LETTERS

Conflicting advice

Concerning use of conjugate pneumococcal vaccine, the most recent CMO letter sent out in August 2002, updates the recommendations issued by the Department of Health (DoH) in January 2002 by making the recommendations for “at risk” under 2 year old children coincide with the manufacturer’s recommendations for immunisation of normally healthy children. In particular, the DoH advice does not draw any distinction between different risk groups, whereas our advice is to give extra doses to children with hyposplenism and various forms of immunocompromise. The DoH does not, at present, advocate use of the conjugate vaccine in any children over the age of two, whereas we do, conscious that many experts feel that there are good theoretical reasons to use the conjugate vaccine in this way (just as conjugate meningococcal C vaccine has replaced polysaccharide vaccine use in older children). Finally, the DoH suggests all recipients in the second year of life should receive two doses of conjugate pneumococcal vaccine, whereas we suggest only one for “at risk” children outwith the very high risk groups mentioned above.

The differences between the two sets of advice have led to some enquiries from colleagues as to how best to proceed and why the two documents differ.

We think it is important to emphasise that both sets of recommendations have been drawn up in the absence of much data as to how best to protect these groups of children. What evidence there is, is summarised in our paper. Further immunogenicity studies in children with HIV and other groups are in progress. In addition, it was reassuring to hear the preliminary results of a large efficacy study in children in South Africa at the International Symposium on Pneumococci and Pneumococcal Diseases in May 2002 which suggested that conjugate pneumococcal vaccine is protective in children with HIV infection, albeit less so than in uninfected children. However, most pre-licensure studies were done in normal healthy infants, since that was the target group for the license. In the absence of more data, it is not surprising that different expert groups have come up with slightly differing advice. In addition, presumably, as a government agency, the DoH must be constrained to some extent against issuing recommendations which go beyond or which differ from those contained within an official product license—even if that license relates to healthy rather than “at risk” individuals.

Consistently following either set of recommendations seems reasonable under the circumstances—to doubt further modifications to this advice will follow in due course as further evidence emerges.

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References

On Archimedes

Using the best available evidence is expected of us in clinical practice. How should clinicians get such evidence? Should we all be formulating questions, searching for the evidence and then appraising it? Or as busy clinicians are we forced to rely on the evidence provided for us in published systematic reviews. Rudolf’s recent paper puts one side of the argument. Nine doctors attending at MmmedSc course each spent an average of five hours analysing a clinical problem “in accordance with the principles of evidence based practice”. As a result of this work they judged themselves to have improved in structuring clinical questions, searching electronic databases, and in critical appraisal. In addition they succeeded in highlighting the poor evidence upon which we base much of our practice. I have no doubt that their efforts had an educational value, but would they be right to base their clinical practice on the conclusions of five hours work?

In November 2001, as part of the Archimedes series, two middle grade paediatricians attempted to answer the following question: in a feverish infant, how accurately does tympanic thermometry measure core temperature? They took rectal temperature to reflect core temperature and restricted their search to work on children. They found two directly relevant studies and one systematic review. On this they based their analysis. In August 2002, Craig and her colleagues published a systematic review comparing tympanic thermometry and rectal thermometry in children. They searched eight databases and checked through numerous reference lists. They contacted authors and suppliers of clinical thermometers. They found 44 studies eligible for inclusion, including two unpublished papers and five written in languages other than English. The process of searching for and identifying eligible articles took approximately 80 hours spread over several months (Y Craig, personal communication). Given the huge disparity in the number of identified papers, it is surprising that the results of both reviews were similar: in an individual patient, tympanic thermometry may not accurately mirror the rectal temperature. However in the details they differed. Riddell and Eppich tell us that “age and presence of fever significantly affected the rectal tympanic difference” Craig et al showed that this was not the case, “there was no systematic relation between the temperature difference and the underlying temperature” and similarly “we found no association between temperature difference and the age of the children”.

Riddell and Eppich found 3 papers. Craig et al had found 44. What does this tell us?

Answering clinical questions by appraising the available evidence is justifiably the new creed. But done quickly, it risks being done badly. The search for evidence, and its analysis, is best left to those with the necessary time and expertise. The urge to join in is understandable. It should be resisted. Those of us in busy clinical posts should assess the results of thorough systematic reviews and then, in the words of Sackett and his colleagues, conscientiously, explicitly and judiciously, use them to make decisions about the care of our patients. If we are honest with ourselves, we really haven’t time for anything else.

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References

Author’s reply

As editor of Archimedes, and victim of his play, I have the pleasure in responding to the concerns raised by Dr Lopez. I think there are two—a concern with the philosophy of Archimedes and a problem with the tympanic topic.

