Ischaemic heart disease

Folat as a way to reduce in-stent restenosis ▶ Plasma homocysteine has been recognised as an important cardiovascular risk factor. Several groups have found a link between homocysteine concentrations and angiographic restenosis within stents. A trial of 529 patients assigned to lowering of homocysteine with 812 mg/day folate (400 µg/day), folic acid (5 mg/day), and pyridoxine (10 mg/day) versus placebo suggests benefit at one year. The combined end point of death/myocardial infarction/repeat revascularisation showed a relative risk (RR) of 0.68 on treatment (15.4% v 22.8%; p = 0.03), primarily caused by a reduced rate of target lesion revascularisation (9.9% v 16.0%, RR 0.62, 95% confidence interval [CI] 0.40 to 0.97; p = 0.03).


CABG or PTCA for isolated proximal LAD lesions? ▶ With improvements in technology, coronary angioplasty (PTCA) can be safely done in many cases which would previously have required surgery. Minimally invasive left internal mammary artery (LIMA) grafting (MIBCAB) has also reduced the risks of coronary artery bypass grafting (CABG). In 220 patients randomised to either PTCA and stenting, or MIBCAB, the surprising fact was the rate of death/myocardial infarction/revascularisation at six months was as high as 15% in the surgery group. This was better than the 31% in the PTCA group (p = 0.02). High restenosis rates after stenting (20% v 8%, p = 0.003) were the problem; rates of death and myocardial infarction did not differ significantly between groups (3% in the stenting group and 6% in the surgery group, p = 0.50). The percentage of patients free from angina after six months was 79% in the surgery group, as compared with 62% in the stenting group (p = 0.03). However, this could also be interpreted to mean that nearly two thirds of patients could safely avoid CABG. The choice is personal, but drug eluting stents may shift the balance towards PTCA in the future.


Absciximab and tirofiban are equivalent in non-diabetic patients ▶ Independently shown to reduce major adverse event rates after PTCA and stenting, the TARGET trial is the only head-to-head comparison of tirofiban and abciximab. A total of 4809 patients undergoing elective or urgent stent implantation were randomly assigned a bolus and infusion of tirofiban or abciximab. Event rates at 30 days favoured abciximab, but at six months, the composite end point of death, myocardial infarction, and target vessel revascularisation occurred in 356 (14.8%) patients who received tirofiban and 345 (14.3%) patients who received abciximab (hazard ratio 1.04, 95% CI 0.90 to 1.21; p = 0.591). There were no differences in any individual end points, including restenosis. Data in diabetic patients is still much stronger for abciximab, however.


Perhaps statins are not as well tolerated as we think ▶ There were 22,379 patients in the acute coronary syndrome (ACS) cohort, 36,106 in the chronic coronary artery disease (CAD) cohort, and 85,020 in the primary prevention cohort over 66 years of age who had been prescribed statins at least once. Two year adherence rates in the cohorts were only 40.1% for ACS, 36.1% for chronic CAD, and 25.4% for primary prevention. Two possible explanations are that the physicians were not continuing prescription through lack of belief in long term benefits, or the drugs are not well tolerated by the elderly. Patients with ACS appeared more likely to continue than others.


Heart failure

Obesity doubles the risk of heart failure ▶ Among 5881 participants in the Framingham heart study (mean age 55 years, 54% women), 496 developed heart failure. After adjustment for established risk factors, there was an increase in the risk of heart failure (5% for men and 7% for women) for each increment of 1 in body mass index. As compared with subjects with a normal body mass index, obese subjects had a doubling of the risk of heart failure.


Iron overload as detected by MRI decreases with oral iron chelation ▶ Despite the introduction of the parenteral iron chelator deferoxamine more than 30 years ago, 50% of patients with thalassaemia major die before the age of 35 years, predominantly from iron induced heart failure. The only alternative treatment is oral deferoxiprone, but its long term efficacy on myocardial iron concentrations is unknown. Myocardial iron content and cardiac function was assessed in 15 patients receiving long term deferoxiprone treatment with 30 matched thalassaemia major controls who were on long term treatment with deferoxamine. Myocardial iron concentrations were measured by a new magnetic resonance T2* technique, which shows values inversely related to tissue iron concentration. The deferoxipronaegroup had significantly less myocardial iron (p = 0.02) and higher ejection fractions (mean [SD] 70 [5.5]% v 63 [6.9]%, p = 0.004) than the deferoxamine controls.


