Short cuts

What's new in the other general journals

Medical students are naive about drug companies

A survey of more than 1000 medical students from across the United States has shown that they are a soft target for drug companies. Respondents from eight medical schools received an average of one gift or sponsored event each week. Almost all the students had eaten sponsored lunches and accepted pens or coffee mugs from drug representatives. More than four fifths (690/798, 86%) had also attended sponsored grand rounds, and about half had accepted gifts of textbooks. Four fifths of the students (all third years) believed that they were entitled to gifts from drug companies, and 69% (556/808) said that gifts and other direct marketing would not influence their practice.

The authors say that the survey, with an overall response rate of 72%, shows that US medical students are not as sceptical as they should be about the marketing tactics of drug companies. Seven in 10 respondents believed that drug company materials were a good way to learn about new drugs, and nine in 10 described sponsored grand rounds as helpful and educational.

JAMA 2005;294:1034-42

On-call fatigue has similar effects to inebriation

After three or four standard alcoholic drinks most adults become uninhibited and overconfident. Their attention wanders and their judgment becomes unreliable, along with their driving. A heavy on-call rota does much the same thing.

US researchers paid 34 young paediatric residents \$400 to complete a

series of performance tests after four weeks of light on-call duty and after four weeks of heavy duty. The residents also did the same tests after enough vodka and tonic (with lime) to bring their blood alcohol concentrations to 0.04-0.05 mg/100 ml.

Compared with light duties, the heavy rota (90 hours a week and one in four or five on-call) significantly reduced the residents' ability to drive a simulator and their performance in tests of vigilance and sustained attention. The residents' performance after a month of heavy duties was statistically indistinguishable from their performance after several vodkas and tonics. Reaction times and attention impairment were about the same, and drinking or heavy duties made the residents equally as likely to swerve off the road or crash. Keeping to a steady speed seemed particularly difficult for tired but sober residents. Their speed variability was 30% better when well rested but drunk.

JAMA 2005;294:1025-33

Online education works as well as live workshops

Online continuing medical education (CME) is better than nothing at keeping doctors up to date. But how does this increasingly popular format compare with more traditional live CME? In a recent randomised trial, primary care doctors learnt as much from an internet based package as they did from a small group workshop. Doctors in both groups were more knowledgeable after their teaching and kept their new knowledge for at least 12 weeks. But only doctors who had training online got better at treating patients.

The trial, sponsored by AstraZeneca, included 97 primary care doctors practising in and around Houston, Texas. The two educational formats had similar but not identical content based on the latest guidelines from the National Institutes of Health on screening and treatment of high

serum cholesterol in adults. Researchers assessed the impact of online CME using knowledge tests and before and after the intervention as well as a review of patient notes to assess practice. Doctors who used the internet materials were more likely than doctors who had live CME to treat their patients appropriately afterwards, although the improvement was modest because they were treating most of their patients appropriately to start with (85% before intervention; 90% after intervention; $P = 0.04$).

JAMA 2005;294:1043-51

Tiotropium has modest benefits for men with COPD

Tiotropium is a new anticholinergic bronchodilator. It lasts longer than other inhaled anticholinergics, such as ipratropium bromide, so patients can use their inhaler just once a day. Previous trials show that tiotropium can improve lung function in people with chronic obstructive lung disease (COPD). This latest clinical trial now reports that better lung function corresponds to a 14% reduction compared with placebo in the risk of a serious exacerbation for these patients.

Overall, 1829 Americans with moderate or severe disease took part in this randomised trial, which was paid for (and analysed) by Boehringer Ingelheim, the manufacturers of tiotropium. The participants, almost all men, took tiotropium or a placebo once a day for six months. In this time, 28% of the tiotropium group and 32% of the placebo group had at least one serious exacerbation ($P = 0.037$). People who took tiotropium stayed well for longer before their first exacerbation (hazard ratio 0.83, 95% CI 0.70 to 0.98). About 2% of the patients in each group died.

Tiotropium's effects were modest in this study, but they do confirm the indication from previous trials that tiotropium can generate discernible clinical benefits as well as improve the results of tests of lung function.

Annals of Internal Medicine 2005;143:317-26

Amiodarone reduces risk of arrhythmias and stroke after heart surgery

Up to 60% of patients have atrial fibrillation or atrial flutter after open heart surgery.

Both tachyarrhythmias increase the risks of stroke and heart attack, prolong hospital stay, and increase costs. Perioperative β blockers are an established and effective prophylactic, but the place of amiodarone hydrochloride is much less clear. Most of the many trials that have been done are too small to assess the clinical outcomes that matter.

