Ischaemic heart disease

Off-pump CABG after carotid surgery is safe ➤ Patients with combined coronary and carotid artery disease are at high risk of perioperative stroke and myocardial infarction. Of 2556 patients scheduled for off-pump bypass surgery (CABG), 82 patients with > 70% carotid stenosis were found by screening with duplex scanning (5% of the group). The mean age of the patients was 63 years. Carotid endarterectomy was immediately followed by off-pump CABG. There was no hospital mortality. One patient had perioperative myocardial infarction and another a transient ischaemic attack. It seems that, in the correct hands, combined procedures can be safe.


β Blockers as anti-inflammatory agents? ➤ Aspirin and pravastatin lower C reactive protein (CRP) concentrations and reduce vascular risk, underlining the importance of inflammation in destabilising coronary plaques. β Blockers are thought to work by reducing arrhythmia related deaths in patients with heart failure and ischaemic heart disease (IHD). Even excluding patients with contraindications to β blockers, a survey of 333 consecutive patients with IHD showed CRP concentrations 40% lower in those on β blocker treatment. How they lower CRP is not clear.


Statins improve bone density ➤ As well being good for your heart, statins were found to increase bone density and reduce fracture risk by 40%. This effect was independent of height, weight, lifestyle, and other medication. Coupled with the fact that coronary heart disease (CHD) risk is lowered on a statin even if your initial cholesterol is normal, perhaps all patients over 65 should be on one.


Difficult treatment of MI in the > 75 age group ➤ In a cohort of over 2000 patients > 75 years old who had a myocardial infarction (MI), only 63% of eligible patients got thrombolysis while 27% of thrombolysis recipients had what were as good as absolute contraindications to the treatment. The odds ratio of death was 1.57 (95% confidence interval (CI) 1.03 to 2.40, p = 0.04) in those patients with contraindications versus those who did not receive lytic treatment. If aged < 80, thrombolysis was associated with reduced mortality, but at age 80–90, the predicted odds of death among thrombolysis recipients versus non-recipients was 1.4.


Asian children show insulin resistance ➤ Early atherosclerotic changes can be seen at postmortem examination in children of all races. Indian Asians in the UK as adults have a much higher risk of CHD death than UK whites. The cause for this is still not clear, but insulin resistance may play a part. This insulin resistance appears early in childhood, as shown by this study. Mean insulin concentrations were higher in Asians (percentage difference was 53% [95% CI 14% to 106%] after fasting and 54% [95% CI 19% to 99%] after glucose load), though glucose concentrations were similar. In addition triglyceride concentrations were higher and high density lipoprotein (HDL) cholesterol lower. The relation between insulin concentrations and adiposity was much stronger in Asians, suggesting a tendency to truncal obesity and a worsening insulin resistance.


Stent after primary angioplasty for acute MI ➤ Stenting after coronary angioplasty (PTCA) for acute MI has previously been shown to be associated with a paradoxical reduction in coronary flow. This may have been caused by distal embolisation, which could be reduced by treating with abciximab. Therefore, 2082 patients with acute myocardial infarction underwent PTCA alone (518 patients), PTCA plus abciximab treatment (528), stenting alone with the MultiLink stent (512), or stenting plus abciximab treatment (524). About 95% of patients achieved normal flow, with all treatments equally good. However, at six months, the primary end point—a composite of death, reinfarction, disabling stroke, and ischaemia driven revascularisation of the target vessel—had occurred in 20.0% of patients after PTCA, 15.5% after PTCA plus abciximab, 11.5% after stenting, and 10.2% after stenting plus abciximab (p < 0.001). The difference was due to repeat revascularisation rates being 15.7% after PTCA versus 5.2% after stent plus abciximab. This was caused by a 40% re-infarction rate after PTCA versus 22% after stenting (p < 0.001) independent of the use of abciximab.


Hypertension

HOPE for stroke reduction ➤ Reduction in blood pressure in the HOPE trial with ramipril 10 mg/day was modest (3.8 mm Hg systolic and 2.8 mm Hg diastolic). The relative risk of any stroke was reduced by 32% (156 v 226) in the ramipril group compared with the placebo group, and the relative risk of fatal stroke was reduced by 61% (17 v 44). Benefits were consistent across baseline blood pressures and all subgroups. Significantly fewer patients on ramipril had cognitive or functional impairment.


LIFE after HOPE ➤ Thiazides and β blockers are the best assessed interventions in hypertension management. The HOPE trial suggested that angiotensin converting enzyme (ACE) inhibitors may have added benefits beyond blood pressure control. Most physicians would use an angiotensin II receptor blocker (ARB) if an ACE inhibitor was not tolerated. The LIFE trial of > 9000 patients with mild to moderate hypertension suggests that losartan (an ARB) reduces the risk of death/MI/cerebrovascular accident over 4.7 years follow up (23.8 per 1000 patient-years in the losartan group v 27.9 per 1000 patient-years in the atenolol group; relative risk (RR) 0.87, 95% CI 0.77 to 0.98, p = 0.021). There was a significant reduction in stroke (0.75, 95% CI 0.63 to 0.89, p = 0.001) but not MI. Blood pressure reductions were similar in both groups. As in the HOPE trial, the high risk diabetic group gained as much benefit if not more and showed a significant reduction in total mortality (RR 0.61, 95% CI 0.45 to 0.84, p = 0.002) and MI.

