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Correspondence

Rectal examination in appendicitis

Sir,

I read with interest the article on rectal examination in appendicitis,[1] but feel that the conclusions are invalid and cannot go unchallenged.

The fact that 80 + 121, that is 201 of 328 children examined (61·5%) experienced severe or minor discomfort casts serious doubt on the competence of the operators performing the rectal examinations. In my experience, I find that even consultant physicians and surgeons have no idea about how to perform a rectal examination on a child. When I see a crying child on the end of someone's finger, I blame the operator and not the child.

Successful rectal examinations can be performed on most children if the operator takes time and care. The most important part of the examination is never to insert the finger. The patient should always be asked to strain down on the finger, no matter how long this takes to achieve. During the examination the child is reassured and talked to in words he understands. In most instances no restraint is needed or necessary.

Sixty one of 103 examinations in acute appendicitis were positive.[1] The position of the appendix is not stated. A retrocaecal appendix for instance, which would be expected in approximately a third of cases, may not give rise to rectal tenderness.

A correctly performed rectal examination must remain as a valuable and important examination in the assessment of acute abdominal pain, and I think the conclusions drawn in the report are invalid.

Reference

[1] Dickson AP, MacKinlay GA. Rectal examination and acute appendicitis. *Arch Dis Child* 1985;**60**:666–7.

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Drs Dickson and MacKinlay comment:

We thank Mr Freeman for his comments on our paper[1] but do not agree that they cast doubt on our conclusions.

We are naturally always careful with regard to our technique of rectal examination, but in our experience even the most cooperative child still suffers some discomfort from the procedure. Furthermore, many children have great difficulty in following instructions and relaxing completely, probably in view of the impending intrusion, no matter how much time and care is taken. Experience with adults confirms that the procedure performed even in patients who understand its requirement, produces considerable unpleasantness. It may be of interest that when our report was presented to meetings of paediatric surgeons before submission for publication, the general feeling was that the responses of our group of children to rectal examination were less severe than most.

We agree that retrocaecal appendicitis may not give rise to rectal tenderness, and this probably partly accounts for only 60% of our rectal examinations being positive. We fail, however, to see the point of this comment in relation to the main conclusion of our report, which is that acute appendicitis may be diagnosed without rectal examination in the vast majority of children on the basis of history and general examination. As stated in the paper, we regard rectal examination to be mandatory in all children presenting with an acute abdomen who do not have a clear diagnosis of acute appendicitis on abdominal assessment.

Ceftazidime in neonatal infections

Sir,

Having used ceftazidime monotherapy for the blind treatment of neonatal sepsis for the past two years,[1 2] we read the paper by Low *et al*[3] with interest. From our experience of treating more than 400 babies, 30 of whom had bacteraemia, we cannot agree with the authors' conclusions that ceftazidime has only a theoretical role for neonatal use, or that it cannot be recommended as monotherapy before the results of bacteriological cultures are known. The five cases reported where treatment was considered to have been unsuccessful and upon which Low *et al* based their conclusions, raise serious questions. The patient with fatal *Escherichia coli* meningitis who failed to respond to ceftazidime had not responded to previous treatment with gentamicin or chloramphenicol. As the authors point out, neonatal meningitis has a mortality of 35 to 50% no matter what antibiotic is used. In one of the two cases of group B streptococcal sepsis where ceftazidime was thought to have failed, treatment was delayed because of an earlier diagnosis of hyaline membrane disease. Many units would consider penicillin plus gentamicin more appropriate once infection with group B streptococci had been confirmed. It also seems unduly harsh to consider as a ceftazidime failure the baby with *Enterobacter cloacae*/ enterococcal bacteraemia who, having been previously treated unsuccessfully with penicillin and gentamicin, died with 24 hours of starting ceftazidime. Finally, the activity of ceftazidime against staphylococci is known to be unremarkable and initial treatment with this antibiotic could only have been expected to hold the case of *Staphylococcus aureus* bacteraemia until specific treatment could be introduced. High ceftazidime concentrations were reported in four of five samples of cerebrospinal fluid but no mention was made of contamination with blood, small

amounts of which would have given highly misleading results.

No antibiotic regimen currently available provides total cover against the wide range of neonatal pathogens, although in our experience ceftazidime has distinct advantages over the alternatives bearing in mind that among our patients four of 30 bacteriaemia were due to pseudomonas. Colonisation with faecal streptococci occurs, and if ceftazidime treatment is to continue for more than five days it is our practice to add ampicillin to the prescription.

