are also ready for managing public health emergencies, where the importance of our valuable assets or workforce at the lowest level of our health systems including field epidemiologists and rapid responders comes in.

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The Role of the Military in Achieving Sustainable Nutrition to Prevent Stunting in Indonesia

Dr. Zelvya Rika, DDS (Indonesia)

Stunting eradication is crucial to achieving a brighter generation. Child malnutrition is a serious and ongoing problem in Indonesia. Stunting, a form of chronic malnutrition, particularly in the first 1000 days from conception to age two, is detrimental to a child's growth and development. As a result, leading to poor cognition and academic performance, adult productivity loss and low income, and hampering economic growth. The increased risk of nutrition-related chronic diseases in adult life exacerbates these issues. Stunting affected

around 7.3 million children in 2018, with the prevalence being classified as high, putting Indonesia further from the global nutrition targets set by the United Nations Sustainable Development Goals in 2015 to end stunting and wasting in children under five years of age by 2030. The causes are complex and multifaceted and can be brought down to the individual and household scale, including low maternal background, suboptimal infant and child feeding practices, infectious disease, and poor maternal health and nutrition. In Indonesia, nutrition falls under the responsibility of local governments in Indonesia's decentralized governance system, leading to significant variations in nutrition delivery. The Indonesian military has at least 48 hospitals, 468 clinics and first-level health facilities, and 583 integrated health posts (Posyandus) across Indonesia. These health facilities aim to support the National Population and Family Planning Agency (BKKBN) to reduce stunting, serving as education and nutrition centers for families with stunted children and those at risk. This paper aims to analyze the military's role in preventing stunting in Indonesia to achieve ustain sustainable nutrition goals by 2030 and pinpoint issues in the current military programs and ways in which these programs can improve to build a more productive and efficient generation.

Keywords: Sustainable nutrition, children, stunting

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The Role of Diagnostic Stewardship in the Success of Antimicrobial Stewardship Programs.

**Prof. Salah Qutaishat (USA)*

Description:

The World Health Organization (WHO) considers antimicrobial resistance (AMR) as one of the top 10 global public health threats facing humanity. Inappropriate use of antimicrobials may lead to the development of therapeutic failure. Many healthcare facilities embarked on establishing antimicrobial stewardship (AMS) programs aimed at optimizing the use of antimicrobials. One key component of AMS is the optimization of laboratory diagnostic testing.

The aim of this presentation is to describe the role of diagnostic stewardship (DS) in guiding the appropriate use of antimicrobials. The main three areas of diagnostic testing to be discussed are blood culture, urine culture, and Clostridiosis difficile testing.

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Epidemiology of cholera

Dr. Osama Atoom (Jordan)

Cholera remains an important global threat to public health which causes morbidity and mortality in the developing countries and an indicator of inequity and lack of social development.

Cholera is an acute diarrhoeal infection caused by ingestion of food or water contaminated with the bacterium Vibrio cholerae

Every year there is more than 3 million of cholera cases with more than 100,000 deaths around the world. majority of severe cases are fatal if untreated. duration and severity, of the disease depends on Environmental factors. Urbanization, and overcrowding can also increase transmission of the disease.

Cholera outbreak can be seasonal or sporadic in endemic countries an and represents more than expected number of cases and has negative impact on these country which affect socioeconomic conditions.

A multifaceted approach is using to prevent and control cholera to reduce deaths.

Sanitation, hygiene, oral cholera vaccines, treatment, and surveillance are very important.

Keywords: Cholera, public health, outbreak, Vibrio cholera

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Search for novel mutations for breast and ovarian cancers in Jordan: a pilot study for familial cancer services in Jordan

* Dr Munir Abu-Helalah (Jordan)*

Objectives:

Assess familial risk for breast and ovarian cancers and validated criteria for genetic screening for these cancers

Present the prevalence of BRCA1 and BRCA2 mutations amongst patients at high risk of familial cancer

Present details of novel BRCA1 and BRCA2 mutations identified amongst patients at high risk of familial cancer in Jordan

Explore the urgent need for familial cancer services in Jordan

Familial breast cancer is estimated to account for 15–20% of all cases of breast cancer. Surveillance for familial breast cancer is well-established world-wide. However, this service does not exist in Jordan, due to the scarcity of information with regard to the genetic profiling

of these patients, and therefore lack of recommendations for policy-makers. As such, patients with very strong family history of breast or ovarian cancers are not screened routinely; leading to preventable delay in diagnosis. Whole coding sequencing for BCRA1/BCRA2 using next-generation sequencing (NGS)/Ion PGM System was performed. Sanger sequencing were then used to confirm the pathogenic variants detected by NGS. In this study, 192 breast cancer patients (and 8 ovarian cancer cases) were included. The prevalence of recurrent pathogenic mutations was 14.5%, while the prevalence of newly detected mutations was 3.5%. Two novel pathogenic mutations were identified in BRCA2 genes. The common mutations in the Ashkenazi population used for screening may not apply in the Jordanian population, as previously reported mutations were not prevalent, and other new mutations were identified. These data will aid to establish a specific screening test for BRCA 1/BRCA2 in the Jordanian population.

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Clinical Attire Preference Among Patients in Military Healthcare Facilities in Kuwait

**Dr. mohammad Al Bagdady (Kuwait)*
Alotaibi H, Sadek A, Hands J, Alali A and Alsabah AM

Objectives: Military healthcare professionals often consult patients while wearing their full military uniforms, which may affect patients' clinical experience. This study aims to understand patients' opinion concerning clinicians' attire regarding patients' preference, ease in declaring personal or private information, comfort in asking for further information or raising concerns, and confidence in maintaining privacy and confidentiality in a military setting.

Methods: Patients attending outpatient clinics in two military medical facilities in Kuwait were asked to complete a questionnaire regarding their preference for clinician attire and any effect on their comfort or confidence in the clinicians.

Results: The overall response rate was 94.6% (n=937). Most participants were neutral regarding all statements. However, female participants preferred their doctors to be in military uniforms in comparison with males (P=0.000). Non-Kuwaiti participants felt more comfortable sharing private/personal information and asking for clarification or raising concerns with a doctor in military uniform (p=0.007). Civilian participants also preferred doctors in military uniform (p=0.000). Officers preferred their doctor to be in military uniform (p=0.014), whereas non-commissioned officers preferred their doctor to be in civilian attire (p=0.000).

Conclusion: Patients visiting military medical facilities do not prefer a certain attire, and attire does not influence their perception of the physicians' competence. This may lead us

to conclude that doctors' attire, regardless of being civilian or military, may not be the most concerning factor regarding the patient's confidence and comfort and that the doctor-patient relationship is more vital. Therefore, further investigation of the psychological impact of doctor's attire is highly recommended.

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Return to work after traumatic brain injury

** Dr. Piera Santullo (UK)*

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spinal cord injuries in Jordan, an epidemiological study

**Dr. Kareem Al_Rashdan (Jordan)*

To survey the situation of traumatic spinal cord injuries (SCI) in Jordan and for a future nationwide epidemiological survey, a retrospective study was conducted at the Royal Jordanian Rehabilitation Centre (RJRC) King Hussein Medical Centre (KHMC) Amman-Jordan, where all traumatic cases within this center in addition to a few non-traumatic spinal injury patients are referred to the spinal unit which has a capacity of 30 beds.
219 SCI patients who were admitted to the spinal unit at RJRC during the period January 2021 to June 2022 were reviewed. The estimated annual incidence was 27 per million populations in Jordan compare to global prevalence, estimated annual global incidence is 40 to 80 cases per million populations. Up to 90% of these cases are due to traumatic causes, though the proportion of non-traumatic spinal cord injury appears to be growing.
The majority were predominantly males (85.4%) the male/female ratio was 4.7:1. The mean age at the time of injury was 33 being 30.9 years for males and 34.8 years for females.
There were 68% (n=148) with paraplegia and 32% (n=70) with tetraplegia.
The commonest etiology was motor vehicle accidents (56.4% n=122), next came accidental fall (19.8% n=41), followed by non-traumatic cause (15.2% n=32). Other causes of SCI, bullet injuries 2.8%, sport injuries 2.4% (with noticeable increase in incidence of tetraplegia complete SCI due to diving injury in summer), stab injury 1%, being struck by an object 1.7%, and suicidal attempts 0.7%.

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Acute Management of Spinal Cord Injury Patients

Mr. Maurizio Belci (UK)

The early management of patients with spinal cord injuries remains pivotal and will determine the short-term as well as the long-term outcomes in these patients' clinical pathway. Nowadays, an average of 50% of spinal cord injury patients admitted to the spinal cord injury units are traumatic in origin. The other 50% of the spinal cord injuries/diseases will be related to infections, ischaemic or haemorrhagic events, tumours, AV malformations, inflammatory conditions etc. For the traumatic spinal cord injury patient group, the journey will start in a major trauma centre but an early engagement with the spinal cord injury rehabilitation teams will be initiated immediately, and regular input will be received via the clinical outreach team until the patient is admitted to the spinal cord injury rehabilitation centres. Particular attention to all rehabilitation aspects will be required in order to achieve good outcomes. The respiratory management and weaning will be very important in the high tetraplegic group of patients. Stabilising their cardiovascular system with focus on the autonomic dysfunction will be one of the primary challenges during their acute stage. Adequate nutrition, swallowing and speech evaluation, neurogenic bowel management are all components addressed in the acute stage. The management of the neurogenic bladder is also important, and the long-term management plan is usually finalised within the first three months. DVT prevention, autonomic dysreflexia treatment, postural hypotension management, pain and prevention of pressure sores will all be discussed. The optimal surgical treatment and especially the precise timing to intervene in the acute stage remains an area that requires further research. Outcome from studies such as STASCIS and preliminary results from the most recent studies such as POEM as well as current ongoing projects such as DISCUS will be presented.

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Recent Updates on Osteoporosis Burden

Dr. Ali Otom (Jordan)

Osteoporosis is defined as a systemic skeletal disease characterized by low mineral bone mass and microarchitectural deterioration of bone tissue, more specifically a decrease in the number of trabeculae coupled to trabecular thinning and loss of connectivity, as well as decrease in cortical thickness and an increase in its porosity. This consequently increases bone fragility and susceptibility to fracture. It is a major public health problem, affecting hundreds of millions of people worldwide, predominantly postmenopausal women. The main clinical consequence of the disease is

bone fractures. It is estimated that one in three women and one in five men over the age of fifty worldwide will sustain an osteoporotic fracture. Hip and spine fractures are the two most serious fracture types, associated with substantial pain and suffering, disability, and even death. As a result, osteoporosis imposes a significant burden on both the individual and society.

