Ischaemic heart disease

Inflammation marks the risk ▶ CD40 ligand is released from activated lymphocytes and platelets, and is proinflammatory. The concentrations of soluble CD40 ligand were raised (above 5.0 µg/l) in 221 of 626 patients with acute coronary syndromes (40.6%). Raised soluble CD40 ligand values identified those with acute coronary syndromes who were at high risk for death or non-fatal myocardial infarction (MI) (hazard ratio v with those with low levels, 6.65, 95% confidence interval [CI] 3.18 to 13.89; p < 0.001) independent of troponin concentrations. Elevation of soluble CD40 ligand identifies a subgroup of patients at high risk who are likely to benefit from antiplatelet treatment with abciximab (adjusted hazard ratio as compared with those receiving placebo, 0.37, 95% CI 0.20 to 0.68; p = 0.001). Whether this adds to assessment using C reactive protein, a better validated risk marker, was not tested.


Informed consent for acute MI trials is nearly impossible ▶ Patients being asked to take part in a trial with approved protocol were assessed to see what information they were able to take in during the stress of an acute MI. The patient information sheet needed education to age 18 for comprehension, although only 75 of 346 (18%) read the patient information sheet before giving or refusing consent to participate. Patients who gave consent were more likely to report good or partial comprehension of the information provided than were those who refused consent. In an assessment of competence to make a decision, 75 of 145 (52%) were ranked at the lowest grade and 26 (18%) were not needed education to age 18 for comprehension, although only 75 of 346 (18%) read the patient information sheet before giving or refusing consent to participate. Patients who gave consent were more likely to report good or partial comprehension of the information provided than were those who refused consent.


No role for antibiotic treatment in ACS ▶ In the AZACS trial of 1439 patients with unstable angina or acute myocardial infarction, patients were randomly allocated to receive 500 mg azithromycin on the first day after randomisation, followed by 250 mg daily for four days or placebo. Treatment with azithromycin did not result in reduction of any of the primary end points of death, MI or revascularisation. This is in line with two previous trials (ACADEMIC and ROXIS), but disagrees with earlier smaller studies.


Reduce readmissions by angiography in the elderly with angina ▶ In 282 patients with at least class 2 angina, and a mean age of 80 years, 140 received angiography with a view to revascularisation, and 142 received medical treatment. Among invasive therapy patients, readmission with revascularisation was much less likely (10% v 46%; hazard ratio 0.19, 95% CI 0.11 to 0.32, p < 0.001). However, one year mortality (11.1% for invasive, 8.1% for medical; p = 0.28) and death or non-fatal myocardial infarction rates [17.0% for invasive, 19.6% for medical; p = 0.71] were not significantly different. Overall major adverse cardiac event rates were higher for medical patients after 12 months (p < 0.001) [25.5% v 64.2% for intervention], but quality of life was the same in both groups.


General cardiology

Three minutes of CPR pre-shock in out-of-hospital VF arrests may improve outcomes ▶ In a randomised trial of 200 patients presenting with ventricular fibrillation (VF) to casualty, there was no difference between standard group (DC shock first) versus patients receiving three minutes of cardiopulmonary resuscitation (CPR) and then DC cardioversion. However, for patients with response intervals [arrest to arrival of ambulance] of longer than five minutes, more patients achieved an output in the CPR first group compared with the standard group (58% v 38%; odds ratio [OR] 2.22, 95% CI 1.06 to 4.63; p = 0.04); survival to hospital discharge [22% v 4%; OR 7.42, 95% CI 1.61 to 34.3; p = 0.006]; and one year survival [20% v 4%; OR 6.76, 95% CI 1.42 to 31.4; p = 0.01]. Thirty three (89%) of 37 patients who survived to hospital discharge had no or minor reductions in neurological status with no difference between the groups.


Troponin may have a role in assessing CV risk in renal failure patients ▶ The annual mortality in haemodialysis patients is 23%, mainly from cardiovascular events. A total of 137 patients on chronic dialysis were enrolled for baseline troponin I (raised > 1 ng/ml) and followed for 15 months. Patients with a history of acute coronary syndrome (within 30 days) were excluded. Of the 137, 10 patients (7%) had a raised troponin I value at baseline. At 15 months, four of the 10 patients had died compared with 12% of those with normal values (hazard ratio 9.6, 95% CI 2.8 to 33; p < 0.01). This persisted after multivariate analysis. The reason for the rise was not clear.


ICDs save lives ▶ Eight trials were included in the analysis (4909 patients, 1154 deaths). Compared with usual care (most commonly amiodarone treatment), regardless of baseline risk, implantable cardioverter-defibrillators [ICDs] were equally efficacious in preventing sudden cardiac death in both secondary prevention [relative risk [RR] 0.50, 95% CI 0.38 to 0.66] and primary prevention in higher risk groups [RR 0.37, 95% CI 0.27 to 0.50]. Results of MADIT-II suggest any previous acute MI puts you in the latter category. As for statins, who you treat depends on what you can afford as a health service.

**Lipid lowering with statins reduces stroke risk** The role of statins in coronary heart disease risk reduction is certain, but an effect on stroke reduction was less convincing. A meta-analysis (38 trials, 83,161 patients, mean follow up of 4.7 years) shows a significant relative risk reduction (RRR) of strokes by lipid lowering of 17% (p < 0.001), without significant heterogeneity between trials and between subgroups according to either the type of prevention (primary or secondary) or the type of lipid lowering treatment. The most substantial effects were obtained, however, with statins (RRR 26%).

**Images in Cardiology**

Transoesophageal echocardiography of a large tricuspid valve vegetation: a perfect image of reality

A 33 year old man had Wilson’s disease. One month after a successful, second liver transplant he developed a fever. He was being treated with steroids and immunosuppressive drugs. A subclavian central line had been removed two weeks previously. Multiple blood cultures grew methicillin sensitive *Staphylococcus aureus*. Vancomycin and gentamicin treatment was started. Transoesophageal echocardiography showed a large mobile mass (22 × 13 mm diameter) attached to the atrial surface of the anterior leaflet of the tricuspid valve (left hand panel). Open heart surgery was performed. The elongated friable vegetation, attached to the tricuspid valve (right hand panel), was excised. The valve defect was repaired with a pericardial patch. Pathological examination of the vegetation showed extensive infiltration with *S aureus*. The patient made an uneventful recovery. Follow up echocardiography demonstrated normal valve motion and minimal tricuspid regurgitation.

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