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Ischaemic heart disease

Statin treatment: the longer the better ▶ At what concentration of cholesterol should treatment be initiated? The answer from the heart protection study (HPS) seems to be anything above a total cholesterol of 3.5 mmol/l. The cost effectiveness seems to improve on long term treatment as more events are prevented. The LIPID study cohort was followed for two years beyond the initial six years of the trial, and allowed to take open label pravastatin (> 80% in each group). The group who had initially been assigned to placebo still appeared to have more events in this period than those initially on statin treatment, despite similar cholesterol concentrations, suggesting a long term effect with a 1–2 year lag time.

▲ **The LIPID Study Group.** Long-term effectiveness and safety of pravastatin in 9014 patients with coronary heart disease and average cholesterol concentrations: the LIPID trial follow-up. *Lancet* 2002;359:1379–87.

▲ **Collins R, Peto R, Armitage J.** The MRC/BHF Heart Protection Study: preliminary results. *Int J Clin Pract* 2002;56:53–6.

Nicorandil is effective at keeping angina patients out of hospital ▶ Nicorandil is used as a second line antianginal agent. It may also have a cardioprotective effect. This trial of > 5000 patients followed for 1.6 years suggests no reduction in coronary heart disease (CHD) deaths or non-fatal myocardial infarction, but reduced unplanned admissions with angina (defined as possible angina, definite angina, and unstable angina) from 7.6% in placebo to 6.1% in nicorandil group ($p = 0.028$).

▲ **The IONA Study Group.** Effect of nicorandil on coronary events in patients with stable angina: the impact of nicorandil in angina (IONA) randomised trial. *Lancet* 2002;359:1269–75.

Perhaps risk of CHD in diabetics is not so high ▶ Haffner *et al* have suggested that a patient with diabetes is at as high a risk of CHD death as a patient with prior myocardial infarction. Now a Scottish survey suggests that this absence of difference between these groups may have been caused by lack of power in the study. In the cohort study 3477 patients of all ages with newly diagnosed type 2 diabetes were compared with 7414 patients who had just had an acute myocardial infarction. Patients who had just had an acute myocardial infarction had a higher risk of death from all causes (adjusted risk ratio (RR) 1.35, 95% confidence interval (CI) 1.25 to 1.44), cardiovascular death (RR 2.93, 95% CI 2.54 to 3.41), and hospital admission for myocardial infarction (RR 3.10, 95% CI 2.57 to 3.73).

▲ **Evans JMM, Wang J, Morris AD.** Comparison of cardiovascular risk between patients with type 2 diabetes and those who had had a myocardial infarction: cross sectional and cohort studies. *BMJ* 2002;324:939.

▲ **Haffner SM, Lehto S, Ronnemaa T, Pyorala K, Laasko M.** Mortality from coronary heart disease in subjects with type 2 diabetes and in nondiabetic subjects with and without prior myocardial infarction. *N Engl J Med* 1998;339:229–43.

How to predict risk of diabetes ▶ The standard method of identifying persons at high risk for type 2 diabetes mellitus involves using a two hour oral glucose tolerance test (GTT). This prospective cohort study enrolled about 3000 US adults and assessed their medical history, body mass index, blood pressure, fasting and two hour plasma glucose concentrations, fasting serum total, low density lipoprotein, and high density lipoprotein concentrations, and triglyceride concentration. Using only the risk factors was better at predicting the seven year risk of diabetes than using the GTT, with the addition of a GTT providing little extra value.

▲ **Stern MP, Williams K, Haffner SM.** Identification of persons at high risk for type 2 diabetes mellitus: do we need the oral glucose tolerance test? *Ann Intern Med* 2002;136:575–81.

Gamma radiation is good for restenosis in SVG ▶ Gamma radiation is complicated to administer, but probably has a niche market in difficult restenosis. Up to 40% of saphenous vein grafts (SVG) have occluded at 10 years. If treated with coronary angioplasty and stenting, the restenosis rate can be 37%. With gamma radiation, the six months binary restenosis rate was halved (21% v 44%, $p = 0.005$), and repeat revascularisation at one year was reduced by 70% (17% v 57%, $p < 0.001$).

▲ **Waksman R, Ajani AE, White RL, Chan RC, Satler LF, Kent KM, Pichard AD, Pinnow EE, Bui AB, Ramee S, Teirstein P, Lindsay J.** Intravascular gamma radiation for in-stent restenosis in saphenous-vein bypass grafts. *N Engl J Med* 2002;346:1194–9.

Anger is bad for the heart ▶ Anger can trigger myocardial ischaemia and may be an independent risk factor for coronary heart disease. A prospective study of 1055 men followed up for 32–48 years showed that overall 34.5% developed CHD by the age of 76 years. In addition 7.9% developed CHD before the age of 55 years. This group showed higher self reported anger levels when at school (RR of high v low anger 3.5, 95% CI 1.1 to 11.8). Anger did not predict CHD if events after 55 years of age were also included.

▲ **Chang PP, Ford DE, Meoni LA, Wang N-Y, Klag MJ.** Anger in young men and subsequent premature cardiovascular disease: the precursors study. *Arch Intern Med* 2002;162:901–6.

Heart failure

Clinical assessments of heart failure are flawed ▶ The rule of halves states that 50% of patients treated for heart failure do not have systolic dysfunction. This study of 225 patients presenting with clinical heart failure revealed that no finding on history, examination, or non-invasive investigation could reliably differentiate an ejection fraction of > 45% from that of < 45%. Half of the patients labelled as having heart failure had normal ejection fractions. This is in accordance with previous data suggesting that a third of cases have diastolic dysfunction, a third have systolic dysfunction, and a third have both.

▲ **Thomas JT, Kelly RF, Thomas SJ, Stamos TD, Albasha K, Parrillo JE, Calvin JE.** Utility of history, physical examination, electrocardiogram, and chest radiograph for differentiating normal from decreased systolic function in patients with heart failure. *Am J Med* 2002;112:437–45.

▲ **Colucci WS, Braunwald E.** Pathophysiology of heart failure. In: Braunwald E, Zipes DP, Libby P, eds. *Heart disease*, 6th ed. Philadelphia: WB Saunders, 2001:517–18.

Journals scanned

American Journal of Medicine; American Journal of Physiology; Heart and Circulatory Physiology; Annals of Emergency Medicine; Annals of Thoracic Surgery; Archives of Internal Medicine; BMJ; Chest; European Journal of Cardiothoracic Surgery; Lancet; JAMA; Journal of Clinical Investigation; Journal of Diabetes and its Complications; Journal of Immunology; Journal of Thoracic and Cardiovascular Surgery; Nature Medicine; New England Journal of Medicine; Pharmacoeconomics; Thorax

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