The burden of osteoporosis is enormous at both the human and socioeconomic level:

- Hip fractures cause the most morbidity with reported mortality rates up to 20-24% in the first year after a hip fracture. Loss of function and independence among survivors is profound, with 40% unable to walk independently, 60% requiring assistance a year later. Because of these losses, 33% are totally dependent or in a nursing home in the year following a hip fracture.
- By 2050, the worldwide incidence of hip fracture in men is projected to increase by 310% and 240% in women, compared to rates in 1990.
- Osteoporosis takes a huge personal and economic toll.
  In Europe, the disability due to osteoporosis is greater than that caused by cancers (with the exception of lung cancer) and is comparable or greater than that lost to a variety of chronic noncommunicable diseases, such as rheumatoid arthritis, asthma and high blood pressure related heart disease.
- The health economic cost of fragility fractures is enormous and on the rise. In Europe alone, the cost is estimated at 37.5 billion (2017) and set to increase by 27% by2030.

  In spite of this Osteoporosis remains under-diagnosed Diagnosis of osteoporosis or fragility vertebral fracture is done by less than 2% of primary care physicians Treatment is only offered to 36% of diagnosed patients
- Clinically proven osteoporosis treatments have been shown to significantly reduce the risk of hip fractures, vertebral fractures and other clinically apparent fractures.
- Prioritizing osteoporosis assessments and guidelines-based treatment for high fracture risk patients
- Globally, current adherence with guidelines is poor, including treatment of individuals who have sustained fragility fractures.

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Electrodiagnosis in Rehabilitation medicine

**Prof. Ziad Hawamdeh (Jordan)*

Electrodiagnostic studies are important part of evaluation in rehabilitation practice, it is considered an extension of the physical examination; its important in evaluating patient who present with muscle weakness, numbness, pain, fatigue, cramps and abnormal sensory symptoms. It includes nerve conduction studies (NCSs), electromyography (EMG); and evoked potentials (EP).
NCS includes motor and sensory nerve examination. In motor study an electrode is placed on a muscle innervated by a nerve, and information about the impulse can be recorded, including its amplitude, latency, the distance traveled and the nerve conduction velocity. In sensory study recording is done from two points on the skin over the sensory nerve pathway, and conduction velocity is calculated.
EMG involves the placement of a needle into various muscles to record different stages of muscle activity, including activity at rest, mild contraction, and maximal interference activity. At rest, normal muscle is electrically silent. Damaged or denervated muscle may result in spontaneous depolarization of individual muscle fibers.
Somatosensory evoked potentials (SSEPs) are electrical signals generated by the nervous system in response to sensory stimuli; they represent the function of ascending sensory pathway. It's initiated by repetitive sumaximal stimulation of a sensory nerve, mixed nerve or dermatome and recorded from the spine or the scalp and accordingly conduction velocity is calculated. Motor evoked potentials (MEP) are obtained by central stimulation to the brain, potentials are recorded from peripheral muscles.

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Respiratory Rehabilitation of Spinal Cord Injury Patients

**Mr. Maurizio Belci (UK)*

The respiratory rehabilitation of spinal cord injury patients remains one of the most challenging aspects in the whole rehabilitation programme. Complete and incomplete high tetraplegic patients are at very high risk of developing recurrent bronchopneumonia and respiratory failure in the acute stage of their treatment. Often these patients' journey starts with a surgical intervention followed by a prolonged stay in intensive care therapy units. Patients requiring ventilation to start with, may be extubated early but in the majority of cases, high cervical spinal cord injury will require a prolonged respiratory support via tracheostomies. Once

the patients are transferred to spinal cord injury centres for rehabilitation, a gradual and structured process of stabilisation of their ventilation will start in conjunction with other rehabilitation interventions that will include mobilisation out of bed, autonomic stabilisation, establishment of a bowel routine, of neurogenic bladder management, skin care, spasticity and pain management etc. At this early stage, patients will be evaluated for a potential of weaning from the ventilatory support as well as from their tracheostomies. A multidisciplinary team effort will be required with regular assessments and intervention from speech and language therapist, physiotherapist, occupational therapist, specialised respiratory nurses etc. The evidence suggests that patients who engage in a well-structured and systematic weaning programme that can last many weeks or months, will eventually be more successful in coming off the ventilator. Various weaning protocols can be adopted. The basic principles and the weaning protocol used at the NSIC at Stoke Mandeville Hospital will be presented. Chest infections, secretion management, cough assist manoeuvres, medications used and equipment such as the domiciliary ventilators will be discussed as well as the importance of the long-term follow-up of this patient group. A selected group of patients will benefit from treatments including the use of phrenic nerve stimulators or diaphragmatic stimulators. The use of these technologies will be discussed.

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Principles in Cardiac Rehabilitation

**Dr. Khaled Bani Hani (Jordan)*

Cardiovascular disease (CVD) is one of the leading causes of death worldwide and is the leading cause of death in the United States.
Cardiac rehabilitation is the process through which persons with cardiovascular disease (CVD) undergo to restore and maintain their optimal functional, vocational, psychological, social, and emotional status.
The goal is to prevent complications, and disability that increase with prolonged bed rest and limited outpatient physical activity.
Cardiac rehabilitation services are comprehensive, long-term programs that include medical evaluation, prescribed exercise, cardiac risk factor modification, education and counseling.
These programs manage the physical and psychological effects of heart disease, reduce the risk of sudden death or recurrence of heart attacks, control cardiac symptoms, stabilize or reverse the atherosclerotic process, and designed to improve the psychological and professional status of coronary heart disease patients.
Cardiac rehab services include supervised aerobic and resistance training classes, risk factor assessment, stress management programs and nutrition counseling.

CARDIAC REHABILITATION divided to three phases Phase I: Start within 24- 48 hours after admission until discharge Phase II (Immediate Outpatient Period) following a hospital discharge.
Phase III/IV (Maintenance and follow up).

In this session, we will talk about these phases in some details, indication contraindication of cardiac rehabilitation, evaluation of patients at outpatient clinic, with field test such as 6-minute walk test, exercise tolerance test, cardiopulmonary Exercise test CPET, the exercise testing with imaging modalities, and interpretation of exercise test in special population.

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Chronic Low Back paid. Are we targeting the true enemy?
**Dr. Yusef Sarhan (Jordan)*
The presentation will discuss the possible reasons explaining why our current approaches for treating chronic low back pain are not very effective. The new evidences on recent research looking at the role of the brain in the chronicity or low back pain, will be represented as well as the promising approaches and modalities
The aim of the presentations is to re-direct our thinking of how to improve our results in treating patients suffering from chronic low pain

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Review of life expectancy in traumatic brain injury patients

** Dr. Piera Santullo (UK)*

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Rapid Assessment of Assistive Technology (rATA) Survey in Jordan

**Dr. Jaber Al Daod (Jordan)*
Dr. Amer Abu-Nabhan; Dr. Tarek Khatib; Dr. Ali Al Rjoub.

Assistive technology (AT) is the application of organized knowledge and skills related to assistive products, including systems and services. Assistive products (AP): Any external product that maintains or improves functioning and independence.
The Ministry of Health (MOH) in collaboration with WHO conducted a study to assess situation of AT in Jordan. A special survey from WHO was used on a nationally representative sample to collect data by house-hold visits then upload it to WHO servers for analysis.
The study enables Jordan to join the Global Report on Assistive Technology (GReAT) and

helps MoH prioritize the areas that need focus and development regarding AT.
The results of the study showed that prevalence of use of at least one assistive product: 12.5%, with no significant difference between males & females. Prevalence of need (met need + unmet need) of at least one AP:15.9%. While 66.4% of males have their need met, 63.8% of females do. 83.5% depended on the private sector as source of their MAIN AP. While 7.3% relied on the public sector. 66.6% funded AP from their out-of-pocket budget. More than 80% were satisfied with their main AP. More than 50% reported complete suitability of their AP to home, surroundings, and places they like to visit.

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The Effectiveness of counseling program based on integrative theory to reduce depression symptoms and Improving psychological hardiness in a sample of mothers of children with kidney failure in AMMAN

Fayha Mryan, SW (Jordan)

The study aimed to Investigate the effectiveness of a counseling program based on integrative theory in reducing symptoms of depression and improving psychological hardiness level among a sample of mothers of children with renal failure in a Amman. The study sample consisted of (36) mothers who obtained the highest scores on the depression scale, and the lowest scores on the psychological hardiness scale, divided randomly into two groups : an experimental group of (18) mothers to which the complementary counseling program was applied , and a control group of (18) mothers to which the program was not applied , to achieve the objective of the study , the researcher used the quasi-experimental approach and two tools, including the Depression scale, and the psychological Hardiness scale , which was developed by the researcher after checking validity and reliability . they were applied to the two groups before and after the implementation of the integrated counseling program, which consisting of (16) counseling sessions prepared by the researcher.
The result showed the existence of statistically significant apparent differences at the level of significance (a=0.05) between the mean of the experimental and control groups on the scale of depression, among mothers of children with renal failure in favor of the experimental group. it also revealed the existence of apparent statistically significant differences at the level of significance (a=0.05) between the averages of the experimental and control groups on the scale of psychological hardiness in terms of its total significance and its sub-dimensions, in favor of the experimental group to which the program was applied. And there were no statistically significant differences at the level of significance (a=0.05) between the mean performance of the experimental group on the depression scale and its total scores and the overall score of the psychological hardiness scale and its four sub-dimensions. Also the

experimental group retained the continuity of the impact and effectiveness of the integrated counseling program five weeks after the completion of the program implementation.
The study recommended disseminating the current integrated program and applying it to different categories, to treat depression, develop psychological hardiness and improve counseling and health services provided to mothers of children suffering from chronic diseases.
Keywords: counseling, program, renal failure, depression, psychological, hardiness, mother of children with renal failure.

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The Effects of Using Oswestry Standing Frame in Decreasing Spasticity in Spastic Paraplegia Spinal Cord Injury Patients.

