Short cuts

What's new in the other general journals

Many patients with cardiogenic shock after heart attack miss out on early revascularisation

REVASCUARISATION RATES IN PATIENTS WITH CARDIOGENIC SHOCK

The American College of Cardiology and the American Heart Association both recommend early mechanical revascularisation (usually percutaneous) for people aged less than 75 who develop cardiogenic shock after a heart attack. But about half of eligible patients in the United States were still missing out five years after the recommendations were published. A study based on data from a national register of patients with heart attack shows that in 2004, only 54.4% of patients with heart attack and cardiogenic shock had a percutaneous coronary intervention, although a further 3.2% had an immediate coronary artery bypass operation.

The National Registry of Myocardial Infarction, which is sponsored by the drugs industry, includes 293 633 US patients who had a heart attack with ST segment elevation between 1995 and 2004 and who presented to a hospital with revascularisation capability. Of these patients, 8.6% (25 311) had cardiogenic shock or developed it during their admission. Although their chances of percutaneous revascularisation have increased steadily from the 27.4% recorded in 1995, the recommendations had no measurable impact on the upward trend when they were published in 1999.

Although these high risk patients are less likely to die of cardiogenic shock now than they were 10 years ago (47.9% *v* 60.3%),

these data show there is still plenty of room for improvement. In this study, as in others, better survival was clearly and independently associated with early revascularisation.

JAMA 2005;294:448-54

Pesticide poisoning still a problem in US schools

Between 1998 and 2002, 2593 children and adults become ill after exposure to pesticides in and around US schools. That's an incidence of 7.4 per million schoolchildren and 27.3 per million adult employees. Most of the illnesses were mild (2315, 89%), but 275 people (11%) were ill enough to need treatment, and in three people (0.1%) the illness was life threatening. Two thirds of the reported cases were from exposure to insecticides or disinfectants. The commonest symptoms were cough, shortness of breath, nausea and vomiting, headache, and sore eyes.

The researchers, who compiled these data by trawling through three national surveillance databases, say the overall incidence of pesticide poisoning in schools looks fairly low, but it is likely to be an underestimate because of patchy ascertainment by surveillance and the frequent under-reporting of mild symptoms. The incidence of poisoning in children increased from 5.6 to 7.4 cases per million between 1998 and 2002 ($P < 0.001$), possibly because suburban sprawl is taking schools deeper into farmland, where crop spraying can drift into schools. Data from two of the surveillance systems suggest that 40% of poisoned children were exposed this way. The rest were poisoned by pesticides, including disinfectants, used in school grounds and buildings.

JAMA 2005;294:455-65

Hypertension is almost unavoidable if you live long enough

Compared with younger age groups, adults aged more than 80 are more likely to be hypertensive, and less likely to be adequately treated, according to the latest study of 5296 people from the Framingham cohort. Treatment of elderly women is particularly ineffective, achieving adequate control of blood pressure in only 23% of hypertensive women aged over 80. The link between blood pressure and risk of serious cardiovascular events remains as strong as ever in older people, starting at 9.5% for those with normal blood pressure and rising

to 24.7% for anyone taking antihypertensive drugs or with an untreated systolic blood pressure ≥ 160 mm Hg (hazard ratio compared with normal blood pressure 2.4; 95% confidence interval 1.2 to 4.6).

Hypertension is unavoidable for most people living beyond 80. Fewer than one in 10 (6.9%) of the oldest Framingham participants had normal blood pressure. Three quarters of those aged over 80 were already hypertensive (74%), and the rest (19.1%) were getting there, with systolic blood pressure of 120-129 mm Hg or diastolic blood pressure 80-89 mm Hg.

Since people over 80 are the fastest growing age group in the US, the authors of this analysis call for urgent research into the best and safest way to treat them, because doing so would prevent a substantial number of heart attacks, strokes, and other cardiovascular events.

JAMA 2005;294:466-72

β blockers reduce mortality in high risk patients having major surgery

β blockers are often prescribed to help prevent perioperative myocardial infarction in patients having major surgery, despite mixed results from randomised trials. Larger, more definitive trials are on the way, but, to inform practice in the meantime, researchers analysed data from a retrospective cohort of 782 969 patients who had had major non-cardiac surgery in 329 US hospitals during 2000-1.

Of the 663 635 patients without contraindications to the drugs, 122 338

(18%) had prophylactic β blockers. When patients were stratified according to their preoperative cardiac risk, high risk patients who were given β blockers had a significantly lower mortality in hospital than those who weren't. The researchers scored patients' cardiac risk, giving one point each for ischaemic heart disease, cerebrovascular disease, poor renal function, diabetes, and high risk surgery. Patients scoring 3-5 had significantly reduced mortality risk with prophylactic β blockers, and those scoring ≥ 4 showed the greatest benefit (odds ratio 0.57, 0.42 to 0.76).