After combining 10 trials in a meta-analysis the authors are now fairly sure that, compared with placebo, perioperative amiodarone can protect against atrial arrhythmias (relative risk 0.64, 95% CI 0.55 to 0.75) and ventricular arrhythmias (0.42, 0.28 to 0.63), reduce the risk of stroke (0.39, 0.21 to 0.76), and help to get patients back home a little faster after heart surgery. Amiodarone had no effect on the risk of heart attack or death in this meta-analysis, but the data on these outcomes were too poor to be conclusive.

The authors still do not know how amiodarone works in patients already receiving standard prophylaxis with β blockers. β blockade was patchy and inconsistent in these trials, some of which were done more than 10 years ago.

Annals of Internal Medicine
2005;143:327-36

Coiling is better than clipping for certain intracranial aneurysms

Three years ago, researchers from the United Kingdom and elsewhere in Europe published a landmark trial comparing surgical clipping with endovascular coiling for patients with a ruptured intracranial aneurysm. A clear result in favour of endovascular coiling stopped the trial early and forced the researchers to publish before all the data were available. A complete update now confirms the early findings: patients are less likely to be dead or disabled one year after coiling than one year after surgical clipping (250/1063 (24%) v 326/1055 (31%); $P=0.0001$).

The original trial included a generous 2143 patients, some of whom have been followed up for seven years. The benefits seem to persist and correspond to 74

patients avoiding death or dependency for every 1000 patients treated.

So should endovascular coiling be offered to everyone with a ruptured intracranial aneurysm? No, says an accompanying editorial (pp 783-5). The patients in this trial were a highly select group with aneurysms that were suitable for either treatment. To find them, researchers had to assess almost 10 000 patients. In all, 78% of potential participants were excluded, mostly because their aneurysms were not fit for coiling. Even among the lucky minority with the right kind of disease, the survival advantage was offset (though only slightly) by a higher risk of late rebleeding.

Lancet 2005;366:809-17

Gabapentin relieves hot flushes in women with breast cancer

FREQUENCY AND SEVERITY OF HOT FLUSHES

Gabapentin is an effective alternative to hormone replacement therapy for women who experience hot flushes after systemic treatment for breast cancer, a randomised trial has found. Researchers tested two doses of the drug against placebo in 420 women with breast cancer who were having two or more hot flushes a day. The highest dose (900 mg a day) worked best, reducing the frequency of hot flushes by 26% and the severity by 30%, relative to placebo. The effects of 300 mg of gabapentin were statistically no different from placebo. Women took their assigned treatment for eight weeks and recorded their symptoms

in a diary for one week before treatment began then during weeks four and eight of the study. Ten women taking the higher dose of gabapentin withdrew from the study because of side effects as did six women in each of the other groups. Tiredness was the commonest symptom.

A handful of non-hormonal treatments for hot flushes are already available, including clonidine hydrochloride and the antidepressants fluoxetine, paroxetine, and venlafaxine. The authors of this study say that gabapentin, an analogue of γ -aminobutyric acid more commonly used as an antiepileptic, should be added to the list. Hopefully, someone will then compare them all in head to head trials.

Lancet 2005;366:818-24

US would benefit from financing better treatment programmes for tuberculosis in Mexico

The United States should pay for bigger and better tuberculosis treatment programmes in Mexico, Haiti, and the Dominican Republic, say researchers—not because of any humanitarian imperative but because it would eventually save the US government a lot of money.

Most new cases of tuberculosis in the US now occur in recently infected migrants from neighbouring developing countries. Using decision analysis, researchers compared three options to reduce the burden of tuberculosis in incoming migrants—screen all legal migrants with a chest radiograph (the current policy), add a tuberculin test, or pay for extra treatment programmes in the migrants' country of origin. The third option was the most cost effective. Paying for an expanded programme of directly observed treatment (DOTS) in Mexico alone would prevent 2591 new cases of tuberculosis among migrants to the US, save 349 lives, and give the US government a health dividend of \$108m over the next 20 years. This enlightened self interest, if extended to Haiti and the Dominican Republic, would save a further \$20m and prevent 590 more cases of tuberculosis in the US, again over 20 years.

The findings of all decision analyses depend on a series of more or less robust assumptions. The weakest link in this one is the assumption that an expanded DOTS programme would reduce the incidence of tuberculosis in Mexico by 6% a year. A linked editorial (pp 1057-9) thinks this is optimistic and that the savings could be somewhat lower, but still a worthwhile return on the initial investment of nearly \$35m.

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