Clinical shorts

Tiotropium for preventing COPD exacerbations: In patients with moderate-to-severe chronic obstructive pulmonary disease (COPD), a long-acting anticholinergic agent, tiotropium, was more effective than a long-acting ß$_2$-agonist, salmeterol, in preventing exacerbations. This is the conclusion of a one-year multicentre trial in 25 countries in which 7376 patients with moderate to severe COPD and a history of at least one exacerbation in the previous year were randomly assigned to treatment with either tiotropium or salmeterol, in addition to their usual medications for COPD. About half the patients smoked throughout the trial. Compared with salmeterol, tiotropium increased the time to first exacerbation by 42 days (187 v. 145), corresponding to a 17% risk reduction (hazard ratio [HR] 0.83, 95% confidence interval [CI] 0.77–0.90, $p < 0.001$). Over the study year, tiotropium also reduced the risk of moderate exacerbations by 14% (HR 0.86, 95% CI 0.79–0.93, $p < 0.001$) and severe exacerbations by 28% (HR 0.72, 95% CI 0.61–0.85, $p < 0.001$). In this industry-sponsored trial, the incidence of serious adverse events was similar in both groups, as was discontinuation of treatment. See *N Engl J Med* 2011; 364:1093-103.

Can genital shedding of herpes simplex virus occur without symptoms? Yes, it can. However, genital shedding of herpes simplex virus type 2 (HSV-2) is more common in people who are symptomatic. About 500 people who were seropositive for HSV-2 infection collected swabs of genital secretions for at least 30 days and kept a diary recording the presence of genital lesions and symptoms. Most participants in this Oregon study were white (81%), heterosexual (65%) and had a history of symptomatic genital herpes infection (82%). As expected, the overall rate of HSV-2 shedding was higher in those with a history of symptoms than in those without (20.1%, 95% CI 18.3–22.0% v. 10.2%, 95% CI 7.7–13.6%, $p < 0.001$). However, genital shedding occurred on 12% of days when no genital lesions were reported by participants. The quantity of virus shed was higher and episodes of viral shedding were longer (median 5.0 v. 2.0 days, $p < 0.001$) when associated with genital lesions than when participants were asymptomatic. The authors caution that, for those with known HSV infection, advice to use protection or daily oral antiviral drugs can only partly reduce the risk of transmission. Controlling the transmission of asymptomatic HSV infection is even more challenging. See *JAMA* 2011;305:1441-9.

Coronary artery bypass surgery in left ventricular dysfunction: In patients with heart failure and coronary artery disease amenable to coronary artery bypass grafting (CABG), overall mortality was the same in those treated with medical management alone or with medical management and CABG. A randomized multicentre trial involving 1212 patients with an ejection fraction of less than 35% showed that the overall mortality rate was similar in both groups (between 36% and 41%) during the follow-up period (median 56 months). Although there was no difference in overall mortality, a combination of death from any cause or hospitalization for cardiovascular causes (a secondary outcome) was higher in those in the medical therapy group than in those in the CABG group (HR with CABG 0.74, 95% CI 0.64–0.85, $p < 0.001$). There was a crossover of 9% in the CABG group to medical therapy alone, whereas 17% in the medical therapy group underwent CABG. The authors wondered if limitations of their study may have contributed to the similar overall mortality in both groups, rather than a true lack of benefit of CABG. See *N Engl J Med* 2011;364:1607-16.

Perioperative myocardial infarction in noncardiac surgery: Most patients with myocardial infarction (MI) occurring within 30 days after noncardiac surgery do not have ischemic symptoms. In a prospective cohort study of over 8300 participants who had or were at increased risk of atherosclerotic disease, 5% experienced a perioperative MI. Most infarctions (74%) occurred within 48 hours after surgery, and more than 50% of those who died after MI did so within the same period. The 30-day mortality rate in those with perioperative MI was more than five times the rate in those who did not have an MI (11.6% v. 2.2%, $p < 0.001$). Mortality rates were elevated whether patients experienced symptoms with their MI or not. Because the highest risk of MI and death is in the first 48 hours after surgery, regardless of whether the patient has symptoms of ischemia, the authors suggest that perioperative monitoring of troponin levels should be done routinely. See *Ann Intern Med* 2011;154:523-8.

Reduction in working hours for residents: Has the reduction in working hours for residents to less than 80 hours a week adversely affected patient outcomes or postgraduate training? Not in the US, concluded the authors of a recent systematic review. Most of the 72 studies in the review were "before-and-after" retrospective cohort studies conducted in the US; heterogeneity precluded meta-analysis of the results. In general, the studies showed a beneficial or neutral impact on patient safety and clinical outcome. There appeared to be a limited or lack of effect on postgraduate training, as determined by examination results or procedural volume per trainee. Although these results are heartening, the authors emphasize that the literature is inadequate to assess the effects of working-hour reforms in the UK and other countries in the European Union. See *BMJ* 2011;342:d1580 doi:10.1136/bmj.d1580.

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