A retrospective look at data collected for insurance claims can never be conclusive, but the authors think it's enough to justify doctors prescribing β blockers to high risk patients before they have major non-cardiac surgery. Patients without cardiac risk factors should probably wait for better evidence. That is also the message of the systematic review in this week's *BMJ* (p 313).

New England Journal of Medicine
2005;353:349-61

Female genital mutilation linked to infertility in Sudanese women

Severe forms of female genital mutilation have been linked to primary infertility, in a case-control study from Sudan. The authors, who found that infertile women were over four times more likely to have had severe mutilation than matched fertile controls, say that their findings are new and important ammunition against this traditional cultural practice.

Female genital mutilation is part of the social fabric in more than 30 countries worldwide, but future fertility for girls is an equally important part of that fabric. If confirmed, these findings should help turn traditional communities away from genital mutilation and accelerate a cultural change that is already under way.

The 99 infertile women in this study were matched with 180 fertile controls from a hospital antenatal clinic. Almost all study participants had had some kind of female genital mutilation at around the age of 7 years. The most severe form, including the labia majora, was significantly more common among infertile women (odds ratio 4.69, 95% confidence interval 1.49 to 19.7), although no link was found between fertility and vulval stitching or closure. Forty eight of the 99 infertile women had tubal damage, which implies that ascending infection from the site of the mutilation could be to blame.

Lancet 2005;366:385-91

Girls stop exercising and get fat during adolescence

Girls' body mass index rises sharply during and after adolescence. This is partly because of an increase in lean body mass, including bone, but also because

adolescent girls get fat. In a longitudinal study of 2287 US girls, skinfold thickness of the upper arm increased substantially between the ages of 9 and 19. Modest changes in the girls' diet could not explain the weight gain, which was mirrored by a precipitous drop in the amount of exercise they did outside school. The least active girls at age 9 or 10—those doing the exercise equivalent of less than 75 minutes of brisk walking each week—were doing almost no exercise by the age of 16, and they stayed that way until the end of the study three years later.

Although body mass index went up across the whole cohort, it rose more slowly in the most active girls, who were doing the equivalent of about two and a half hours' brisk walking each week. The difference in body mass index between active and inactive girls trebled during the 10 years of study. The authors estimate that if all young girls were even moderately active, they would put on between 4 and 9 kg less body weight while they were growing up, and enjoy the health dividend associated with a slimmer adulthood.

Lancet 2005;366:301-7

Inpatients with stroke are more likely to have left sided than right sided cerebral pathology

Between 1997 and 2002, more than 20 000 German adults were admitted to hospital with a stroke or transient ischaemic attack, according to an analysis of data from a national stroke register. Fifty six per cent of them (11 328) had damage to the left cerebral hemisphere, and only 44% (8769) had damage to the right hemisphere, an important difference that the researchers think is caused by an imbalance in admissions, not an imbalance in the pathology of stroke. The symptoms of left sided ischaemia include aphasia and paralysis of the right arm, both of which are hard to miss. The symptoms of right sided

ischaemia, such as neglect of the affected side, are more subtle and potentially harder to recognise. This could mean fewer admissions to hospital for patients with right sided ischaemia.

Further analyses of the same data support this theory; the gap between left and right increased with patients' age and was most marked among patients with mild or moderate symptoms, especially those with transient ischaemic attack. The difference was not evident at all among patients with intracerebral haemorrhage, who tend to have severe symptoms. Most importantly, patients with left sided ischaemia were more likely to be admitted in time for thrombolysis (within three hours). Fifty eight per cent of patients who had thrombolysis had left sided pathology.

Lancet 2005;366:392-3

Echinacea does not work against the common cold

Echinacea is a popular herbal remedy for colds. As with many other popular herbal remedies, evaluation has been patchy and inconclusive. A carefully controlled and double blinded experiment now provides the strongest evidence so far that *Echinacea* does not work, thanks to 399 volunteers who agreed to be inoculated with rhinovirus type 39.

For seven days before the inoculation and five days afterwards, the young adult volunteers took one of three well defined formulations of *Echinacea* or a placebo. Treatment was randomly allocated. Altogether 349 of the volunteers caught a cold. Compared with placebo, none of the formulations prevented infection, relieved symptoms, or speeded up recovery. The volunteers were isolated in hotel rooms throughout the experiment, where they completed questionnaires of symptoms twice a day and had a nasal lavage every morning. Their nasal secretions were weighed and analysed for viruses, leucocytes, and inflammatory markers. The volunteers came back three weeks after the experiment to have blood taken to measure their serum concentrations of neutralising antibody to the rhinovirus.

The *Echinacea* preparations, which were isolated from the species *Echinacea angustifolia*, had no impact on any measure of infection including viral titres or inflammatory markers in nasal secretions. They contained different proportions of the alkaloids, polysaccharides, and caffeic acid derivatives thought to be active in *Echinacea* products available on the high street. These products are likely to be equally ineffective.

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