DRUG INTERACTIONS

Statins and influenza vaccine immunogenicity and effectiveness (November 2015)

Statins are used commonly in older adults with hyperlipidemia and are known to have immunomodulatory effects, which could affect vaccine responses. In an observational study conducted in the context of a randomized trial that evaluated influenza vaccines in individuals >65 years of age, hemagglutination inhibition (HAI) geometric mean titers to various influenza strains were substantially lower in those receiving chronic statin therapy than in those not receiving it [1]. In addition, in the adjusted analysis of a large retrospective cohort study, statin use was associated with reduced influenza vaccine effectiveness against medically attended acute respiratory illness [2]. The observed associations between statin use and vaccine effectiveness could be due to confounding, as patients receiving statins are likely to be at differing baseline risk of influenza from those not receiving statins. Although these studies raise the possibility that older patients receiving statins are less likely to be protected by the influenza vaccine, such individuals should still receive statins, when indicated, as well as an influenza vaccine annually. (See "Seasonal influenza vaccination in adults", section on 'Efficacy'.)

ADVERSE REACTIONS AND WARNINGS

Low risk of anaphylaxis with intravenous iron (December 2015)

Many clinicians are reluctant to use intravenous (IV) iron due to concerns about anaphylaxis. We believe the risk is overestimated, largely due to experience with older products such as high molecular weight iron dextran (HMW ID), which is no longer used, and to the practice of aggressively treating non-allergic infusion reactions with diphenhydramine and other therapies that convert the reaction to a more serious event. A recent review addressed the frequency of anaphylaxis in nearly 700,000 older adults who received an IV iron product [63]. Overall risk of anaphylaxis was low (<0.07 percent), although some deaths were recorded. However, we believe this may overestimate serious reactions because the criteria for anaphylaxis were based on medical coding data that may not have distinguished adverse drug events from effects of premedications. The rates with iron dextran may also be an overestimate, since they included HMW ID. Further, findings from this population may not be directly applicable to younger patients. We continue to use IV iron in a variety of settings, and we do not premedicate with diphenhydramine (or in most cases, with any medications). (See "Treatment of iron deficiency anemia in adults", section on 'Risks/prevention'.)

Mortality outcomes with direct oral anticoagulants versus warfarin (November 2015)

A number of oral anticoagulants are now available. Decisions among them depend on many factors including compliance, efficacy, bleeding risks, and other costs and burdens. A recent meta-analysis provides more definitive data regarding the clinically important risks with the direct oral anticoagulants (DOACs) compared with warfarin [64]. This analysis, which included 13 randomized trials and over 100,000 patients, found a lower case-fatality rate from major bleeding, lower cardiovascular mortality, and lower all-cause mortality in patients assigned to one of the DOACs. This safety profile is reassuring, although these agents are not necessarily the right choice for every patient. DOACs make it more difficult to assess noncompliance, and they are not appropriate during pregnancy or in patients with prosthetic heart valves. (See "Management of bleeding in patients receiving direct oral anticoagulants", section on 'Bleeding risks from DOACs' and "Anticoagulation with direct thrombin inhibitors and direct factor Xa inhibitors", section on 'Comparison with heparin and warfarin'.)

Outbreak of fungal CNS infection and septic arthritis in the United States: Long-term follow-up (November 2015)

A multistate outbreak of fungal central nervous system infection and septic arthritis associated with injections with contaminated methylprednisolone was detected in the United States in 2012 and involved >750 cases. In a long-term follow-up study, by 12 months after the initial diagnosis, 42 percent of 455 patients followed in the study were considered cured, 41 percent were no longer receiving antifungal therapy but did not meet the definition of cure, 7 percent were still receiving antifungal therapy, 8 percent had died (with 24 of 36 fatalities attributed to outbreak-associated infections), and 2 percent had incomplete follow-up data [65]. One patient developed probable fungal meningitis 26 months after receiving an injection of contaminated methylprednisolone. In addition, eight cases of relapsed fungal infection were reported. Median time to relapse was 90 days, but one relapse occurred 21 months after cessation of therapy. (See "Outbreak of fungal central nervous system and osteoarticular infections in the United States: Epidemiology, clinical manifestations, and diagnosis", section on 'Incubation period' and "Outbreak of fungal central nervous system and osteoarticular infections in the United States: Treatment", section on 'Outcomes'.)