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 (3% 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 are regarded 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 triglycerides 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.


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 total 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 LIFE 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 benefited as much 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.
Systolic or diastolic blood pressure as the best predictor of 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.


Right heart thromboemboli: treat with thrombolysis?

Echocardiographic studies in patients with pulmonary emboli show right heart thromboembolism in between 3–23%, which significantly increases the mortality risk in patients with pulmonary embolism. The optimum management of such patients remains unclear, as no prospective randomised trials have been conducted to compare anticoagulation, thrombolysis, and surgical intervention. In this retrospective analysis of all reported cases from 1966 to 2000, 177 patients were identified with echocardiography of right heart thromboembolism. Overall, 20% were treated with anticoagulation, 35% with thrombolysis, and 35% with a surgical procedure (either surgical or percutaneous catheter embolectomy). Age and sex were not predictors of mortality. The mortality rate in patients receiving no treatment, anticoagulation, surgical procedure, and thrombolysis were 100%, 29%, 24%, and 11%, respectively. Although not randomised, these probably are the best data available to guide management.

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 symptomatic status 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

**WEB TOP 10**

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These articles scored the most hits on Heart's web site during March 2002.

1 Inflammation in acute coronary syndromes
T Mulvihill, J B Foley

March 2002,87:201–4. (Review)

2 The medical management of valvar heart disease
NA Bown, P Bloomfield

April 2002,87:395–400. (Education in Heart)

3 Joint British recommendations on prevention of coronary heart disease in clinical practice


4 New coronary imaging techniques: what to expect?
P J de Feyter, K Nieman

March 2002,87:170. (Editorial)

5 Which patient should be referred to an electrophysiologist: supraventricular tachycardia
R J Schilling

March 2002,87:299–304. (Education in Heart)

6 Myocardial molecular biology: an introduction
NJ Brand, P IR Barton

March 2002,87:284–93. (Education in Heart)

7 Hypertrophic cardiomyopathy: management, risk stratification, and prevention of sudden death
WJ McKenna, EB Bahk

February 2002,87:169–76. (Education in Heart)

8 Virtual coronary angiography using multislice computed tomography
S Schroeder, AF Kopp, B Ohrnseorge, H Loke-Gie, A Kuettner, A Baumbach, C Herdeg, CD Clausen, KR Karsch


9 Arrhythmias in adults with congenital heart disease
JK Triedman

April 2002,87:383–9. (Education in Heart)

10 Rapamycin eluting stent: the onset of a new era in interventional cardiology
P W Serruys, E Regar, A J Carter

April 2002,87:305–7. (Editorial)

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