

Clinical shorts

Cost-effectiveness of options for diagnosing hypertension: Ambulatory blood pressure monitoring after an initial raised reading in primary care would reduce misdiagnosis and save costs, say the authors of a modelling study that compared blood pressure measurement in the clinic, at home and with an ambulatory monitor. The study looked at lifetime costs, quality-adjusted life years and cost-effectiveness based on a hypothetical primary care population aged 40 years or older with a screening blood pressure level of at least 140/90 mm Hg in the clinic and risk-factor prevalence comparable to that of the general population. The authors also ran the model for 10 age- and sex-stratified groups: men and women aged 40, 50, 60, 70 and 75 years. Ambulatory monitoring saved costs for all groups and resulted in more quality-adjusted life years for those older than 50 years. For example, using the model, ambulatory monitoring saved £323 (95% confidence interval [CI] -389 to -222) in women aged 40 years. The authors note that the additional costs for ambulatory monitoring were counterbalanced by cost savings from better targeted treatment. They suggest that ambulatory monitoring be considered seriously for most people before treatment with antihypertensives is started, which is consistent with the recently released National Institute for Health and Clinical Excellence guidelines. See *Lancet* 2011 DOI:10.1016/S0140-6736(11)61184-7.

Brief versus longer periods of CPR before analysis of rhythm: Among adults with an out-of-hospital cardiac arrest, there was no difference in survival benefit between those who received a brief period of cardiopulmonary resuscitation (CPR) compared with those who received a longer period before the first analysis of heart rhythm. This is the conclusion of a multicentre

cluster-randomized trial involving 9933 adults who received care for an out-of-hospital cardiac arrest. Patients in the early-analysis group were assigned to receive 30 to 60 seconds of CPR administered by emergency personnel before electrocardiographic analysis; those in the later-analysis group were assigned to receive three minutes. Despite the differing treatment approaches, 5.9% of patients in both groups survived to hospital discharge with satisfactory functional status (the primary outcome); the cluster-adjusted difference was -0.2 percentage points (95% CI -1.1 to 0.7, $p = 0.59$). Only 8% of all patients in the study survived until discharge. Although the duration of CPR before first analysis of rhythm did not fall within the assigned target for 36% of patients, there was very good separation between the two study groups in terms of CPR length. The authors suggest that there is no advantage of delaying analysis of cardiac rhythm during CPR administered by emergency personnel. See *N Engl J Med* 2011;365:787-97.

Manual lymph drainage after axillary dissection for breast cancer: Manual lymph drainage has little effect on the prevention of arm lymphedema after axillary lymph node dissection for breast cancer. In a single blinded trial, 160 patients with operable breast cancer were randomized into treatment and control groups. Participants were scheduled for unilateral surgery that included axillary dissection. After surgery, both groups were given exercise therapy and information about preventing lymphedema. The treatment group also received a course of manual lymph drainage, which consisted of 40 half-hour sessions. After 12 months of follow-up, there was little difference in the cumulative incidence rate for arm lymphedema between the two groups (24% in treatment group v. 19% in control group, odds ratio 1.3, 95% CI 0.6 to

2.9, $p = 0.45$); the results were similar when adjusted for risk factors. Manual lymph drainage also had little effect on the time to develop lymphedema (hazard ratio 1.3, 95% CI 0.6 to 2.5; log rank $p = 0.44$). See *BMJ* 2011;343:d5326 doi:10.1136/bmj.d5326.

Choice of bariatric surgery for severe obesity: In a randomized parallel-group trial comparing gastric bypass and duodenal switch procedures, both bariatric techniques resulted in weight loss, improved quality of life and a reduction in cardiovascular risk factors in 60 patients with a body mass index (BMI) between 50 and 60 kg/m² before surgery. Duodenal switch surgery (in which the pyloric valve is preserved, but most of the small intestine is bypassed) was associated with greater weight loss and greater reductions of cholesterol, but also more adverse events, than gastric bypass surgery. Two years after surgery, the reduction of BMI was 17.3 kg/m² after gastric bypass and 24.8 kg/m² after duodenal switch surgery, with a mean between-group difference of 7.44 kg/m² (95% CI 5.24 to 9.64, $p < 0.001$). All patients receiving duodenal switch surgery had a BMI under 40 kg/m² at two years, compared with 74% of those in the gastric bypass group. However, adverse events, such as vomiting, malnutrition and infection, were more common in those receiving duodenal switch surgery (62% v. 32% in the gastric bypass group, $p = 0.021$). Although patients benefited from both types of surgery, the authors suggest that duodenal switch surgery be restricted to specific groups of patients because of the higher risk of adverse events. See *Ann Intern Med* 2011;155:281-91.

Diane Kelsall MD MED
Deputy Editor, Clinical Practice
CMAJ

CMAJ 2011. DOI:10.1503/cmaj.111491