**Alaa Al-Rawabdeh, Pt (Jordan)*
Huda Al Qudah, Baker Al Smadi, Rana Samawi, Rawan Alawidi

Objectives: To detect the effects of standing frame in decreasing the spasticity of paraplegic spinal cord injury patients.
Methodology: This study has been done in Royal Rehabilitation Center in the Royal medical services for a period of three years 1May 2019to 1 May2022. Fifty-three spastic paraplegic patients were included in this study,35males (66%), and 18(34%)females, age (17- 56) year old. Seventeen patients (32.1%)have spasticity grade three and thirty-six patients (67.9%) have spasticity grade two. We evaluate the spasticity grade by modified Ashworth scale at the beginning and weekly. All patients were treated medically with antispastic drugs. The patients underwent five to three sessions weekly on standing frame for Forty minutes with ordinary rehabilitation protocol of (balance training, strengthening and stretching exercises).
Results: There is an improvement in spasticity grade, thirteen patients (24.5%) decrease from (3) to 2 and1+grade, twenty-nine patients (54.7%) decrease from (2) to 1grade, eleven patients (20.8%) no change in spastic grades.
Conclusion: Using Oswestry standing frame decrease the degree of spasticity and help in rehabilitation programs in spastic paraplegic patients.
Keywords: Paraplegia refers to motor and/or sensory function loss or impairment in the thoracic, lumbar, or sacral segments, secondary to the injuries of neural structures in the spinal canal. Spasticity is an abnormal increase in muscle tone or stiffness of muscle, which might interfere with movement, or be associated with discomfort or pain usually caused by damage to nerve pathways within the spinal cord. Oswestry standing frame is an assistive technology used by a person who relies on a wheelchair for mobility, provide alternative positioning to sitting in a wheelchair by supporting the person in the standing position

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Association Between Nuclear Factor Kappa B Gene Polymorphism (rs28362491) and Interleukin 10 in Jordanian Rheumatoid Arthritis Patients

**Safaa AL-Zuod, Mlt (Jordan)*
Manal S Al-Mashaheh (Dr); Maram M Al-Mtaryeen (MLT); Fatima H Megdade (MLT); Hanan A Al-Abbas (RN)

Objectives: to evaluate the effect of different variation of NF-κB polymorphism (rs28362491) on IL-10 expression level in RA patients in Jordanian population.
Methodology: Seventy-four blood samples were divided into two groups which are: control group (n=24) and the RA patient group (n=50). Two blood sample were taken from each participant. One for NF-κB polymorphisms (rs28362491) genotyping assay by real-time PCR using TaqMan SNP Genotyping Assays, and the other for measuring the concentration of the human IL-10 using ELISA test.
Results: The IL-10, Anti -CCP, CRP, RF, and ESR were significantly increased in RA patients when compared with the control group ($P<0.01$). However, there was no significant difference in the genotype and allele frequencies of -94 ATTG Ins/Ins, Ins/Del and Del/Del polymorphisms (rs28362491) between RA and control group. Additionally, IL-10 levels were significantly increased in RA patients that carry Del/Del alleles compare with the other alleles (302.0±46.9 pg/ml vs. 256.0.0±36.9 and 247.2±44.5 pg/ml, respectively). Furthermore, The Del/Del polymorphism had significantly higher ($P<0.05$) Anti-CCP levels than both Ins/Ins and Ins/Del polymorphisms
Conclusion: Our findings showed that the Del/Del allele in the NFB1 –94ins/del ATTG polymorphism influences the severity and progression of RA in Jordanian patients through regulating IL-10
Keywords: RA Rheumatoid arthritis NF-κB Nuclear factor kappa B IL- 10 Interleukin 10 PCR Polymerase chain reaction ELISA Enzyme-Linked Immunosorbent Assay ESR Erythrocyte sedimentation rate CRP C-reactive protein RF Rheumatoid Factor Anti-CCP Anti- Cyclic citrullinated peptide

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The role of therapeutic radiology in increasing the rate of recovery from breast cancer

**Omar Enezat, Rt (Jordan)*
Rt. Eslam Refae; Rt. Laith Rajbee; Rt. Mahmoud Tantawi; Rt. Mohamed Hijazi

Objectives: The role of therapeutic radiology in increasing the rate of recovery from breast cancer

Methodology: Many scientific articles were reviewed by Google Chrome, Scopus, Broadcast, and scientific books from EBook Central There are about 23 scientific references, Partial Breast Irradiation (PBI) For selected patients with stage-by-stage cancer, these are non-invasive to precisely radiate radiation to the area from which the tumor was removed. As a result, we can reduce the duration of treatment from impregnation to a week twice a day. Also compare a demo to PBI once per day for two weeks. PBI can lead to side effects at the site of the tumor, Radiation therapy for breast cancer protects the heart and lungs from the spread of cancerous cells, Radiation therapy uses very powerful beams of energy, such as X-rays and protons, to make it easier to work with. to kill cancer cells. Radiation therapy is usually done using a large device that directs beams of energy toward the body (external radiation). But radiation can also be done by placing a radioactive substance inside the body (brachytherapy). External radiation is usually used after an early-stage breast cancer tumor has been removed. Doctors may also recommend radiation therapy to the chest wall after a mastectomy if the breast cancer is large, or if the cancer has spread to the lymph nodes.
Results: All studies confirmed the effectiveness of radiotherapy for breast cancer by approximately 95%, The role played by the World Health Organization in continuous awareness of the early detection of breast cancer, which leads to the control of cancer and the possibility of treatment and avoiding the spread of cancer cells in the body, which leads to diagnosis and recovery when resorting to periodic examinations that help determine the stages of the disease and the direction towards the correct treatment plan with the techniques mentioned, and we allocate Noting therapeutic radiology
Conclusion: Radiation therapy plays an important role in controlling and treating cancer cells
Keywords: Radiotherapy, Breast Cancer

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Assessment of the sensitivity of the ABO + RhD test for blood donors by slide method in a Blood Bank of Princess Iman Research and Laboratory Sciences Center in King Hussein Medical Center

**Mohammad Suleiman, Mlt (Jordan)*
Hosam Awwad Alnajjar; Hamzeh Hamed Khalaf Al Hunaity; Rashed Saleh Radwan Hazaimeh; Mohammad Abbas Hamzeh Otoum

Objectives: Assessing the sensitivity of the blood group (ABO + RhD) test using the slide method, and finding a relationship between these tests to determine the most rapid, sensitive and inexpensive test.
Methodology: A study was conducted on 2070 donors who came to donate blood in the blood bank of Princess Iman Research and Laboratory Sciences Center, from 1/9/2022 to

30/9/2022. The blood group test was conducted for each blood donor twice, once using the slide method, and the second time the same test was performed on the automated analysis device (QWALYS EVO from DIAGAST), and a comparison was made between the results of these tests to determine the compatibility between these two methods.

Results: Among the results of the ABO + RhD test for 2070 blood donors, the number of errors in the ABO test on the slide method compared to the results on the QWALYS EVO device was 27, and the number of errors in the RhD test on the slide method compared with the results on the QWALYS EVO device was 28.

Conclusion: Comparing the results of the ABO and RhD test on the slide method and the QWALYS EVO device, the percentage errors in the ABO and RhD test results on the slide method were 1.3% and 1.35%, respectively. This study showed the advantages of using the slide method when conducting a blood group (ABO + RhD) test during the process of collecting from donors, such as the easy and rapid of reading the results, inexpensive, sensitive and its results are reliable and are highly compatible with other methods used in conducting this test. And also showed that it is very useful to use it when carrying out external blood donation campaigns.

Keywords: Blood group, Blood donation, Blood transfusion, Blood products.

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The association of B-fibrinogen gene -455G/A polymorphism with fibrinogen level and the risk of coronary heart disease. (at Queen Alia Heart Institute between 1/8/2021 to 15/4/2022)

**Lina Al Momani, Mlt (Jordan)*

Muna Al Maharma, PhD; Mryam Al Edwan, BSc; Alaa Al Khamaiseh, BSc; Raida Oudatm, MD.

Objectives: To compare the levels of fibrinogen among various genotypes of B-fibrinogen -455G/ and to determine whether the risk of coronary heart disease (CHD) is related to the fibrinogen gene-455G/A.

Methodology: Case Control Study: 55 CHD patients at QAHI, average age of (52.93) years, and 55 healthy controls in their mid-fifties. Fibrinogen was examined in Na-citrated plasma according to the Clauss method/ Sysmex, and the level was stated as (g/l). DNA was extracted from EDTA-whole blood using the Promega Kit to study single nucleotide polymorphisms (SNP) of B -fibrinogen -455G/A was examined using PCR and a Vienna lab kit, Austrian reserve hybridization strip assay. SPSS used for data analysis.

Results: According to genotype groups (G/G, G/A, and A/A), the mean plasma fibrinogen levels were (2.49±0.41),(3.3±0.48),(3.95±0.37)g/l respectively. The frequencies of the genotypes (G/G,G/A and A/A) in cases were (76.36%, 12.72% and 10.90%) respectively, and

controls were (94.54%, 3.63% and 1.82%) respectively. The frequencies of (A) allele were: (16.36%), and (G) allele were : (83.63%), (Odd ratio : 2.52 , P-value < 0.001).

Conclusion: Plasma fibrinogen levels were found to be higher in(A) allele carriers than (G) allele which indicated that the (A) allele of β-fibrinogen -455G/A was significantly associated with CHD in comparison with the (G) allele.

Keywords: Single nucleotide Polymorphism, genotype, CHD, EDTA, reverse hybridization, strip assay

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Surgical site infections after cesarean delivery in Prince Rashed Hospital

**Ahmad Bani Hani (Jordan)*

Objectives: To determine the most microorganisms associated with Cesarean wound infections.

Methodology: This study was carried out in the Department of Microbiology, Prince Rashed Hospital from Jan 2020to Dec 2020 from clinical samples (pus swabs from Cesarean wound discharge) Atotal of 244 swab samples processed,199 were culture positive.of 199 were bactria.. Cesarean wound were cultured on Cled agar,Blood agar , chocolate agar and incubated at 37c overnight. . Isolates were identified by biochemical tests and by Vitek2. Antimicrobial susceptibility was done by Kirby-Bauer disk diffusion method according (CLSI 2020) and by Vitek2.

Results: Atotal of 244 swab samples processed,199 were culture positive. of 199 were bactria and 124 were gram negativeThe predominant isolate was E.colis n=81(65%) Pseudomonas aeurginosa n=31(25%) followed by Proteus spp n=7(7%)and Klebesiela n=5(4%). 75 were gram positive The predominant isolate was Staphylococcus aureus n=39(52%)were MRSA(n=19) (25%) and staphylococcus epidermis n=17(23%).

Conclusion: gram negative and positive bacteria associated with Cesarean wound infection. knowledge of most bacterial caused Cesarean wound infections help us in treatment and reduce complications.