There is a firm and widely held belief that evidence based practice can be achieved only by those “with the necessary time and expertise”, and that we should only change our practice after assessing “the results of thorough systematic reviews and . . . conscientiously, explicitly and judiciously, use them to
make decisions about the care of our pa-
tients?".

The position of Archimedes, and I'd guess many clinicians who believe they practice in an evidence based fashion, is nearly the opposite. Finding questions, seeking answers, assessing the value of the evidence to answer that question, applying it, and assessing the results is a cycle we all (should) perform in some way or another. I think that all's evidence based practice really is. The fa-
mous Sackett quote about evidence based medicine being "the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients, the current best evidence not just systematic reviews (which might be categorised as "the best evidence which can be produced").

Dr Lopez asks "Riddell and Eppich found three papers. Craig et al had found 44. What does this tell us?". Well, possibly that Dr Lopez didn't read the Riddell report very closely, as their commentary starts with "The systematic review of efficacy studies addressing the use of different methods of temperature measurement". Accordingly, it's not at all surprising that the papers come to the same bottom lines. Any minor difference—reported as comments on subsidiary papers with a much lower level of evidence—wouldn't be that clinically exciting, would they?

But anyway, I think that Dr Lopez and myself would agree on one thing. Compared to starvation in Zimbabwe, an impending Gulf war, and children being raped by their parents, this isn't all that important.

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More lumbar punctures, please!

Applause to Kneen et al and Riordan and Cant' for reminding us of the value of lumbar puncture in suspected meningitis. To their arguments I would add that, while the matter may end after seven days' intravenous antibiotic treatment as far as the admitting surgeon is concerned, it certainly does end after seven days' intravenous antibiotic treatment in the mild to moderately ill febrile child, this simply encourages misdiagnosis and promotes development of antibiotic re-
sistance.

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As both papers point out, the epidemiology and management of bacterial meningitis are changing fast. Has anyone paused to consider how, in the future, we will evaluate either its incidence or the effectiveness of our current management strategies if we can't tell how many cases we have seen and to whom they were? Clearly, it can be ill-advised to perform a lumbar puncture at the outset in seriously sick children—but there is always a time later on when the procedure can be done safely, and often painlessly just before weaning from the ventilator.

As for the habit of replacing the LP (and other necessary investigations) with indi-

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vated by a desire to relieve the child of the risk and discomfort of the procedure or to relieve ourselves of seeing a "undiagnosed case". Undoubt edly risk and discomfort does not seem to have put us off requesting large numbers of head CT scans (often without contrast—as they do not reliably exclude abscess) in this clinical situa-
tion, even though they do not tell us anything useful about raised intracranial pressure.

Authors' reply

We thank Dr Isaacs for his helpful letter. He rightly points out that the published recom-
mendations as to which Glasgow Coma Scale score serves as a contraindication to a lumbar puncture vary between <8 and <13, though we are not aware of any definitive evidence supporting either value. For the purposes of this overview commentary we chose the most conservative value (<13), which was recommended in the Advanced Paediatric Life Support Manual produced by the RCPCH advisory committee. Opinions will vary as to what level of consciousness is a contraindica-
tion to lumbar puncture (LP). In our clinical practice we do perform LPs on children with lower coma scores if there are no other contraindications to LP. These issues clearly deserve further consideration, especially the editorial our primary concern related to the observation that even many fully conscious children do not undergo LP for the spurious reasons outlined in our article.

In the editorial we refer to a survey of LP practice in Liverpool, which were unpublished observations at the time; these data have now also been published.3

References
2 Riordan FAI, Cant AJ. When to do a lumbar puncture. Arch Dis Child 2002; 87:181–3.

LP and Glasgow coma score

Congratulations to the authors on a balanced article on the need for lumbar puncture. One point of possible confusion is the Glasgow Coma Score (GCS) quoted as a contrain-
dication to LP Kneen et al quote a GCS <13 as a contraindication to LP which would exclude a very large number of children with meningi-
tis. Riordan and Cant' in the same issue of your journal quote a GCS <8. Rennick et al also use a GCS <8 as their cut off figure in their hospital, as do we.

There is little evidence to my knowledge. A retrospective Manchester study found that children with GCS <8 were more likely to die from coning than other children with menin-
gitis (relative risk 4.6, 95% CI 1.06–35.8). I would welcome comments from the authors and others as to whether they have observations at the time; these data have now also been published.3

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Are interhospital transport teams de-skilling the DGH paediatricians?

As one of the referring hospital consultants to the South Thames combined transport serv-

References
1 Kneen R, Solomon T, Appleton RE. The role of lumbar puncture in children with suspected central nervous system infection. Arch Dis Child Pediatrics 2002; 87:235–7. This article is available free online from: http://www.biomedcentral.com

Are interhospital transport teams de-skilling the DGH paediatricians?

