Ischaemic heart disease

A little heparin can be a bad thing

Heparin-induced thrombocytopenia (HIT) is a rare complication of unfractionated and even more rarely of low molecular weight heparin treatment. It usually occurs between 5–8 days after starting heparin treatment, although may occur earlier if there has been previous exposure. This study of 12 patients highlights that even courses of heparin for only three days can initiate HIT and thrombosis. Presentation may be as late as three weeks after the exposure. Checking for antibodies to the platelet-factor-4/heparin complex is vital to diagnosis.

Risk of sepsis after coronary angiography

Of 22 006 invasive cardiac procedures carried out in Madrid from 1991 to 1998, 25 blood stream infections were documented within 72 hours. Overall incidence of bacteraemia was 0.11% (0.24% after percutaneous transluminal coronary angioplasty, 0.6% after diagnostic cardiac, and 0.8% after electrophysiologic studies). Bloodstream infection was detected a median of 1.7 days after the procedure, and was more common in the elderly and those with recent heart failure. The overall mortality rate was 0.009% for patients who had an invasive procedure, but was 8.0% for the 25 patients with bacteraemia.

Myeloperoxidase as a risk marker for coronary disease

Atherosclerosis is an inflammatory disease. Concentrations of myeloperoxidase (MPO), a leucocyte enzyme that promotes oxidation of lipoproteins in the atheroma, act as a marker for inflammation and may predict the prevalence of artery disease (CAD). MPO concentrations strongly correlate with prevalence of CAD (adjusted odds ratios comparing the highest v lowest quartiles of leucocyte MPO and blood MPO concentrations were 1.19 and 20.4 for CAD, respectively). C reactive protein (CRP), a more validated marker of inflammation that was not studied, may be better still at predicting risk. In the fast revascularisation during instability in coronary artery disease II (FRISC II) study, high IL-6 concentrations during acute coronary syndrome were associated with high risk of cardiovascular events up to 12 months later.

Hypertension

Gadolinium enhanced MRA or contrast CT are the best ways to detect renal artery stenosis

In unselected hypertensives, 1–5% will have renovascular hypertension. The gold standard for detection is considered to be invasive angiography. A survey of the literature on computed tomography (CT), magnetic resonance angiography (MRA), captopril enhanced scintigraphy, and ultrasonography concludes that gadolinium enhanced MRA and contrast enhanced CT are probably the best non-invasive ways to detect renal artery stenosis.

What really is normal blood pressure?

High-normal blood pressure (systolic pressure of 130–139 mm Hg, diastolic pressure of 85–89 mm Hg, or both) may be associated with increased risk of cardiovascular events (cardiovascular death, myocardial infarction, cerebrovascular accident, heart failure). Among 6859 participants in the Framingham heart study who were initially free of cardiovascular events, 10 year cumulative incidence of cardiovascular disease in subjects 35–64 years was 4% (95% confidence interval [CI] 2% to 5 %) for women and 8% (95% CI 6% to 10%) for men; in older subjects (those 65–90 years old), the incidence was 18% (95% CI 12% to 23%) for women and 25% (95% CI 17% to 34%) for men. As compared with normal blood pressure (< 120/80 mm Hg), high-normal blood pressure was associated with a risk factor adjusted hazard ratio for cardiovascular disease of 2.5 (95% CI 1.6 to 4.1) in women and 1.6 (95% CI 1.1 to 2.2) in men. There are no data on whether treatment to reduce this level of blood pressure would reduce the risk.

General cardiology

Anticoagulation before cardioversion for atrial flutter?

The curative treatment for atrial flutter is radiofrequency ablation. However, most cardiologists would still anticoagulate and cardiovert as their initial approach. A series from the Mayo clinic of 615 electrical cardioversions performed electively in 493 patients showed that success rate was 95%. Three embolic events occurred in the 30 days after successful cardioversion (0.6% of successful procedures, 95% CI 0.1% to 1.6%). Two of the three patients had not been anticoagulated, whereas the third patient had subtherapeutic oral anticoagulation. No embolic event occurred in procedures performed with adequate anticoagulation. The rate of emboli in those not anticoagulated was 1% (previous studies of cardioversion without anticoagulation in AF (as opposed to flutter) showed a rate of 6%).

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