Keywords: microorganisms, Gram negative, gram positive, Antibiotics, antimicrobial susceptibility, CLSI, vitek2

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Authentic leadership Impact on the quality of work life from the point of view of the employees in the Royal Medical Services

**Walaa Al- Ghnaimate, Rt (Jordan)*

Objectives: The study aimed to figure out the impact of the authentic leadership on the quality of the work life from the point of view of the employees in the Royal Medical Services.
Methodology: The descriptive, analytical approach was adopted where the study population consisted of all the male and female employees in the royal medical services (n. 17000). The researcher distributed a simplified sample of the employees of the Royal Medical Services to whom questionnaires were sent through WhatsApp and Facebook applications. (385) questionnaires were sent to the employees with (376) responses to the questionnaire's website
Results: The actual study sample consisted of (376) male and female employees. After conducting the statistical analysis using the (SPSS), the study concluded statistically significant impact at sig. ($\alpha \leq 0.05$) for the authentic leadership with its different dimensions on the quality of work life. The study recommends directing the behavior of leaders in the quality of work life towards applying the authentic leadership style and its four dimensions (self-awareness, transparency, ethical perspective, and balanced treatment) given its significant impact on the quality of the work life through preparing and implementing training programs or workshops to provide leaders with its characteristics and skills.
Conclusion: Significant impact on the quality of the work life through preparing and implementing training programs or workshops to provide leaders with its characteristics and skills
Keywords: Authentic leadership, Quality of work life, Royal medical services.

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Aspirin decreases human sperm motility and vitality, chelates seminal calcium, but insignificantly reduces seminal nitric oxide production

**Reema Shatnawi, Mlt (Jordan)*

Objectives: aspirin, at therapeutic serum concentrations, may induce negative effects to semen quality parameters, mainly sperm motility and vitality, and hence to male infertility. Therefore, we aimed to: Measure these semen quality parameters in the presence of aspirin Explain the variation in these parameters via measuring the ability of aspirin to chelate seminal free calcium, affect seminal nitric oxide level, and alter seminal creatine kinase activity.

Methodology :Experimental design and sample preparation: Collected samples were homogenized gently 0.1 and 1 mM of aspirin was prepared Aliquots were incubated for 1 hour at 37 ºC to be analyzed Measurement of Sperm Motility: Measured manually by Makler® counting chamber Grade-a progressive motility of sperm was measured Total motility of sperm was measured Measurement of Sperm Viability: Was measured using Eosin test Measurement of Ca+2, NO, and CK: Assessment of Calcium Chelating Activity of Aspirin in Semen 4 aliquots (0.0 mM, 0.1 mM, 1.0 mM of Aspirin and 10 uL EDTA) Calcium chelating by aspirin was measured spectrophotometrically through the reduction of o-CPC chromogen reduction Measurement of Nitric Oxide Concentration in Semen by Effect of Aspirin 4 aliquots (0.0 mM, 0.1 mM, 1.0 mM of Aspirin and 10 uL L-NAME) A spectrophotometric assay known as Griess assay The intensity of the azo dye absorbance at 540 nm, is directly proportional to seminal [NO2-] à level of NO The effect of Aspirin on Activity of Seminal creatine Kinase: Was measured using creatine kinase kit (BioMed).
Results: serum concentrations, may induce negative effects to semen quality parameters, mainly sperm motility and vitality, and hence to male infertility. Therefore, we aimed to measure these semen quality parameters in the presence of aspirin and then explain the variation in these parameters via measuring the ability of aspirin to chelate seminal free calcium, affect seminal nitric oxide level, and alter seminal creatine kinase activity.
Conclusion: The percentage of sperm motility, particularly the progressive grade-a one, and vitality significantly reduced in the presence of aspirin at 0.1 and 1 mM. Such reduction, albeit partially, may be attributable to the ability of aspirin to chelate free calcium or affect nitric oxide synthesis, but not reducing the activity of creatine kinase.
Keywords: Aspirin; semen; sperm motility; sperm vitality; free calcium; nitric oxide

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The effect of Procalcitonin level in COVID-19 patients

**Esraa Al_ Mawajdeh, Mlt (Jordan)*
Faten Sleiman wrekat; Moutaz Ibrahim Mahmoud; Sahar Ibrahim Al_Nawaiseh; Ahmad Salem Al_Naanaah

Objectives: to examine the effects of variations in procalcitonin (PCT) levels and how they effect on corona virus patient.
Methodology: Medical records of patients treated at queen alia hospital, 95 patients from (February 2021 to December 2021), the inclusion criteria were as follows: adult patients with laboratory confirmed covid-19, and procalcitonin test method taken from manual is chemiluminescence.

Results: The study comprised 90 COVID-19 patients in all, including 34 male and 56 female. The current study included 34 male and 56 female patients who had their PCT values serially measured; of these, 26 male patients were released from the hospital when their PCT level was normal, and 8 patients had complications and blood poisoning because their PCT values were very high; and of the 56 female patients, 33 were released and 23 had complications and blood poisoning because their PCT values were very high. Both high-normal and abnormal PCT levels dropped in the patients who were released as they recovered.
Conclusion: This study demonstrates that PCT may be an indicator of disease severity and may contribute to determining the severity of patients with COVID-19. In addition, PCT level increase in chronic corona virus patients.
Keywords: Corona virus, COVID-19, Procalcitonin, Severity, Prognosis.

(400)
Challenges to delivering safe and effective prescribing in modern healthcare systems

**Prof. Simon Maxwell (UK)*

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Implications of pharmacogenomics on pharmacy practice

**Prof. Imad Treish (Jordan)*

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Prescribing skills assessment: ensuring competency of doctors and other healthcare professionals to use medicines

**Prof. Simon Maxwell (UK)*

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Cost-effectiveness implications of pharmacogenomics

** Prof. Imad Treish (Jordan)*

(404)
Global Supply Chain Challenges Facing Healthcare sector

*Prof. Khaled El Sakty (Egypt)

The healthcare systems have been under a lot of strain since the COVID-19 epidemic. The requirement of the hour was for resources and individuals to move quickly. We have experienced severe shortages of necessary medical supplies, protective gear, etc. at this time. Worldwide, nations are having trouble acquiring materials and handling logistics as a result of the erratic demand. The major goal of this session is to examine what caused these problems and what can be done to save costs, increase efficiency going forward, and be ready for constantly shifting healthcare dynamics.

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Captagon: what pharmacists need to know?

*Prof. Mayyada Wazaify (Jordan)

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Pharmaceutical supply chain resilience strategies under politico-economic crisis

**Prof. Khaled El Sakty (Egypt)*

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Qualitative exploration of the experiences of Captagon users in Jordan

**Prof. Mayyada Wazaify (Jordan)*
Yara M. Al-Khateeb; Baseem Musleh; Hamza Al-Smadi; Christina Steenkamp;

Background: Captagon (Fenethylline) is an amphetamine type stimulant and one of the most popular substances of use in the Middle East. This study aims to describe and analyse the trajectory of captagon use, severity of addiction and withdrawal symptoms and its effect on quality of life from the perspectives of users who receive treatment as well as therapists.
Methods: This study took a qualitative approach, using semi-structured, audio-recorded interviews, which were transcribed verbatim, translated to English and coded using Nvivo software for thematic analysis.
Results: Data saturation was achieved after interviewing a total of 27 participants (7 therapists

and 20 users of captagon either alone or among other illicit drugs), most of which were male (n =22). Their ages ranged between 18-48 years (median= 27). Six main themes were identified during the interviews: (1) the definition of captagon; (2) the effects, patterns of use and withdrawal symptoms associated with captagon use; (3) motivations for captagon use ;(4) main sources and ease of accessibility to captagon;(5) treatment of captagon addiction; and (6) the effect of Covid-19 on captagon's use and accessibility.

Conclusion: This qualitative study has illustrated for the first time the several challenges and complicating factors that captagon users and therapists face in Jordan. Findings call attention to implementing effective interventions to raise public's awareness of the negative impact of such use, with focus on high-risk groups, address the needs of different users, encourage the use of international treatment guidelines and recognise non-pharmacologic modalities as important part of treatment

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Understanding Value Based Healthcare (VBHC)- Part 1

**Prof. Zoltán KALÓ (Hungary)*

This increase in healthcare spending is not only visible in wealthy countries, but in middle and lower income countries as well, where healthcare expenditures have increased 6.3% and 7.8% per year, respectively, between 2000 and 2017.

During this time frame, the growth of health spending outpaced GDP in most fastgrowing economies. The increase in healthcare spend may be attributed to various factors including better healthcare options in emerging markets, the use of newer and more expensive technologies, a growing elderly population and an increase in complex chronic conditions.

However, the alarming expenditure on healthcare becomes untenable when one considers the amount of wasteful spending estimated in these numbers. According to a 2017 report from the Organization for Economic Cooperation and Development (OECD), at least one-fifth of healthcare spending "makes no or minimal contribution to good health outcomes." Some of the sources of this wasteful spending include remediating treatment errors, inappropriate or unnecessary emergency room visits, excessive antibiotic prescriptions, underuse of generic medicines, administrative processes that add no value, as well as fraud and corruption.

Furthermore, unnecessary treatments can be performed without complications, and thus remain undetected even though they do not improve the quality of life for patients.

We are aim through this symposium to answer these Questions:

- What are the benefits of value-based healthcare (VBHC)?
- What are the leading economic models in VBHC?
- What is needed to implement VBHC?
- What can we do to prepare for VBHC?

What is Value-Based Healthcare?

VBHC is a patient-centered approach to healthcare delivery focused on improving the health outcomes that matter most to patients across the entire cycle of care, while concurrently optimizing healthcare resource utilization and cost to society. It includes a shift in the reward system, incentivizing improvements in value rather than volume through alternative payment models.

Increasing life expectancy accompanied by the rise of chronic diseases and unsustainable healthcare costs are driving the move towards VBHC, VBHC puts patient wellbeing at the front and center, and makes payments contingent on achieving patient-centric health outcomes ,VBHC may not only improve patient outcomes, but also contribute to lowering healthcare costs and The threat of financial loss and the need for standardized outcomes and robust data and IT infrastructure are among the common challenges limiting the uptake of VBHC models worldwide, however there are success stories

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Understanding Value Based Healthcare (VBHC)- Part 2

Prof. Zoltán KALÓ (Budapest, Hungary)

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Radiopharmacy IN RMS, the present and prospective

Pharm. Amer Al Hourani (Jordan)

Radiopharmacy It is subspecialty of pharmacy that dedicated to receiving, preparation, compounding, quality control dispensing and storage of radiopharmaceuticals
In RMS, Radiopharmacy was established since 2005 when we started the cyclotron operation and [F18] FDG production.
Radiopharmacy is a full of regulation field, as there are several practices and fields which may come under the observation and regulation of multiple regulators and legislation. These include occupational exposure of staff to ionizing radiation, preparation of medicines, patient exposure to ionizing radiation, transport of radioactive materials, and environmental exposure to ionizing radiation. Different regulations may cover the various stages involved in radiopharmacies, ranging from production of "cold" (non-radioactive) kits, to the marketing and distribution of final products. So that Staff working in nuclear pharmacies require extensive training on aspects of good manufacturing practice, radiation safety concerns and aseptic dispensing, nuclear pharmacist must be a fully qualified pharmacist with evidence

of additional training and qualification in nuclear pharmacy practice so the residency program in radiopharmacy is a mandatory to qualify pharmacists to keep up with this new specialty and also to meet the RMS needs and expanding in producing more theranostic radiopharmaceuticals.

