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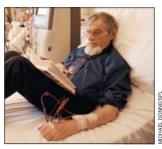
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This week in the BMJ

Is screening for chronic kidney disease cost effective?



Screening for chronic renal disease would be an effective case detection strategy in people over 55 and those with diabetes or hypertension (number needed to screen 8.7. 95% confidence interval 8.5 to 9.0) say Hallen and colleagues (p 1047). In their eight year follow-up of a Norwegian national cross sectional health survey, relatively few people developed end stage renal disease after kidney disease was detected, and substantially more died from cardiovascular disease. Further research is needed to establish whether such screening is cost effective.

Physical activity does not alter children's BMI



A physical activity intervention designed to prevent obesity in children did not alter body mass index or sedentary behaviour, according to Reilley and colleagues (p 1041). The

authors randomised 545 preschool children either to follow an exercise programme at nursery and at home or to no extra activity. Follow-up at six and 12 months showed that the exercise programme improved children's motor skills, which may affect future participation in sport, but had little effect on obesity in the short term.

Baseline serum albumin concentrations do not affect resuscitation outcomes



Fluid resuscitation with saline or albumin produces similar outcomes regardless of patients' baseline serum albumin concentrations say the SAFE study investigators in their randomised controlled trial of 6045 patients across 16 intensive care units (p 1044). They randomised 2451 patients with baseline albumin concentrations of 25 g/l or less and 3594 with values greater than 25 g/l to receive either saline or albumin during resuscitation. Rates of admission to intensive care and renal replacement therapy, and length of mechanical ventilation and hospital stay did not differ between groups.

Prenatal genetic testing for parents who won't terminate

Parents who intend to continue with the pregnancy



but nevertheless request antenatal genetic testing raise difficult issues for clinicians. In an ethical debate (p 1066) two authors take opposing stances on prenatal testing for Huntington's disease—an untreatable condition with adult onset-if parents have decided against a termination. One author argues for testing to spare parents and child from uncertainty, whereas the other argues against testing so that parents are spared the responsibility of deciding when to tell the child.

Religion provides insight into how doctors interpret evidence



Individual interpretations of evidence based medicine can be traced to the reader's "world view" says Links (p 1068). The author draws a comparison between evidence based medicine and religious faith, and describes a spectrum of world views from fundamentalist to conservative and liberal. Where religious belief requires tolerance, debates on evidence must allow for differing world views and recognise limitations of evidence based medicine, specifically when considering evidence not derived from randomised controlled trials.

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Smaller atraumatic needles are probably best for diagnostic lumbar punctures

Research question What is the best way to do a diagnostic lumbar puncture?

Answer Use a small gauge atraumatic needle and replace the stylet before removal

Why did the authors do the study? To determine the best way of doing a lumbar puncture safely in adults suspected to have meningitis and to assess the accuracy of commonly used analyses of cerebrospinal fluid.

What did they do? They searched systematically through the Cochrane Library, Medline, and Embase for randomised trials in any language evaluating different techniques for diagnostic lumbar puncture. The authors did a similar search for studies of cerebrospinal fluid analysis for diagnosing bacterial meningitis in adults. Two people independently selected studies for inclusion in the review using prespecified quality criteria. Differences were resolved by consensus.

What did they find? They found 15 randomised trials evaluating different lumbar puncture techniques. Pooled data from five trials in 587 patients suggested that atraumatic needles helped reduce the incidence of headache after a lumbar puncture, although the difference was not significant (absolute risk reduction with an atraumatic needle 12.3%, 95% CI -1.72% to 26.2%; odds ratio 0.46, 0.19 to 1.07). One trial in 600 patients reported a lower risk of headache if the operator reinserted the stylet before removing the atraumatic needle (ARR 11%, 6.5% to 16%), and one trial in 100 patients reported that a 26 gauge standard needle caused significantly fewer headaches than a 22 gauge standard needle (ARR 26%, 11% to 40%).

The pooled results from four trials comparing bed rest with immediate mobilisation were inconclusive (odds ratio for headache after immediate mobilisation 0.84, 0.6 to 1.16).

