LETTERS TO THE EDITOR

Haemophilus parainfluenzae

EDITOR,—We would like to describe the first report of *Haemophilus parainfluenzae* urinary tract infection occurring in the paediatric population, a case which highlights the importance of looking for more fastidious organisms in selected patients.

Case report

A 2 year old boy was admitted with dysuria, intermittent vomiting, and abdominal pain. Ten weeks earlier he had undergone a distal hypospadias repair which was complicated postoperatively by mild penile inflammation; a wound swab grew low numbers of *Pseudomonas aeruginosa* but the inflammation settled spontaneously and was not treated with antibiotics. Two weeks later he developed persistent dysuria. On examination the hypospadias wound was clean with no evidence of cellulitis. He had not received antibiotics before admission and was started on cefuroxime.

Microscopic examination of a clean catch urine showed neither white nor red cells, but there were a few white cell casts and many small Gram negative bacilli. No growth was seen on CLED agar, however, in view of the microscopy results, a sample of urine was plated out on to chocolate and blood agar. After incubation the chocolate plate revealed a heavy pure growth ($>10^5$ /ml) of bacteria, subsequently identified as *H parainfluenzae*, based upon a growth requirement for factor V (but not X) and a positive ALA (δ -aminolaevulinic acid) disk test (MAST Diagnostics) and which was sensitive to cefuroxime. A blood culture taken on admission showed no growth. He has made a complete recovery clinically but is to be reviewed on an outpatient basis.

Although *H parainfluenzae* has recently been associated with IgA nephropathy,¹ infections within the urinary tract itself are rare. The only study that has attempted to determine the prevalence of *Haemophilus* spp within the urinary tract has shown that, while urethral colonisation is possible, infection is probably very uncommon within the general paediatric population.² A review of the literature revealed only five reports of this organism being isolated in significant numbers from urine,^{3–7} all in the adult population. Four of the five patients had chronic urinary tract problems and, as in this case, two had had instrumentation to the urinary tract (transurethral resection/lithotripsy) in the weeks before the onset of infection. The prevalence of infection within this apparent at-risk group is unknown, but given the lack of growth on conventional isolation media and the usual antibiotic sensitivity of this organism, the number of infections is likely to be underestimated. The first reported urinary isolate³ was able to grow rapidly in spiked samples of urine in contrast to other *H parainfluenzae* isolates from the upper respiratory tract, and certainly our isolate survived in high numbers in urine stored at 4°C for two days, so that there may be urine adapted strains.

For selected patients, those with chronic urinary tract disease and recent instrumentation in particular, the use of more nutritious

agars should be considered where the results of standard culture do not accord with clinical symptoms and the results of urine microscopy.

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Skull fractures in infancy

EDITOR,—Skull fractures in infants are frequent findings in victims of non-accidental injury,¹ and may also occur during childbirth. There are reports in textbooks that skull fractures may remain radiologically detectable for a period up to six months.² In a leading article in 1992 in this journal radiological dating of fractures was discussed in detail,³ but it did not mention the healing of skull fractures. A skull fracture due to abuse in a child under 2 years is associated with very high mortality and morbidity.⁴

Paediatricians may need to know whether a skull fracture in say a 6 week old infant was sustained at birth or more recently; or indeed whether what appears to be a fracture really is one. Therefore it will be of great benefit to general paediatricians and radiologists in district hospitals if the following questions could be answered:

- (1) How long do skull fractures take to heal radiologically?
- (2) Does the healing process of skull bones differ from healing of long bones? If so how could these fractures be dated?
- (3) When is a skull fracture not a fracture?

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- 1 Meservy CJ, Towbin R, McLaurin RL, Myers PA, Ball W. Radiographic characteristics of skull fractures resulting from child abuse. *American Journal of Radiology* 1987; 149: 173–5.
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Dr Wilson, paediatric radiologist, comments:

The time it takes a skull fracture to heal is so variable that it is in practice impossible to date skull fractures from radiographs. Part of the difficulty is that they heal by a somewhat

different process from that seen in other bones and do not form visible periosteal reactions. Also, the bone is too thin for one to be able to see whether the fractured edge has been resorbed early in the healing process. Most do heal in a few days to months; a few fail to react or undergo slow, continuous absorption of the fractured edges – the so-called ‘expanding fracture’, thought to be due to leakage of cerebrospinal fluid from a torn dura, and requiring surgical repair. There are a few guidelines that point towards a non-accidental cause for a skull fracture: these include a widely displaced fracture suggesting extreme violence, or a stellate fracture suggesting a blow from a blunt instrument. In distinguishing birth trauma from non-accidental injury, it is often necessary to look for other radiological or clinical evidence of trauma in order to date the incident.

The child's skull is notorious for the number and variety of the normal radiolucent lines that may run across it. Even the sutures vary a good deal in prominence and position, and there are also arterial and venous vascular markings, synchondroses, and so on.

In general terms, fractures are unilateral, and darker for their width than nearby sutures (which do not pass through both tables of the skull in the same place) or blood vessels (which only indent the skull). When the fractured edges overlap, a thin white line may be produced. They may have sharp corners, unlike blood vessels they tend to taper even when not branching, and if they are displaced as well as angled, the width may appear to vary on different limbs of the zigzag.