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Inform and shape an evidence-based professional development policy for pharmacist development- an evaluation of Jordanian pharmacy sectors.

Dr. Mohanad Odeh (Jordan)

Objectives: This study aims to assess Jordanian pharmacists' views on professional development, namely: the continuous education infrastructure, strategies and programs for personal development, leadership skills, incentive schemes, drug information resources and digital services. As well as exploring options for better academic support delivered to pharmacists.

Methodology: an online validated and reliable (Cronbach's alpha = 0.74, Pearson's r = 0.92) assessment was developed. The non-probability sampling design was used. Participants were qualified pharmacists working at Royal Medical Services (RMS) and Community Pharmacists (CP). Comparison and descriptive statistics were used to report the results.

Results: A total of 271 pharmacists participated, 144 from RMS (8% more than the needed sample and 72% of the target population) and 127 CP (7% more than the needed sample and 74% of the target population). There was a strong desire amongst all participants for continuous educational training in particular on the following areas, First: Advanced counselling and Communication Skills (means=8.99±0.145, 95% CI =3.70-4.28 and 9.37±0.096, 95% CI =4.18-4.56). Second: Personal development skills (mean=8.92±0.142, 95% CI =3.64-4.20 and 9.02±0.145, 95% CI =3.73-4.30). Third, Pharmaceutical health promotion (mean= 8.05±0.180, 95% CI = 2.70-3.41 and 8.57±0.159, 95% CI = 3.26-3.89). Only 19.4% and 18.1% of the RMS and CPs respectively reported the presence of a written policy for personal development and leadership in their workplace. Similarly, there are few incentives for pharmacists to conduct or participate in research, and if pharmacists wish to find out more about a topic they tend not to use the available drug information and toxicology centre, rather refer to written sources and reputable digital sources.

Conclusion: Professional and continuous personal development of pharmacists supports an evolving healthcare system and ensures that healthcare professionals are ready to meet societal needs. This study emphasises the need for a tailored and documented postgraduate educational strategy, personal development and leadership skills training in Jordan. In addition, we must implement well-defined and written schemes of incentives and rewards to encourage pharmacists to engage in continuous professional development and pharmaceutical research. Such strategies should enhance the experiences of both the pharmacists working within health services as well as the patients whom they encounter.

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Royal Medical Services- Clinical Pharmacy Department: An overview on goals, tasks, and achievements

**Pharm. Ola Al-Natshe (Jordan)*

Clinical pharmacy is a health science in which pharmacists provide direct patient care that optimizes medication therapy and promotes health, wellness, and disease prevention.
The clinical pharmacy department was opened under the patronage of Director General of the Royal Medical Services of Jordan on January 31, 2022 in Al Hussein Hospital.
Clinical Pharmacists collaborate with the health care team to optimize the patient pharmaceutical care plan, by participating in selecting the appropriate medication, strength, dose, frequency, route of administration, duration, and timing. Encourage prescribers to make cost effective drug choices, and support the health care team with concise, applicable, comprehensive drug related information.
Identify potential treatment related problems such as untreated condition, unnecessary drug therapy, efficacy issues, safety, and monitoring. As well as participating in Pharmacovigilance documentation.
Educate patients/ caregivers about their medications, and assess their compliance.
Participate in medication guidelines and protocol development. Also get involved in scientific research work. And supervise clinical pharmacy residents and pharm –D students.
Documenting the clinical pharmacist notes in Hakeem system (Initial note, Reconciliation note, and Intervention note).
Achievements:
Twenty-seven training lectures were held on different scientific topics.
Starting work in Vascularsurgery and Neurosurgery Departments with two pharmacists for each. A 1609 INITIAL note, 1281 RECONCILIATION forms, 1365 INTERVENTIONS have been made until September, 2022.
Updating the surgical site infection protocol in Vascularsurgery Department, and follow up

its implementation.
Participating in the Central Committee for Antimicrobial use management, which formed by the Director General of Royal Medical Services.
Supervising clinical pharmacy residents.
Supervising pharm- D students in surgery rotation.
Teaching at Princess Muna College of Nursing.
Being part of the Scientific Research Consultation Committee.
Being member of the Comprehensive Antimicrobial Stewardship Program (ASP) with USAID team.
Starting work in the ICU department.

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Measures to rationalize antibiotic therapy in the German Armed Forces central hospital in Koblenz - ACS, TDM, management of last resort antibiotics - it's all about ABS

** Dr. Bäßler, Claudia (Germany)*

At the German Armed Forces Central Hospital in Koblenz various measures are being taken to rationalize antibiotic therapy as part of the ABS (Antibiotic Stewardship). The ACS (Antimicrobial Consumption Surveillance) enables the status quo to be determined. In connection with this concrete measures for rationalization can then be used in a targeted manner. In addition to ABS visits these are TDM (Therapeutic Drug Monitoring) and the management of reserve antibiotic requirements. The patient-specific determination of the antibiotic concentration as part of the TDM, taking into account the site of action and the sensitivity of the germ to be addressed, enables targeted medication management of anti-infectives. Since July 2018, more than 2000 serum samples from patients have been quantified with regard to their content of ampicillin, ceftazidime, linezolid, meropenem, ceftriaxone, piperacillin and cefuroxime using High Performance Liquid Chromatography (HPLC). More than half of serum samples represent initial determinations. Only 47% were within the target range. Of the samples tested twice and more, 68% were within the target range and 32% had inadequate antibiotic levels. With the tools mentioned above, the use of antibiotics has been reduced and rationalized over the past 4 years, as it is seen in the ACS. From the highest antibiotic consumption densities in the comparison group of hospitals with 400 – 800 beds in 2019 and 2020, this was reduced to a medium level

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Association between Charlson Comorbidity Index and polypharmacy: a retrospective database study from Jordan

**Dr. Rasha Arabyat (Jordan)*
Ola M Alazzam; Sayer I Al-Azzam; Mohammad B Nusair

Objectives: Polypharmacy is usually associated with duplication of therapy, unnecessary medications and adverse drug reactions. Therefore, it is crucial to study the factors that increase the risk of polypharmacy. The objective of this study was to assess the risk factors for polypharmacy (i.e. the concomitant use of at least five medications) with a special focus on comorbidity in Jordan.

Methodology: Using a retrospective cross-sectional study design, medical records of patients (age ≥55 years), which covered slightly over one-fourth of the population, found in a national electronic healthcare database from 2018 to 2019 were retrieved. Polypharmacy, the main outcome, was defined as the current use of at least five medications (the patient should have at least one chronic condition, one medication refill and continuous use of the medication for at least 30 days). Comorbidity, the main exposure

Results: An eligible sample of 113 834 individuals (mean age 68 years, 51.5% female) were included in the analysis, of whom 38% met the polypharmacy definition (28% were categorized as having major [5–9 medications] and 10.2% exhibited excessive polypharmacy [≥10 medications]). Approximately, 20% of the patients had a CCI of ≥1. The most significant predictors of polypharmacy were a CCI score between 3 and 4 (adjusted odds ratio [AOR] = 5.89; 95% CI, 5.10 to 6.80; P < 0.001), gender (AOR = 0.86; 95% C

Conclusion: Polypharmacy is common among patients in Jordan. Comorbidity is positively, independently and strongly related to polypharmacy. Identifying groups who are at the greatest risk for polypharmacy can help optimize patients' treatment, which can lead to better outcomes and improved quality of life.

Keywords: polypharmacy, Charlson Comorbidity Index, electronic healthcare database, predictors

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Pharmacogenetic analysis of MTHFR C677T (A1298C) Polymorphism in Patients with Diabetic Peripheral Neuropathy

**Dr. Alaa Yehya (Jordan)*
Dr. Othman Beni-Yonis

Objectives: Diabetic peripheral neuropathy (DPN) is a loss of distal sensory function in the lower limbs that is accompanied by pain and severe morbidity. The goal of this study was to perform a screening of MTHFR C677T (A1298C) polymorphisms and determine its impact on biochemical profile and clinical presentation of symptoms of Jordanian patients with DPN.
Methodology: A cross-sectional study was conducted in which medical records were used to identify and recruit patients with DPN and collect their demographic and clinical characteristics. The total neuropathy score (TNSr) was used to assess the severity of sensory symptoms. In addition, direct sequencing was performed after PCR amplification to screen for the genotypes of the single nucleotide polymorphisms (SNP) of interest.
Results: Ninety patients with DPN participated in the study. The MTHFR-SNP variant (CT) and (TT) genotypes were identified in 39 (43.3%) and 19 patients (21.1%), respectively. The distributions of the genotype frequencies of the MTHFR-SNP statistically differed between patients with DPN and the control group ($P < 0.0001$). Moreover, patients carrying variant genotype had a higher tendency of having unsatisfactory HbA1c levels (>7mg/dl) , ($P = 0.029$) and moderate to severe symptoms (TNSr score 8–24).
Conclusion: The findings of this study support the use of the MTHFR C>T-677 SNP as genetic risk markers of DPN. Assessing patients' risk genetic-metabolic profile is recommended for providing personalized treatment.
Keywords: Keywords: Diabetic Neuropathy, MTHFR, Gene, Polymorphism, Pharmacogenetic, Jordan

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Characteristics of thyrotoxicosis among thyroid patients and their quality of life in a teaching hospital in Jordan: A cross- sectional study

**Pharm. Sarah Ibrahim (Jordan)*
Sarah Ibrahim; Amani Al-Rawashdeh; Raja'a Al-Qudah; Muna Barakat; Abla Al-Bsoul

Objectives: Aim: This study aimed to describe the general characteristics of thyrotoxicosis patients, evaluate their quality of life and adherence to medications as an outpatient at endocrine clinic in Jordan.
Methodology: This was a descriptive cross-sectional study. The eligible participants, who were patients from endocrine outpatient clinics at JUH were recruited. The inclusion criteria limited the study to patients aged 18 years and older who were newly diagnosed with or had a past diagnosis of hyperthyroidism disease for any cause. Data were analyzed using Statistical Package for Social Sciences version 24.0 (SPSS® Inc., Chicago, IL, USA).
Results: Most participants were females (81.3%) and married (87.9%). The majority were educated and had a bachelor's degree or higher (41.8%). The average reading for T3 was 6.80±8.26 pmol/l, T4 16.87±7.98 pmol/l, TSH 3.49±11.51 Mu/L, Anti thyroglobulin 2.37±1.73, and Anti thyroglobulin peroxidase 4.80±1.13. There were no significant findings in assessing the effect of treatment types on lab tests (p-value >0.05). The majority of thyrotoxicosis cases were caused by Graves' disease (64.7%), followed by 17
Conclusion: Thyrotoxicosis is understudied in the Middle East, particularly Jordan. The main findings revealed that thyrotoxicosis is more prominent in females, mainly in their 4th decade. Future work should focus on the main possible methods to improve the HRQOL. In addition, awareness programs are required to encourage patients to obey the advice of their physician and increase their self-care towards improving the quality of their life
Keywords: Thyrotoxicosis; Quality of life; Adherence; Thyroid medications

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Poisoning Cases in Jordan: Analysis of two Years Data from Jordan Drug Information and Toxicology Center; from June 2020 to June 2022

**Pharm. Maha Abu Suhyoun (Jordan)*

Objectives: This study aims to analyses the cases of poisoning received by the team working at Jordan Drug Information and Toxicology Center during the time period of June 2020 to June 2022.