Iqbal Malik, Editor
Regular exercise lowers blood pressure ▶ In 54 randomised, controlled trials (2419 participants) whose intervention and control groups differed only in aerobic exercise, exercise was associated with a significant reduction in mean systolic and diastolic blood pressure: 3.84 mm Hg (95% CI 4.97 to 2.72 mm Hg) and 2.58 mm Hg (95% CI 3.35 to 1.81 mm Hg), respectively. A reduction in blood pressure was seen in those with and without hypertension, and in obese and non-obese patients.


Viagra to treat pulmonary hypertension ▶ Intravenous prostacyclin has been shown to improve symptoms and prolong life in some patients with severe pulmonary hypertension. Pulmonary pressures may be lowered by nitric oxide donors (inhaled nitric oxide), elevation in cGMP, or elevations in cAMP. Sildenafil (Viagra) inhibits phosphodiesterase 5 and so raises cAMP concentrations. This study of 30 patients showed that sildenafil was as effective in lowering pulmonary vascular resistance as the use of the inhaled prostacyclin analogue iloprost, with the combination even more effective. Now long-term data are needed on mortality benefits with this novel treatment.


Drinking water as a treatment for POTS syndrome ▶ Water drinking increases blood pressure in a substantial proportion of patients who have severe orthostatic hypotension caused by autonomic failure. In 11 patients with autonomic failure and nine with the idiopathic POTS (postural orthostatic hypotension and tachycardia syndrome), half an hour after intake of 480 ml of water, blood pressure [on standing for one minute] was raised from 83/53 mm Hg to 114/66 mm Hg. Other treatments include mineralocorticoids and stockings.


Systolic or diastolic blood pressure as the best predictor of cardiovascular risk? ▶ Systolic blood pressure (SBP) is a better predictor of CHD and cardiovascular disease (CVD) risk than diastolic blood pressure (DBP), according to a follow up study of 4714 hypertensive men over 14 years. Despite treatment, 85% remained with a blood pressure >140/90 mm Hg. After adjustment for age, associated risk factors, and DBP, compared with subjects with SBP under 140 mm Hg, the RR for CVD mortality was 1.81 (95% CI 1.04 to 3.13) in subjects with SBP 140–160 mm Hg, and 1.94 (95% CI 1.10 to 3.43) in subjects with SBP >160 mm Hg. By contrast, after adjustment for SBP levels, DBP did not affect CVD risk.


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The following electronic only articles are published in conjunction with this issue of *Heart*.

**Beneficial effects of biventricular pacing in a patient with hypertrophic cardiomyopathy and intraventricular conduction delay**

C A Rinaldi, C A Bucknoll, J S Gill

The beneficial use of biventricular pacing is reported in a patient with hypertrophic cardiomyopathy and intraventricular conduction delay. This resulted in improvements in symptoms and exercise tolerance that may be related to cardiac resynchronisation. The improvement in symptoms by biventricular pacing in a patient with hypertrophic cardiomyopathy and intraventricular conduction delay is previously undocumented and requires further investigation.

*(Heart 2002;87:e6) www.heartjnl.com/cgi/content/full/87/6/e6*

**Diagnosis of amyloidosis by histological examination of subcutaneous fat sampled at the time of pacemaker implantation**

G M Gribbin, J A Gilbertson, P N Hawkins

Atrioventricular conduction disease may occur in a range of conditions. If echocardiography suggests the presence of an infiltrative cardiomyopathy the diagnosis of amyloidosis may be confirmed by subcutaneous fat sampling from the site of pacemaker implantation. This technique requires no additional invasive procedure and confers no extra risk for the patient. Confirmation of amyloidosis provides important prognostic information and may allow specific treatment.

*(Heart 2002;87:e7) www.heartjnl.com/cgi/content/full/87/6/e7*

**Mitral valve endocarditis in hypertrophic cardiomyopathy: case report and literature review**

G Morgan-Hughes, J Motwani

Mitral endocarditis complicating hypertrophic cardiomyopathy occurs predominantly on the left ventricular aspect of the anterior mitral valve leaflet in the presence of outflow tract obstruction. It is a rare condition and the estimated cumulative 10 year probability of developing endocarditis in patients with obstruction is < 5%. Combined mitral valve replacement and septal myectomy has been reported in this setting. A case of community acquired Staphylococcus aureus mitral valve endocarditis is reported in a previously asymptomatic young man with hypertrophic obstructive cardiomyopathy. The potential treatment options are discussed.

*(Heart 2002;87:e8) www.heartjnl.com/cgi/content/full/87/6/e8*