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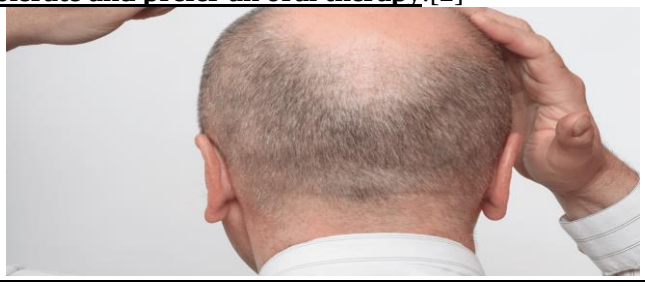
Beta blockers after acute myocardial infarction (July 2024)

While older studies suggest that beta blocker treatment is beneficial in patients with normal left ventricular ejection fraction (LVEF) after acute myocardial infarction (MI), it remains unclear whether beta blockers are beneficial in similar patients treated with modern therapies for MI (eg, percutaneous coronary intervention, **ticagrelor**). In a recent trial that included over 5000 patients with acute MI and LVEF ≥50 percent who were randomly assigned to beta blocker treatment or no beta blocker treatment, rates of mortality and recurrent MI were similar in the two groups after a median of 3.5 years .However, the results were inconclusive due to issues with adherence to the assigned therapy and the open-label trial design. **In patients with acute MI and normal LVEF but without heart failure or contraindications to beta blockade, we suggest initiation of beta blockers**.[1]

Oral versus topical minoxidil for male pattern hair loss (June 2024)

Randomized trials evaluating oral **minoxidil** for male pattern hair loss (MPHL, androgenetic alopecia in males) are **limited**. In one of the first trials to compare oral minoxidil with topical minoxidil for MPHL (n = 90), the mean change in terminal and total hair density at week 24 did not differ between patients treated with oral minoxidil (5 mg per day) and patients treated with topical minoxidil 5% solution. However, **the oral minoxidil group had a greater percentage increase in vertex scalp terminal hair density and improvement on photographic assessment.** Both treatments were generally well tolerated. Although further study is necessary to confirm the relative efficacy of these therapies, **the findings support oral minoxidil as an alternative therapy for MPHL for patients who tolerate and prefer an oral therapy**.[2]



Aficamten therapy for hypertrophic cardiomyopathy and symptomatic left ventricular outflow tract obstruction (July 2024)

Patients with hypertrophic cardiomyopathy (HCM) may develop dyspnea or other symptoms caused by left ventricular outflow tract (LVOT) obstruction that were historically treated with negative inotropic drugs or septal reduction therapy (eg, surgical myectomy). In a randomized trial in nearly 300 patients with HCM and symptoms of LVOT obstruction**, patients receiving aficamten (an investigational oral cardiac myosin inhibitor) had fewer severe heart failure symptoms and improved quality of life compared with those receiving placebo**. Although there was concern that myosin inhibitors could increase the risk of atrial fibrillation (AF), rates of AF in this trial were similar between the groups. In patients with HCM and symptoms of LVOT obstruction refractory to initial therapy with a beta blocker, therapy with a myosin inhibitor may improve symptoms. [3]

A risk score to predict the risk of acute kidney injury associated with Cisplatin therapy (June 2024)

Cisplatin is a potent anticancer agent used to treat a broad spectrum of malignancies; however, nephrotoxicity, particularly acute kidney injury (AKI), is a dose-limiting adverse effect. A risk score based on nine readily available clinical parameters has been developed and validated to predict the **risk of cisplatin-associated AKI (CP-AKI**; defined as a twofold or greater increase in serum creatinine or kidney replacement therapy within 14 days of a first dose of intravenous cisplatin). When applied to two separate cohorts (over 24,000 adults), a higher risk score was found to correlate with a higher incidence of CI-AKI. Use of this risk score can help to identify patients at risk for severe CP-AKI; a tool to calculate this risk is available online.[4]

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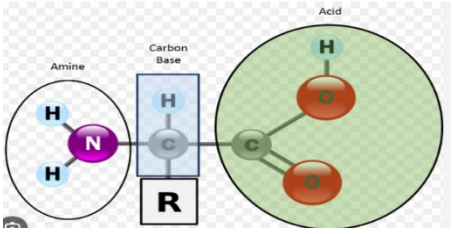
Subcutaneous Semaglutide and risk of kidney disease progression in type 2 diabetes (June 2024)

In a trial evaluating subcutaneous **semaglutide** (1 mg weekly) versus placebo in over 3500 adults with type 2 diabetes (mean age 67 years, mean A1C 7.8 percent) and chronic kidney disease (CKD; mean estimated glomerular filtration rate [eGFR] 47 mL/min/1.73 m^2 with median urinary albumin-to-creatinine ratio of 567 mg/g), **semaglutide reduced the incidence of major kidney events** (a composite of kidney failure onset, ≥50 percent reduction in eGFR from baseline, or kidney- or cardiovascular-related mortality). Benefits were observed specifically for reduction in eGFR from baseline and cardiovascular mortality. These findings further support the use of semaglutide in people with type 2 diabetes and CKD, particularly when substantial glucose and/or body weight lowering are major goals of care.[1]

Amino acid infusion for the prevention of acute kidney injury (June 2024)

Intravenous (IV) amino acid infusion increases kidney perfusion and glomerular filtration rate, and has been proposed to reduce the risk of acute kidney injury (AKI). In a trial in which over 3500 patients scheduled to undergo cardiac surgery with cardiopulmonary bypass were randomly assigned to either an IV infusion of a balanced mixture of amino acids or to a crystalloid placebo, the rate of AKI was lower in the amino acid group (27 percent versus 32 percent). However, most episodes of AKI were not severe, and the rate of kidney replacement therapy was similar in both groups. Because the intervention in this trial may have affected kidney hemodynamics without preventing acute tubular injury/necrosis, more study is required to delineate the potential role of amino acid infusion in the prevention of ischemic AKI.[2]



Effects of a four-drug, quarter-dose, single-pill combination on blood pressure in patients with hypertension (June 2024)

Most patients with hypertension require combination therapy to achieve adequate blood pressure control, usually with moderate doses of two agents. Using low doses of more than two agents has been suggested as a strategy to achieve control while potentially minimizing dose-related adverse effects. In a trial of nearly 600 patients with hypertension, a four-drug, single-pill combination (that contained small doses of **irbesartan**, **indapamide**, **amlodipine**, and **bisoprolol**) lowered 24-hour systolic blood pressure more than full-dose irbesartan (18 versus 10 mmHg) and led to higher rates of control (77 versus 50 percent); the incidence of adverse effects was similar between the groups. While promising, clinical experience with using four-drug combination pills is limited and therefore not yet recommended as initial treatment.[3]

Acetaminophen in sepsis-related organ failure (June 2024)

Preliminary data have suggested that **acetaminophen** may have potential benefits in patients with sepsis. A recent randomized trial of 447 patients with sepsis and respiratory or circulatory organ failure reported that patients treated with acetaminophen (1 g every six hours for five days) had a similar number of days alive and free of organ support compared with placebo. However, acetaminophen may have reduced the rate of acute respiratory distress syndrome (2 versus 9 percent). **Further study is needed before acetaminophen can be routinely used in patients with sepsis and organ dysfunction**. [4]

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