Methodology: A retrospective analysis of all registered poisoning inquiries of two years period (from June 2020 to June 2022) was conducted depending on the data collected from MI databank software program which contains all data and inquiries received by the Jordan Drug Information and Toxicology Center's pharmacist. The inquiries were received by telephone or person during work time or evening shift.

Results: The analysis of total 280 poisoning cases that collected from MI databank software program during the study period (June 2020 to June 2022). The age group were between 20 days to 74 years old, the highest incidence were in children less than 5 years old (at-risk age group) (71.07%) , victim's age more or equal to 5 years (24.60%). Most of the poisoning cases were incidental and unintentional, where medications and household chemicals were responsible for most poisoning cases.

Conclusion: This study highlighted the importance of public education about the safe and rationale use of medication. Most of poisoning cases of Jordan could be preventable by protective measurements by the parents and baby sitters, as keeping medications and chemicals in a safe place far away from children.

Keywords: Acute Poisoning, Chronic Poisoning, MI Databank, Emergency Department, Toxicity, Toxicology, Jordan.

(418)

The Appropriateness of Empiric Treatment of Urinary Tract Infections in a Tertiary Teaching Hospital in Joran: A Cross-Sectional Study

**Dr. Rana Abu Farha (Jordan)*
Rama Alkhawaldeh, Rana Abu Farha, Khawla Abu Hammour, Eman Alefishat

Objectives: This is a cross-sectional study that was conducted at Jordan University Hospital (JUH) to evaluate the appropriateness of Urinary Tract Infection (UTI) empiric treatment based on microbial culture data and susceptibility testing.
Methodology: All urine cultures requested for adult patients (≥18 years) admitted to JUH within the period from January 2019–July 2021 were reviewed and only those cultures with positive episodes of infection were considered.
Results: In this study, 6950 urine culture episodes were screened; among them, 34.5% (n = 2400) revealed positive results. Among those patients with positive culture episodes, 1600 patients (66.7%) were discharged before the availability of culture results and were excluded. Of the remaining eligible 800 patients, 701 (87.6%) received empiric treatment. In 26.8% of the eligible cases (n = 214), the prescribed empiric agents failed to have appropriate coverage of the identified pathogens, and in 14.6% of the cases (n = 117) the identified microorganisms were reported as resistant to the prescribed empiric agents. Furthermore, only 13.4% of the patients (n = 107) were appropriately treated for their UTI with empiric antibacterial agents. We were not able to judge the appropriateness of UTI treatment for one-third (n = 263, 32.9%) of the patients, because they did not have susceptibility reports performed.
Conclusion: This study revealed an alarmingly high rate of inappropriate treatment of UTIs, which encourages the emergence of bacterial resistance and affects health-related outcomes negatively. Therefore, antimicrobial stewardship programs must be applied to optimize antibiotic consumption in hospital settings.
Keywords: antibiotic resistance; empiric antibiotic; urine culture; susceptibility test; Jordan

(419)

Home Delivery of Medications: Community Pharmacists' Perspectives on the Pros and Cons of the Service

Dr. Rana Abu-Farha (Joordan)

Rana Abu-Farha, Karem H. Alzoubi, Rama Alkhawaldeh, Rania Itani, Samar Karout, Tareq Mukattash, Eman Alefishat

Objectives: The main goal of the current study was to investigate pharmacists' perception of home delivery of medications service in Jordan and their willingness to use the service.
Methodology: This cross-sectional observational study was conducted between March -April 2022. The study targeted community pharmacists working at different community pharmacies across Jordan. The study questionnaire was distributed through Facebook to target Jordanian community pharmacists' groups.
Results: Three hundred and twenty-four community pharmacists participated in the study, 75% (n=244) of pharmacists reported being willing to use the home delivery and 274 (84.6%) thought it increases the efficiency of their community pharmacies' services. Only 129 (39.8%) pharmacists agreed or strongly agreed that unlike in-store service, home delivery of medications is suitable only for OTC but not for prescriptions medications Nearly half the number of participating pharmacists (n= 153, 47.2%) believe that the service is suitable for refill prescriptions but not for new prescriptions. Pharmacists believe that the foremost pros of the service were to continue life-saving medical treatment (n= 249, 76.9%), serve sick, elderly, and disabled patients (n= 241, 74.4%), and decrease congestion at health facilities (n= 228, 70.4%). On the other hand, the cons of this service, as perceived by pharmacists included failing to build a professional relationship with patients (n= 203, 62.7%), and the contribution to communication errors (n= 147, 45.4%). Logistic regression showed that pharmacists who serve 50 patients or more per day were more willing to use the service than those serving less than 50 patients per day (OR= 2.058, P= 0.032).
Conclusion: The majority of participating pharmacists in this study were willing to use the service at their community pharmacies, especially those serving a large number of patients per day which may indicate the potential of this service in relieving the pressure on community pharmacies and allowing them to serve more patients efficiently.
Keywords: Home delivery of medication; perception, willingness; community pharmacists; Jordan

(420)

Antibiotic Susceptibility of the Most Prevalent Bacteria Isolated from Disinfecting Solutions of Contact Lens Cases

**Pharm. Zahira AL-Khani (Syria)*
Hadeel T. AL-Hadithi

Objectives: Occurrence of bacteria in contact lens (CL) solutions pose a threat to the wearers, particularly when display multiple resistance to antibiotics.
Methodology: Serratia spp., Staphylococcus spp., and Acinetobacter spp. isolated from solutions of CL's cases of university students were examined for their susceptibility to an array of antibiotics by agar dilution and disc diffusion methods.
Results: Two Coagulase Negative Staphylococcus (CONS) and two S. aureus showed resistance Oxacillin, which are termed as Methicillin Resistant CONS (MRCoNS) and Methicillin Resistant S. aureus (MRSA). MRSA isolates were resistant to penicillin and sensitive to amoxicillin-clavulanic acid. Two S. marcescens and one S. liquefaciens were found resistant to ceftazidime, cefotaxime, gentamicin, ceftriaxone, tetracycline, and cefepime. One Acinetobacter isolate was resistant to ciprofloxacin, cefotaxime, ceftriaxone, and cefepime.
Conclusion: Identification of the bacteria's virulence identified in CL cases should direct us to take serious precautions against them and to advocate proper eye caring. The results of antibiotic sensitivity tests will contribute for determining the most appropriate treatment in cases of bacterial infection, keratitis or any other eye infection.
Keywords: Contact Lens cases, Antibiotic Susceptibility, Methicillin Resistant S. aureus (MRSA)

(421)

Healthcare supply chain management: opportunities and strategies

**Pharm. Jelnar alkalaldeh (Jordan)*

Objectives: The aim of this study is to highlight the best practices in Healthcare supply chain management, in order to improve performance and to lower the direct and the indirect cost
Methodology: This study is based mainly on literature review by finding a global evidence to achieve a sustainable and greatest performance for the health care supply chain management.
Results: Supply chain management is not an easy task, huge efforts are concentrated to have better cost control and efficiency enhancement. A lot of factors are involved like trust, exchange of knowledge and integrate of information technology. More excellence is needed

while healthcare environment become more complicated, as a result of that new and creative strategies are required like supply chain segmentation. A deep look to our logistic tools is needed behinds to perception enhancement. Many frameworks were constructed that focused on inventory, warehousing, purchasing and distribution....etc to solve the discrepancies in the supply chains

Conclusion: More emphasis is required on health care supply chain management because a lot of problems were created as a result of poor understanding of the management of the supply chain. information technology, good strategy planning, partnership and better awareness are all considered a cornerstone for operational excellence in our health care supply chain

Keywords: Supply chain Performance Cost Healthcare

(422)

The Need for Non-Invasive Ventilation among Patients with COVID-19 and ARDS: A Cross-Sectional Descriptive Study.

**Pharm. Amjad Al Tawalbeh (Jordan)*
Sayer Al-Azzam; Reema A. Karasneh; Basheer Y. Khassawneh ; Abdel-Hameed Al-Mistarehi; Wesam W. Ismail; Omar Moawiyah Musleh; Ahmad Tawalbeh

Objectives: This study aims to describe the characteristics of COVID-19 patients who developed ARDS and analyze their association with the need for non-invasive ventilation (NIV).

Methodology: This is a cross-sectional study of COVID-19 patients who were admitted to KAUH between September 2020 - August 2021 and developed ARDS. Clinical symptoms and radiology results were used to identify ARDS cases. We excluded patients who were under the age of 18, immunocompromised or have malignancies. Comorbidities and COVID-19 symptoms were assessed at time of admission. Logistic regression was used to determine the association between risk factors and need for NIV.

Results: We identified 1287 hospitalized COVID-19 patients who developed ARDS, among them, 34.2% needed NIV. The average age was 62.6 years and BMI of 30.5. Patients presented at admission with average SpO2 of 85% and LDH of 976 IU/L. Around 60% were male and 78% presented with SOB/dyspnea at admission. Results of logistic regression (c-statistic = 0.73) showed higher BMI, dyspnea, high LDH levels and low SpO2 at admission significantly increased the odds of NIV need.

Conclusion: Our results showed that 34% needed NIV which is comparable to NIV rate in other countries. High LDH reflects severity of COVID-19 and can predict the need for NIV during hospitalization. Our results highlight importance of admission assessment such as respiratory rate, LDH, BMI and SpO2 to predict the need for NIV.