Arch Dis Child: first published as 10.1136/adc.88.2.177 on 1 February 2003. Downloaded from http://adc.bmj.com/ on September 18, 2023 by guest. Protected by copyright.
iron, total iron-binding capacity, serum ferritin, and serum IgG. Antibodies to H pylori were measured in 937 Korean children (475 boys and 462 girls). Their ages ranged from 10 to 18 years. The prevalence of H pylori infection was compared between groups, based on the presence or absence of anaemia, hypoferritinaemia, iron deficiency, and iron deficiency anaemia. The levels of hemoglobin, serum iron, total iron binding capacity, transferrin saturation and serum ferritin were obtained according to the presence or absence of H pylori infection.

The prevalences of anaemia, iron deficiency, iron-deficiency anaemia, and H pylori infection were 8.1%, 9.1%, 3.1%, and 20.9%, respectively. The H pylori positive rates in anaemia, hypoferritinaemia, and iron deficiency group were 34.2%, 29.5%, and 35.3%, respectively, compared to 19.6% in the non-anaemia group (p=0.003), 19.2% in the non-hypoferritinaemia group (p=0.005), and 19.4% in the non-iron deficiency group (p=0.001).

The H pylori positive rate in the iron deficiency anaemia group was 44.8% in comparison with 20.0% in the non-iron deficiency anaemia group (p=0.001). Haemoglobin and iron levels did not show any significant differences between the H pylori positive and negative groups. The serum ferritin level was significantly lower in the H pylori infected group (p=0.0002).

The associations between iron status and H pylori were largely restricted to girls rather than boys. We speculate that this is because, in preadolescent children and adolescents, female adolescents are more vulnerable to iron deficiency. H pylori may affect iron absorption metabolism in the stomach and exacerbate the iron deficit in adolescents, especially girls, who are already supplied marginally, with anaemia ensuing promptly.

We believe that this is the only large scale study in children showing an association between H pylori infection and iron deficiency. When children at puberty are found to have iron deficiency that is refractory to iron supplementation, H pylori infection can be considered to be a possible cause of iron deficiency.

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The combination of reticulo-nodular pulmonary shadowing and ataxia, as in this case, makes the diagnosis of LCH a real possibility. Given the onset of fatal pneumothorax soon after the child's discharge from hospital, a lung CT scan would almost certainly have shown cystic change and led to tissue diagnosis via lung biopsy or bronchial lavage. With chemotherapy, the prognosis for pulmonary LCH is usually favourable, even if complicated by pneumothorax.

It is generally recommended that patients with suspected LCH are referred to paediatric oncologists and/or managed on the international evidence-based trials of the Histio- cyte Society, which includes recommendations for the management of CNS complications. More details of the Histioyte Society’s activities and their contact address can be found on the Society’s website: www.histio.org-society.

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References


Hypocalcaemia and calcitonin precursors in critically ill patients

We read with interest the paper by Baines and colleagues in which the authors reported a strong inverse relationship between total serum calcium concentrations and disease severity in 70 critically ill children with meningococcal disease. Calcitonin concentrations were measured in a subgroup of 23 children on admission, and significantly correlated with disease severity. In particular, however, the authors found no relation between calcitonin concentrations and total or ionised calcium concentrations. In a study of 69 adult patients with acute pancreatitis, we have similarly found no correlation between plasma concentrations of calcitonin precursors (CTpr) on admission and both the admission and lowest (within 72 hours of admission) adjusted total serum calcium concentrations (unpublished data). The concentrations of CTpr were significantly higher and of the lowest calcium were significantly lower (median [IQR]: 2.16 [2.0–2.18] mmol/l v 2.23 [2.15–2.30] mmol/l, p=0.017) in patients with severe attacks (n=14, Atlanta criteria) compared with mild attacks. Our data and that of Baines and colleagues support the contention that calcitonin and its precursors have a minor effect on calcium metabolism. Indeed, previous investigators found no correlation between the serum concentrations of serum calcitonin and hypocalcaemia in patients with acute pancreatitis or in experimental models of the disease. Whilst CTpr concentrations were reported to rise significantly in critically ill patients, they correlated rather weakly with a concomitant fall in serum ionised calcium. A rise in CTpr concentrations did not correlate with the fall in serum calcium concentrations in patients with acute malaria. This suggests that factors other than calcitonin and CTpr are involved in the homeostasis of calcium in the critically ill.

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References

CORRECTION
The Archivist piece “Heart disease in Williams syndrome” (Arch Dis Child 2002;87:420) should have given the reference to the original article in the Journal of Medical Genetics as J Med Genet 2002;39:554–8.