Gram staining is an accurate way of ruling in, but not ruling out, bacterial meningitis according to three studies, the biggest of which (n = 2635) reported a likelihood ratio of 737 (230 to 2295) for a positive result. Other results that make the diagnosis more likely include a white blood cell count $\geq 500~\mu/l$ (one study: 15, 10 to 22), a ratio ≤ 0.4 between glucose concentrations in the cerebrospinal fluid and blood (two studies: 18, 12 to 27); and a lactate concentration $\geq 3.5~\text{mmol/l}$ in the cerebrospinal fluid (three studies: 21, 13 to 35). For all three tests, the likelihood ratios for a negative result were between 0.1 and 0.3.

What does it mean? The evidence suggests that the best way to prevent headaches is to use a smaller gauge atraumatic needle and reinsert the stylet before you remove it. Patients probably don't need bed rest afterwards, although this remains to be confirmed. The best position for the patient is still unclear, and few studies looked at other outcomes such as number of failed attempts. The authors found no studies on the potentially important effect of operator experience.

Biochemical tests on cerebrospinal fluid are more useful when the results are positive than when they are negative but are unlikely to be used in isolation in the real world. A likelihood ratio of 21 for example, means that patients with bacterial meningitis are 21 times more likely to have a lactate concentration \geq 3.5 mmol/1 than patients without bacterial meningitis.

Straus SE et al. How do I perform a lumbar puncture and analyze the results to diagnose bacterial meningitis? JAMA 2006;296:2012-22

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Editor's choice

Hands across the ocean

Two of the world's greatest nations, both of which have serious image problems, last week achieved milestones that raise new hopes for a better, more open and equitable world. After a heated campaign, China's Dr Margaret Chan has won the contest to become WHO's next director general. As Anne Glusker reports (p 1040), optimists see this as a chance for China to become more engaged in the war against infectious disease. But much will depend on Chan's willingness to challenge the secrecy of China's political regime.

The United States is also set to undergo a transformation after last week's Democratic party victory in the mid-term elections. Janice Hopkins Tanne describes how this has already reinvigorated the debate about universal health care, liberalisation of abortion, and stem cell research (p 1039).

The fact that the BMJ celebrates these changes is evidence of its liberal world view, but we hope never to forget that liberalism is just one view among many. Matthew Links (p 1068) delineates the spectrum of approaches to interpreting medical literature and draws parallels with religious belief systems from fundamentalists, who take a strict and literal view and tend to undervalue non-randomised evidence; through conservatives, who seek clarity and well defined rules about which evidence to include; to liberals, who believe that the totality of evidence, including non-randomised data, should be taken into account. He then risks falling into the trap that all liberals fall into from time to time—preaching tolerance (saying that debates on evidence need to acknowledge the validity of alternative world views) without seeing that he is preaching liberalism. Tolerance is something that fundamentalists won't tolerate, by definition.

On a more trivial note, I suggested in my Editor's Choice on 2 September that there might be a network of readings of George Bernard Shaw's *The Doctor's Dilemma* on 20 November, building on Muir Gray's idea that we should mark the centenary of its first performance in 1906. One respondent in Italy said he might put on a reading in his clinic, and in London we got busy pulling together an all star medical cast for a reading at the Royal College of Physicians. We have a script edited by Michael O'Donnell, former editor of *World Medicine*, who also plays the part of Shaw, and we look forward to a good evening this Monday at 7 30 pm in aid of Médecins Sans Frontières. (A few tickets are still available; see bmj.com).

Now I've just heard from Anne Hudson Jones that there will definitely be one other reading on that day—at the Strand Theatre in Galveston, Texas, performed by faculty and students of the John P McGovern Academy of Oslerian Medicine and the Institute for the Medical Humanities (see bmj.com). Stephen Lock, former editor of the *BMJ*, has emailed to ask if anyone can find a medical excuse to do the same for Monteverdi's *Orfeo*, premiered in Mantua on 23 February 1607. Over to you.

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