Keywords: COVID-19, ARDS

(423)

Master of Pharmacy Administration (MPA): ماجستير أدارة الأعمال الصيدلانية A new postgraduate program initiated at University of Jordan Pharmacy School

Prof. Ibrahim Alabbadi (Jordan)

Objectives: This is a special abstract which will not present research kind one, rather it will present a new initialed post graduate study in the region, so will add the details on the methodology section.

Methodology: Based on market needs and the major interest of fresh pharmacy graduates, biopharmaceutics and clinical pharmacy department, Faculty of Pharmacy, The University of Jordan (JU) founded a new master program believed to be a first of its kind in the region. The latter will satisfy the badly needed scientific knowledge and required skills of business academic as well as applied sciences required for pharmacy profession including pharmaceutical marketing & promotion, economics and outcomes research, regulatory affairs for pharma industry, accounting transactions for pharmaceutical traders, healthcare financing, quality and management. The well-established pharmaceutical manufacturers in Jordan (No. 22) and in the Arabic region (more than 300) producing quality and reputable products worldwide (exporting to more than 70 markets including USA and Europe) are continuously looking for well prepared fresh graduates to strongly enter the field. Furthermore, all drug importers (distributers) or newly established community pharmacies increase the demand for such a program. In accordance with the new JU strategic plan objectives toward establishing market needed new programs away from over saturated traditional ones, Study plan of this initiative and its objectives will be presented including networking with other programs toward establishing new multidisciplinary working teams for the same. The outcome of the program is expected to supply the pharmaceutical business sector locally and regionally with qualified and skillful pharmacy graduates with business backgrounds bridging with the industry & pharmaceutical traders and joining them helping achieve their goals.

Results: see above plz

Conclusion: see above plz

Keywords: Master of Pharmacy Administration (MPA): ماجستير أدارة الأعمال الصيدلانية A new postgraduate program initiated at University of Jordan Pharmacy School

(424)
Overview of Molecular Techniques

**Prof. Rami Mahfouz (Lebanon)*

Molecular techniques are driven by the fast advancement in technology which have shifted from gel-based DNA assessment to qualitative polymerase chain reaction (PCR), real-time quantitative PCR, multiplex testing, sequencing, microarrays, and up to Next Generation Sequencing. This is addition to ancillary important testing like fluorescence in situ hybridization (FISH) and CGH arrays.
The technical concepts will be explained in association with selection criteria as to where a technique is utilized in preference to another.

(425)

The Histopathologic Diagnosis of Very Early Inflammatory Bowel Disease in Children: Recent Advances and Potential Pitfalls

**Prof. Vinay Prasad (USA)*

Inflammatory bowel disease can diagnosed in children younger than 6 years old. In these cases it is called "Very early-onset" inflammatory bowel disease (VEO-IBD). VEO-IBD can be difficult to diagnose. There are many mimickers and potential pitfalls. This course will examine the causes, clinical presentation and histopathologic features. We will review the current literature and evaluate specific histopathologic changes that can assist in correct diagnosis. We will review possible genetic changes as well as the different patterns of changes that present histologically. The presence of genetic predisposition, possible immunodeficiency gene defects and environmental factors are also discussed.

(426)
Osteosarcoma: challenges in diagnosis and what else can we do?

**Dr. Omar Jaber (Jordan)*

Abstract:
Osteosarcoma is considered the most common malignant primary tumor of bones. The diagnosis is based on clinical symptoms, radiologic features and pathologic examination. The prognosis is largely dependent on the grade of tumor, the presence of metastasis and

the response to neoadjuvant chemotherapy. The diagnosis can be challenging in some cases. Factors contributing to difficulties in diagnosis include discordant radiologic and pathologic findings, early presentation in which the radiologic features are subtle, sampling errors and some rare variants of osteosarcoma which makes the diagnosis difficult. Herein, we will describe some rare variants of osteosarcoma including low grade central osteosarcoma, parosteal osteosarcoma, periosteal osteosarcoma and small cell osteosarcoma. The differential diagnosis is discussed along with some ancillary studies that may help in this setting.

(427)

Pathology, classification, and grading of neuroendocrine neoplasms arising in the digestive system

**Dr. Sura Rawabdeh (Jordan)*

Neuroendocrine cells are distributed widely throughout the body. Neuroendocrine neoplasms (NENS), defined as epithelial neoplasms with predominant neuroendocrine differentiation, can arise in most organs. While some clinical and pathologic features of these tumors are unique to the site of origin, other characteristics are shared regardless of site.

The classification and nomenclature of NENs have been complex and confusing in the past, in part because older classifications have focused on tumors arising in a specific organ system. Site-specific proposals for nomenclature and classification have differed in terminology and in the criteria for histologic grading and staging, and this has led to morphologically similar NENs being designated differently depending on the site of origin.

A common framework for the classification of NENs has been proposed by the World Health Organization (WHO), although adoption for each different organ system will await formal updates to the WHO classifications for those anatomic sites. So, for now, there is no one single system of nomenclature, grading, or staging that is suitable for all NENs, independent of origin. However, features such as the proliferative rate of the tumor and the extent of local spread are shared by most classification systems, and the proposed uniform classification system for NENS of all sites has been formally endorsed for the gastroenteropancreatic (GEP) system by the WHO

This topic review will cover the pathology, classification, and histologic grading of GEP NENS, with an emphasis on well-differentiated NETS.

(428)

An Approach to The Diagnosis of Hirschsprung Disease, Evaluating Post Pull Through Specimens and Error Reduction Strategies

**Prof. Vinay Prasad (USA)*

Introduction to HSCR and evaluation of the suction rectal biopsy, full thickness biopsy and biopsy during definitive surgery: review of pitfalls in frozen diagnoses and practical tips to enhance diagnostic precision. Several real cases will be reviewed. Utility of Calretinin stain is examined in detail. Barium enema and clinical features will be discussed. Review of the "transitional zone", how to approach the 'margin" during frozen sections, the need for protocols and checklists to ensure a complete report, and a review of the different types of surgical techniques as they pertain to understanding the pathology, will be reviewed. Review the "skip segment" and potential pitfalls.

(429)

Liquid biopsy: is it ready for the clinic?

**Prof. Rami Mahfouz (Lebanon)*

In the era of Precision Medicine and the advanced technology Next Generation Sequencing has reached, Liquid Biopsy is gaining more insight and need into the vast majority of clinical and molecular diagnostic laboratories. It has sustained major changes and the techniques currently cover Circulating Tumor Cells (CTCs), circulating tumor DNA (ctDNA), and Exosomes. In addition, Liquid biopsies allow longitudinal disease surveillance to monitor developing tumor heterogeneity.
The major question remains: Will Liquid Biopsy have potentials for early detection and is it now ready for the clinic at a full capacity? What is the benefit of utilizing Liquid Biopsy in both diagnosis, prognosis, and follow-up care for cancer patients?

(430)

Platelet Transfusion in adults: controversial challenges and outcomes

**Ass. Prof. Anwar Rjoob (Jordan)*

Platelet transfusion therapy has become an integral part of the treatment of patients with hematological and solid tumor malignancy receiving chemotherapy. In this presentation will discuss some of the platelet transfusion practices in adult patients, focusing on controversial

issues and challenges. The main questions that we will discuss includes:
-What Is the Best Platelet Product to Be Transfused: Random-Donor Platelets or Single-Donor Apheresis Platelets?
-What Is the Current Risk of the ABO Incompatible Platelet Transfusions?
-What Is the Best Platelet Transfusion Strategy: Prophylactic or Therapeutic?
-What Is the Best Platelet Transfusion Strategy: Prophylactic or Therapeutic?
-What is Platelet Transfusion Refractoriness: Diagnosis and Treatment

(431)
Immune evasion of SARS-CoV-2 from interferon antiviral system

**Dr. Mansour Hiary (Jordan)*

COVID-19 caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), presents with clinical manifestations ranging from asymptomatic infection to severe. Control of viral replication and effective anti-viral immune response depends on production and action (signaling) of type 1 interferon. Ineffective antiviral interferon responses upon SARS-CoV-2 infection have been recognized as a hallmark of COVID-19. There are many strategies of SARS-CoV-2 for evasion of interferon antiviral responses, which can impair innate and adaptive immune responses and exacerbate inflammatory disease at late stages of infection.

(432)
Precision Medicine / Advanced Lung cancer profiling

**Prof. Rami Mahfouz (Lebanon)*

(433)
Reducing Errors in Pathology – Strategies for Patient Safety

**Prof. Vinay Prasad (USA)*

Current trends in healthcare emphasized the role of cognitive biases and a lack of knowledge of de-biasing techniques. The presenter will introduce the fundamental basis of bias and heuristics and their effect on how we make diagnoses. We will introduce the Joint Commission 'quick safety' advisory and review the factors that allow cognitive biases. JCAHO recommendations regarding communication, frozen section etiquette and pitfalls. CAP guidelines are examined. A section on frozen sections, sources of errors, and methods to mitigate them is included. The overall goal is to provide the participants with knowledge to reduce errors and enhance patient safety every day.

(434)
Ossiculoplasty using glass – Lonomer Cement

** Prof. Levant Sennearoglu (Turkey)*

(435)
Otosclerosis management and surgical techniques

**Dr. Suliman Soudi (Jordan)*

Surgery for otosclerosis in its contemporary version has been standard practice since 1960s. I will discuss improvement and refinement of stapedotomy with latest recommendations. Multiple videos will be showed to address difficult cases managed by the author.
Complications will be touched upon with different management options.

(436)
Surgery of unusual complications of cholesteatoma…Our experience!!

**Dr. Abed Rabou Qubilat (Jordan)*

In our talk; we are going to discuss our surgical experience in treating certain unusual complications of cholesteatoma (classical one, canal wall down tympanomastoidectomy as well as modified one). So, we will come across surgery of facial nerve palsy, labyrinthine fistulaes, petrous apicitis, lateral sinus thrombosis, internal jugular thrombosis as well as different types of intracranial abscesses.
Therefore, we will focus on our surgical approach and techniques practiced in these complications.

(437)
Management of inner ear malformations

** Prof. Levant Sennearoglu (Turkey)*

(438)
Audiological findings in inner ear malformations

**Prof. Gonca Sennaroglu (Turkey)*

(439)
Pediatric auditory brainstem implantation

** Prof. Levant Sennearoglu (Turkey)*

(440)
Management of meningoencephalic herniation of the temporal bone our experience at KHMC

**Dr. Eyad Abu Nahleh (Jordan)*

Objectives/hypothesis: Temporal bone meningoencephalic herniation is a rare condition with possibly dangerous complications. The purpose of this study is to explore the pathogenesis, clinical presentation, surgical techniques, and postoperative outcome of 23 cases of surgically confirmed temporal bone meningoencephalic herniations.