To condemn its use in neonates because it failed to clear infections that had previously not responded to treatment with other antibiotics, or where initiation of treatment had been delayed, is to apply quite unrealistic demands on any antibiotic. If treatment is started promptly ceftazidime is a very appropriate antibiotic for the initial blind treatment of neonatal sepsis.

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Dr Low and co-workers comment:

Drs de Louvois and Mulhall's wide experience using ceftazidime will be useful, when published, in improving the evaluation of this antibiotic.

Reasons for ceftazidime's ineffectiveness against the case of *Escherichia coli* meningitis and one of the cases of group B streptococcal sepsis were acknowledged in our paper. Without going into great details about the case of *Enterobacter cloacae*/enterococcal infection, this was not a matter of penicillin and gentamicin failing—this course of antibiotics had been stopped as the baby was well. He then became unwell with organisms resistant to ceftazidime.

The point about cerebrospinal fluid being contaminated with blood is well taken. There was some blood in the samples from cases 2, 11, 12, 35, and 42 and these results may be falsely high.

We find it inconsistent to state that ceftazidime is inappropriate for *confirmed* cases of group B streptococcal and *Staphylococcus aureus* infection, two of the commonest neonatal pathogens, while at the same time advocating its use for initial blind treatment. McCracken has recently written that most group B streptococcal meningitis is sterilised within 24 hours using ampicillin and gentamicin.[4] Unless this can be stated confidently about ceftazidime, surely there must be reservations about its usage.

References

[1] Pollock I, Mulhall A, de Louvois J. Ceftazidime in the treatment of neonatal infection. *J Hosp Infect* 1985;**6**:158–65.
[2] de Louvois J, Mulhall A. *Ceftazidime in the blind treatment of neonates.* Excerpta Medica, (in press).
[3] Low DC, Bissenden JG, Wise R. Ceftazidime in neonatal infections. *Arch Dis Child* 1985;**60**:360–4.
[4] McCracken EH. New developments in the management of children with bacterial meningitis. *Pediatr Infect Dis* 1984: **Suppl 3**:S32–4.

Toxic shock syndrome

Sir,

We read with interest the recent description of toxic shock syndrome by Buchdahl *et al.*[1] We have recently seen a case, also within the London area, which fulfils the diagnostic criteria, and which confirms the potentially lethal nature of the condition. A previously well 3 year old boy of Indian origin was admitted to hospital comatose, after a convulsion. There was a two day history of pyrexia, diarrhoea, and vomiting. On examination he was unresponsive to all stimuli. Rectal temperature was 42°C. There was an erythematous-purpuric rash on the legs, which subsequently spread to the trunk and arms. He was severely shocked, with a systolic blood pressure of 60 mm Hg and poor peripheral perfusion. Biochemical abnormalities included severe metabolic acidosis, hyponatraemia, hypocalcaemia, and raised blood urea (9 mmol/l) and transaminases. He was anaemic (haemoglobin 7 gm/dl) and thrombocytopenic (platelet count 47×10^9/l). The prothrombin and thrombin times were prolonged and fibrin degradation products were raised, indicating disseminated intravascular coagulation. Despite instituting all the intensive support measures outlined by Buchdahl *et al,* and the administration of intravenous penicillin, chloramphenicol, and cefuroxime, he died within 12 hours of admission. *Staphylococcus aureus*, sensitive to chloramphenicol and cefuroxime, was subsequently isolated from blood cultures.

In severe cases of toxic shock syndrome it may be difficult to distinguish the effects of toxin production from those of overwhelming septicaemia, and antibiotics should be given in addition to supportive measures. In young children meningococcaemia is the commonest cause of fulminant illness with a purpuric rash, and appropriate antibiotics are given before the availability of culture reports. Should further reports confirm the impression of an increasing incidence of toxic shock syndrome in children, perhaps antistaphylococcal treatment should also be considered in these circumstances.

Reference

[1] Buchdahl R, Levin M, Wilkins B, *et al.* Toxic shock syndrome. *Arch Dis Child* 1985;**60**:563–7.

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Dress of infants in health and illness

Sir,

I read with interest the paper by Eiser *et al.*[1] While working in Leicester I carried out a small survey with local health visitors to find out how infants were dressed and wrapped for sleeping and how mothers adjusted clothing and wrapping if the infant was ill. An unselected group of