February

Better Pharmacist Knowledge

Jordan Drug Information and Toxicology Centre 2022

2022

No role for aspirin in inpatients with COVID-19 (November 2021)

The RECOVERY trial, which randomly assigned nearly 15,000 individuals hospitalized with COVID-19 to receive standard care with or without aspirin 150 mg**, found no benefit of aspirin in reducing mortality or progression to mechanical ventilation.** The aspirin group had a small reduction in thrombosis (4.6 versus 5.3 percent) and a small increase in major bleeding (1.6 versus 1.0 percent).

We continue to use aspirin for standard indications but do not prescribe aspirin for individuals admitted to the hospital with COVID-19. [1]

Booster doses of COVID-19 vaccines for individuals 12 years or older

For individuals ≥12 years of age who received a primary series of a COVID-19 vaccine, we recommend booster vaccination (**Grade 1B**).

Several countries have introduced booster doses of COVID-19 vaccines because of potentially attenuated vaccine effectiveness due to waning efficacy and variants.

The US Food and Drug Administration has authorized and the **Centers for Disease Control (CDC) recommends a booster dose for all individuals 12 years or older** . **The booster dose is given five months after a primary BNT162b2 (Pfizer) or mRNA-1273 (Moderna) series**, and two months after a primary Ad26.COV2.S (Johnson & Johnson) series.

Any vaccine authorized for the patient's age group can be used for the booster dose, regardless of the vaccine used for the primary series; in general, we favor one of the mRNA vaccines over Ad26.COV2.S. We recommend booster doses for eligible individuals, based on trials and observational evidence suggesting improved vaccine efficacy following a booster dose**. [2]**

Direct oral anticoagulants for venous thromboembolism in children ≥ 2 years

For most adolescents (≥12 years) with venous thromboembolism, after at least five days of initial parenteral therapy, we suggest a direct oral anticoagulant (DOAC; eg, dabigatran or rivaroxaban) rather than other agents (Grade 2B).

For children ages 2 to <12 years old, either a DOAC or low molecular weight heparin is reasonable.

In 2021, the US Food and Drug Administration approved dabigatran, a direct oral anticoagulant (DOAC), for treatment of venous thrombosis and thromboembolism (VTE) in children ≥3 months old; another DOAC, rivaroxaban, has been approved in children in Canada and Europe.

These regulatory approvals were based upon two large multicenter pediatric trials demonstrating that dabigatran and rivaroxaban have similar efficacy and bleeding risk compared with low molecular weight heparin (LMWH) and warfarin . Adolescents made up most of the trial populations, and children <2 years were underrepresented. DOACs are an attractive option since they are orally administered and do not require drug monitoring.

We now suggest one of the approved DOACs (dabigatran or rivaroxaban) for treatment of VTE in adolescents, after at least five days of initial parenteral therapy.

For children ages 2 to 11 years, either a DOAC or LMWH is acceptable.

For infants and children <2 years, the efficacy and safety of DOACs remain uncertain, and we continue to suggest LMWH.[3]

References:

1. No role for aspirin in inpatients with COVID-19 (November 2021), accessed online via UpToDate.
2. Booster doses of COVID-19 vaccines for individuals 12 years or older , accessed online via UpToDate.
3. Direct oral anticoagulants for venous thromboembolism in children ≥2 years, accessed online via UpToDate

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Prevalence of iron deficiency during pregnancy (December 2021)

A new retrospective study involving over 44,000 pregnant individuals suggests that a large proportion have iron deficiency, many in the absence of anemia. Ferritin was low in over half (<15 ng/mL in 24 percent, <30 ng/mL in 53 percent) and borderline (30 to 44 ng/mL) in another 25 percent. Individuals with lower household income were less likely to be screened. These data support having a high level of suspicion for iron deficiency during pregnancy, being aware of possible health care disparities, testing individuals at high risk, and evaluating the cause in all patients with anemia.

Iron deficiency is correlated with adverse maternal and fetal outcomes.[1]

Immunogenicity of available vaccines against SARS-CoV-2 in patients with cancer (January 2022).

Patients with cancer are considered to be at high risk for SARS-CoV-2 infection, but there are limited studies directly comparing available COVID-19 vaccines.

In an observational cohort study (CANVAX) of over 700 patients with solid organ or hematologic cancers, two doses of an mRNA vaccine (either BNT162b2/Pfizer-BioNTech or mRNA-1273/Moderna) were associated **with higher protective immune responses compared with one dose of the adenoviral vector vaccine Ad26.COV2.S/Janssen.** Although clinical outcomes were not measured, other studies in the general population suggest that mRNA vaccines may have greater effectiveness against severe disease. In patients with cancer receiving COVID-19 vaccination, as for the general population, **we suggest an mRNA COVID vaccine, rather than an adenoviral vector vaccine**. **[2]**

Omega-3 Supplements Improve Sleep, Mood in Breast Cancer Patients on Hormone Therapy (December 28, 2021)

Hormone therapy in patients with breast cancer can lead to mood and sleep disorders. A new randomized controlled trial shows that omega-3 supplementation improves these symptoms.

After 4 weeks of treatment, patients who received omega-3 reported better sleep, less depression, and better mood outcomes than those who received placebo.

Estrogen receptor inhibitors are used to treat breast cancer with positive hormone receptors in combination with other therapies. However, the drugs can lead to long-term side effects, including hot flashes, night sweats, and changes to mood and sleep.

These side effects are often treated with selective serotonin reuptake inhibitors (SSRIs) and some anticonvulsant drugs. Omega-3 supplements contain various polyunsaturated fatty acids, which influence cell signaling and contribute to the production of bioactive fat mediators that counter inflammation. They are widely used in cardiovascular disease, breast cancer, rheumatoid arthritis, depression, and other cognitive disorders. They also appear to amplify the anti-tumor efficacy of tamoxifen through the inhibition of proliferative and anti-apoptotic pathways that that are influenced by estrogen receptor signaling.**[3]**

Medication Safety/ Black Box Warning Atenolol/ Intravenous (Solution), Oral (Tablet)

Following abrupt cessation of certain beta-blocking agents, exacerbations of angina pectoris and, in some cases, myocardial infarction and ventricular arrhythmias have occurred.

As with other beta blockers, when discontinuation of atenolol is planned, the patients should be carefully **observed and advised to minimize physical activity. If the angina worsens or acute coronary insufficiency develops, promptly reinstitute atenolol, at least temporarily**. Warn patients against interruption or discontinuation of therapy without advice of physician. **[4]**

References:
1. Prevalence of iron deficiency during pregnancy, accessed online via UpToDate.
2.Immunogenicity of available vaccines against SARS-CoV-2 in patients with cancer, accessed online via UpToDate
3.omega-3 supplements improve sleep, mood in breast cancer patients on hormone therapy, accessed online via https://www.medscape.com/viewart
4. Atenolol/ Medication Safety/ Black Box Warning, access online via https://www.accessdata.fda.gov/.

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