Methods: Retrospective study is built on the investigation of the collected data of 23 cases of temporal bone meningoencephalic herniations surgically treated since 2017.

Results: Meningoencephalic herniations were divided into four etiologic groups: spontaneous (17.4%), secondary to chronic otitis media 30.4%), iatrogenic (40.1%), and posttraumatic (13.1%). Different surgical techniques were used for treatment: transmastoid approach (90.4%), combined technique (transmastoid plus minicraniotomy, 8.6%).
Conclusions: Temporal bone meningoencephalic herniations are potentially life threatening, and surgery must take place expeditiously. The choice of the most appropriate surgical approach must be based on the localization and size of the herniated tissue, preoperative auditory function, the presence of active infection, intraoperative cerebrospinal fluid leak, and concomitant pathology.

(441)
Third Window Syndrome

**Dr. Sawsan Abuzaid (Jordan)*

Third window syndrome describes a set of vestibular and auditory symptoms that arise when a pathological third window is present in the bony labyrinth of the inner ear, the pathological third window adds to the oval and round windows, disrupting normal auditory and vestibular functions by altering biomechanics of the inner ear.

The most common third window syndrome arises from Superior Semicircular Canal Dehiscence (SSCD), were a section of bone overlying the superior semicircular canal is absent or thinned (near dehiscence), other third window syndrome causes include: cochlea-facial nerve dehiscence, cochlea- internal carotid artery dehiscence ,cochlea -internal auditory canal dehiscence, enlarged vestibular aqueduct, posterior semicircular canal dehiscence, posterior semicircular canal- jugular bulb dehiscence, peri lymphatic fistula, hypermobile stapes footplate and others.

Third window syndrome include a group of symptoms like; sound or pressure (cough or sneezing) induced vertigo or oscillopsia (Tullio phenomenon), imbalance, hyperacusis, pulsatile tinnitus or autophony, by examination a positive fistula sign (by applying pressure in the external auditory canal (hennebert sign), in which vertigo and nystagmus are induced).

The diagnosis of this disorder depends on a group of auditory, vestibular and imaging techniques including; psuedoconductive hearing loss in Pure Tone Audiometry, and the characteristic findings in instrumental vestibular tests like: low thresholds in c-VEMPs (cervical –Vestibular Evoked Myogenic Potentials), high amplitudes in o-VEMPS (ocular-Vestibular Evoked Myogenic Potentails), high SP/AP ratio in electrocochleography, and the presence of dehiscence in the Temporal bone CT scan with special views (poschl and stenver views).

Surgical repair is indicated for symptomatic patients (specially disabling vestibular symptoms), by resurfacing or plugging the superior semicircular canal by middle cranial fossa approach or transmastiod approach, or a less invasive method; round window reinforcement surgery that is used recently with promising results.

(442)

Endoscopic excision of JNA: new classification

**Dr. T.N. Janakiram (India)*

(443)

360-degree endoscopic approaches to orbital lesions

**Dr. T.N. Janakiram (India)*

(444)
How to avoid complications in FESS

**Dr. Mohannad Al Qudah (Jordan)*

Functional endoscopic sinus surgery (FESS) is an effective technique in management chronic rhinosinusitis (CRS) resistant to medical treatment; however serious complications and persistent symptoms are still being reported especially in revision surgery. The primary goals of the miniseminar will be to discuss techniques aimed at avoiding poor outcomes, present the etiologies behind CRS recalcitrant to conventional medical management and surgery, the options for management and the evidence behind these options.
Extensive clinical experience and evidence-based medical information from peer-reviewed journals will be used in a multimedia presentation to demonstrate fundamental points. Case and video presentations will be used as a springboard to discuss and emphasize important elements in performing safe FESS procedures and a new protocol in treating refractory CRS. Audience participation will also be employed at multiple points throughout the seminar to explore important issues and controversies in the management.

(445)
Endoscopic approaches to infratemporal fossa lesions

**Dr. T.N. Janakiram (India)*

(446)
Endoscopic approaches to Sellar, suprasellar and parasellar

**Dr. T.N. Janakiram (India)*

(447)
Epidemiology and clinical signs and symptoms of allergic rhinitis with impact on patient life.

**Dr. Samir Al Daradkeh (Jordan)*

MD.PHS.Rania.A.Alnejadat; MD.Dr. Belal.M.ALqodah; MD.ENTS.Dr.Eyad Abu Nahleh; MD.ENTS.Dr.Motasem.M.ALkrymeen; RN.Sara AL Sheiekh Yousef.

Objectives: This research is conducted to provide preventive and control measures to be used to limit the effect of allergic rhinitis. also to evaluate and assess the Impact of allergic rhinitis on quality of life. best medications used to control the effect of allergic rhinitis will be studied.
Methodology: prospective prevalence study was conducted; survey was full filled by a team of two ENT specialist doctors, two public health doctors and one medicine doctor and nurse. The sample size was 103 patients, who visited ENT clinic in princes Haya military hospital. Socio-demographics, symptoms, signs, preventive measures, and impact of allergic rhinitis were studied. Analysis was done by SPSS 21 program
Results: Patients with allergic rhinitis was mostly seen in the age category between (20-39y) they showed the highest percent of visitors to the outpatient clinic with a (63.1%) of visitors. Second most common age category was between (40-59y) which showed (25.2%) of the outpatient clinic visitors. When we speak about gender, it was noticed that allergic rhinitis was mostly seen in males it was (61.2%). barns showed a (8.7%) ability to have allergic rhinitis.
Conclusion: allergic rhinitis is a preventable disease, medications modifies allergic rhinitis especially anti-histamines & steroids, smoking, environmental elements, and many other variables may be controlled.
Keywords: allergic rhinitis: AR

(448)

Our experience in royal medical services in management of complicated cases in rhinology

**Dr. Mohammed Alsaraireh (Jordan)*

Objectives: Sharing the effort of otorhinolaryngology departement in royal medical service in management of uncommom cases in rhinology with experts in rhinology
Methodology: we reviewed the complicated cases whom presentation were uncommon during the period from the 1st of January, 2019 to the 31th of August, 2022
Results: we reported three cases of uncommon complicated presentation, one case of nasal sarcoma, case of nasal hemangiopericytoma and the last one case of extensive allergic fungal sinusitis as examples how we deal with complicated cases in rhinology
Conclusion: Management of complicated cases in rhinology need further attention from rhinologist as well as good pre-operative assessment
Keywords: Rhinology, nasal sarcoma, hemangiopericytoma

(449)

Systemic steroid alone versus systemic steroid and antiviral medications for the management of bell's palsy

** Dr. Anas Elamaireh (Jordan)*

Objectives: To compare and evaluate systemic steroid alone versus systemic steroid and antiviral medications for the management of bell's palsy
Methodology: A prospective analysis of 64 patients who presented with picture of bell's palsy, patients divided randomly into two groups, group A of 32 patients treated by systemic steroid alone (Prednisolone tab), group B of 32 patients treated by systemic steroid (Prednisolone tab) and antiviral medication(acyclovir)patients records abstract form was designed to collect our study data which include age, gender, pre and post treatment facial nerve palsy grade according House-Brackmann scale.
Results: Demographic data of our study groups was comparable, group A showed complete recovery into 24 patients (75%), partial recovery into 6 patients (19%), no significant improvement into 2 patients (6%), group B showed complete recovery into 25 patients, (78%), partial recovery into 6 patients (19%), no significant improvement into one patient (3%).
Conclusion: Using of antiviral medication (acyclovir) for the management of bell's palsy does not improve recovery rate.
Keywords: Bell's palsy, Systemic steroid, Antiviral medication

(450)

Tympanoplasty surgery using tragal cartilage graft versus temporalis fascia graft

**Dr. Motasem Al_krymeen (Jordan)*

Objectives: To compare the success rate and hearing result of tympanoplasty surgery when using tragal cartilage graft versus using temporalis fascia graft
Methodology :A prospective analysis of 46 patients who underwent tympanoplasty surgery in Queen Alia Military Hospital , patients divided randomly into two groups , group A of 23 patients underwent tympanoplasty operation using tragal cartilage graft , group B of 23 patients underwent tympanoplasty surgery using temporalis fascia graft, patients records abstract form was designed to collect our study data which include age , gender , examination of tympanic membrane pre and post hearing status.
Results: Demographic data of our study groups was comparable, group A showed success of tympanoplasty surgery (closure of tympanic membrane and improvement of hearing) into

20 patients (87%), group B showed success of tympanoplasty surgery (closure of tympanic membrane and improvement of hearing) into 19 patients (83%).
Conclusion: No significant difference between using of tragal cartilage graft versus using of temporalis fascia in term of closure of tympanic membrane and hearing status improvement
Keywords: Tympanoplasty, Tragal cartilage graft, Temporalis fascia graft

(451)
Hearing result in canal wall up versus canal wall down mastoidectomy patients

**Dr Basem Alkousheh (Jordan)*

Objectives: To compare hearing result in canal wall up versus canal wall down mastoidectomy
Methodology: A prospective analysis of 46 patients aging between 12-49 years who underwent mastoidectomy in Queen Alia Military Hospitals, 26 patients (group A) underwent canal wall up mastoidectomy , 20 patients group (B) underwent canal wall down mastoidectomy, patients record abstract form designed to collect our study data which include age , gender, pre and post-operative hearing assessment
Results: Demographic data of our study groups was comparable, group A (canal wall up mastoidectomy) documented improvement of hearing into 17 patients (65%), deterioration of hearing into 3 patients (12),no significant changes of hearing into five patients (23%) , group B (canal wall down mastoidectomy) documented improvement of hearing into 12 patients (60%) , deterioration of hearing into 3 patients (15%), no significant changes of hearing into five patients (25%)
Conclusion: No significant difference when comparing Hearing result between canal wall up and canal wall down mastoidectomy surgery.
Keywords: Mastoidectomy Hearing assessment

RMS Session

Global Challenges and Sustainable Development in Health – a NATO Perspective
**Col. David Willey (UK)*

Medical Ethics

**Dr. Yousef Al-Qsous (Jordan)*

Narrowing the Gender Leadership Gap Globally.

**Dr. Mumtaz Patel (UK)*

The United States Central Command (USCENTCOM): Global Challenges and Sustainable Development in Health

**Capt. Carrie L. Redpath (USA)*