General cardiology

Inhaled iloprost has some benefit in pulmonary hypertension ▶ Intravenous iloprost is known to reduce mortality in primary pulmonary hypertension. In this study, repeated daily participants in at 2.5 or 5.0 µg of iloprost (six or nine times per day; median inhaled dose, 30 µg per day) were compared with inactivation of placebo. A total of 203 patients with severe pulmonary arterial hypertension (New York Heart Association (NYHA) functional class III or IV) were included. Clinical criteria of improvement were present in 16.8% of the patients receiving iloprost, as compared with 4.9% of the patients receiving placebo (p = 0.007). NYHA class (p = 0.03), dyspnoea (p = 0.015), and quality of life (p = 0.026) also improved. No mortality reduction was seen.


www.heartjnl.com
Large intracoronary thrombi with good TIMI flow during acute myocardial infarction: four cases of successful aggressive medical management in patients without angiographically detectable coronary atherosclerosis

F Burziotta, M Hamon, R Sabatier, F Prati, A Boccanelli, G Grollier

Four cases of young patients with acute myocardial infarction are discussed in which urgent angiography showed large intracoronary thrombus and TIMI (thrombolysis in myocardial infarction) flow ≥ 2 in the infarct related artery. The rest of the coronary tree appeared to be free of detectable atherosclerosis. Percutaneous transluminal coronary angioplasty was not performed and an aggressive antiplatelet/anticoagulant treatment was administered (acetylsalicylic acid, clopidogrel, abiximab, and heparin). In all cases early angiographic control (1–12 days after AMI) showed disappearance of thrombus, no significant residual stenosis, and normal flow. No deterioration of left ventricular function was observed and the clinical course both in hospital and at five months' follow up was uneventful.

(Heart 2002;88:e6) www.heartjnl.com/cgi/content/full/88/5/e6

Rub rather than wash ► We are poor at handwashing between patients when in outpatient. This trial compared the efficacy of handrubbing with an alcohol based solution versus conventional handwashing with antiseptic soap in reducing hand contamination during routine patient care. Bacterial counts were taken from handprints after cleaning. With handrubbing the median percentage reduction in bacterial contamination was significantly higher than with handwashing (83% v 58%, p = 0.012), with a median difference in the percentage reduction of 26% (95% CI 8% to 44%). The median duration of hand hygiene was 30 seconds in each group.

Rub rather than scrub ► The correct way to clean your hands before putting on sterile gloves has always been to scrub with iodine or chlorhexidine solutions. Surgical services used two hand cleansing methods alternately every other month: a handrubbing protocol with 75% aqueous alcoholic solution containing propanol-1, propanol-2, and mecteronium ethylsulfate; and a handscrubbing protocol with antiseptic preparation containing 4% povidone iodine or 4% chlorhexidine gluconate. Surgical site infection rates at 30 days were 55 of 2252 (2.44%) in the handrubbing protocol and 53 of 2135 (2.48%) in the handscrubbing protocol (p = ns). Compliance with the recommended duration of hand antisepsis was better in the handrubbing protocol of the study compared with the handscrubbing protocol (44% v 28%, respectively; p = 0.008), as was tolerance, with less skin dryness and less skin irritation after aqueous solution use.

The correct way to clean your hands before putting on sterile gloves has always been to scrub with iodine or chlorhexidine solutions. Surgical services used two hand cleansing methods alternately every other month: a handrubbing protocol with 75% aqueous alcoholic solution containing propanol-1, propanol-2, and mecteronium ethylsulfate; and a handscrubbing protocol with antiseptic preparation containing 4% povidone iodine or 4% chlorhexidine gluconate. Surgical site infection rates at 30 days were 55 of 2252 (2.44%) in the handrubbing protocol and 53 of 2135 (2.48%) in the handscrubbing protocol (p = ns). Compliance with the recommended duration of hand antisepsis was better in the handrubbing protocol of the study compared with the handscrubbing protocol (44% v 28%, respectively; p = 0.008), as was tolerance, with less skin dryness and less skin irritation after aqueous solution use.

Rub rather than scrub ► The correct way to clean your hands before putting on sterile gloves has always been to scrub with iodine or chlorhexidine solutions. Surgical services used two hand cleansing methods alternately every other month: a handrubbing protocol with 75% aqueous alcoholic solution containing propanol-1, propanol-2, and mecteronium ethylsulfate; and a handscrubbing protocol with antiseptic preparation containing 4% povidone iodine or 4% chlorhexidine gluconate. Surgical site infection rates at 30 days were 55 of 2252 (2.44%) in the handrubbing protocol and 53 of 2135 (2.48%) in the handscrubbing protocol (p = ns). Compliance with the recommended duration of hand antisepsis was better in the handrubbing protocol of the study compared with the handscrubbing protocol (44% v 28%, respectively; p = 0.008), as was tolerance, with less skin dryness and less skin irritation after aqueous solution use.