In particular, anyone who has to decide upon the presence or absence of skull fractures on radiographs should have to hand a copy of a good atlas of normal appearances such as the one by Theodore Keats,¹ and not be embarrassed to ask for a second opinion if in doubt: it is well known that a consensus opinion in radiology is more reliable than that of a single radiologist.

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- 1 Keats TE. *Atlas of normal roentgen variants that may simulate disease*. 5th Ed. Chicago: Mosby Year Book Publishers, 1991.

Central nervous system tumours lack national studies

EDITOR,—The Childhood Cancer Research Group demonstrated that survival from acute non-lymphocytic leukaemia was improved for those children entered in national studies.¹ The same group showed this in acute lymphoblastic leukaemia in 1989.² In a population based study in the South West region from 1976–85, 245 children were identified with leukaemia and 54% of these were entered in national studies. A large percentage would have then benefited from the survival advantage of being entered. This contrasts sharply with the situation for children with central nervous system (CNS) tumours in the same period when of 164 children identified only 5% were entered on trials. A major reason for failure to enter these children into studies for CNS tumours was the lack of available national studies for which they were eligible. This situation still exists today. All children with acute leukaemia are eligible for the different national studies.

However of 42 children presenting to neuro-surgical units in the South West region in the period 1992–3 only 10 were eligible for open national trials. Thus 32 out of 42 children, that is 76%, with CNS tumours cannot benefit from any survival advantage that national studies may bring. This lack of national trials is in spite of the important unanswered questions about treatment of CNS tumours. Both the Medical Research Council and the United Kingdom Children's Cancer Study Group need to address this issue urgently.

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- 1 Stiller CA, Eatock EM. Survival from acute non-lymphocytic leukaemia, 1971–88: a population based study. *Arch Dis Child* 1994; 70: 219–23.
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BOOK REVIEWS

Recent Advances in Paediatrics – 12. Edited by T J David. (Pp 244; £25.95 paperback.) Churchill Livingstone, 1993. ISBN 0-443-04871-1.

So they sent me a copy of this book to review, but I have already bought a copy! Surely that's a recommendation in itself!

Most paediatricians with general or specialist interests welcome the appearance each year of a new volume in this series. This year's edition follows the format of previous years, with authoritative reviews on a wide variety of subjects encompassing developments in basic medical science applied to childhood diseases, practical clinical management, and articles considering more general, but important current issues in child health.

All of us have difficulty in keeping up to date and the inclusion of the final chapter, a literature review, has always proved popular. Space in the book limits the choice, but it does mean that consultants can air their recent knowledge to juniors (provided the juniors do not get hold of a copy first!).

Many of the articles cover practical subjects, and highlights in this edition are the sound practical advice on writing medical-legal reports by Dr Bamford based on his wide experience; an excellent overview of malaria, and advances in the management of sickle cell disease. This latter review is particularly relevant to those of us who work in areas where this is an uncommon problem. When faced with it in clinical practice we require a rapid update.

Professor David, not content with editing this volume, gives an account of the management of atopic eczema. I have always liked his 'paediatric' as opposed to 'dermatological' approach in considering the management of the whole child and family, and there is much here that is based on his much respected clinical practice and experience.

New techniques are not ignored, and a timely article on gastrostomy feeding summarises our current state of clinical

practice. What a pity, however, that this comprehensive article came from Canadian authors rather than from a UK unit where there must surely now be considerable expertise.

We cannot ignore HIV infection and a review article briefly summarises the main points of clinical practice, although I would have liked to have had more comments on the complex psychological and social needs of the family which, as the author points out, are the most important and challenging aspects of paediatric HIV management.

Communication disorders in childhood are not just an area for the specialist, and Lewis Rosenbloom provides practical advice when faced with a specific clinical situation. We gain from years of accumulated experience acquired from this particular interest of his department. This gives us clinical presentation and classification set out without too much emphasis on 'speech therapy jargon'; an article to share with your development team members.

Basic scientific techniques in molecular genetics applied to the pathogenicity of meningitis and understanding the genetic mysteries of the fragile X syndrome require concentrated reading.

This book is completed by a number of other subjects including passive smoking and the management of accidental hypothermia. I now have two copies of this book (as they allow the reviewer to keep this one), which means that one can remain at home while the other goes to our departmental library, where like all good volumes, I would predict it won't remain on the shelves for very long, and we might even have to buy a third. I await volume 13!

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Epilepsies of Childhood. 3rd Ed. By Niall V O'Donohoe. (Pp 340; £49.50 hardback.) Butterworth Heinemann, 1993. ISBN 0-7506-1598-2

Status epilepticus! Another book on epilepsy in children, with at least two others sprouting later this year.

Epilepsy appears to be emerging from a public and professional enforced winter – in fact one could argue that much of the ignorance and misunderstanding about epilepsy originates from the ice age, with some peoples' attitudes still frozen solid in its wasteland. No longer. From Department of Health directed guidelines on what patients with epilepsy need, to the appointment of specific nurse specialists in childhood epilepsy (Royal Liverpool and Birmingham Children's Hospitals), epilepsy is beginning to be recognised for what it is, and for what it is not. This 'greening' of epilepsy has been propagated by nutritional support from the various – and multiple – pharmaceutical companies whose antiepileptic drugs have blossomed (and are still budding) on to the field. Finally, the whole process has been fertilised by the arrival of fresh literature and audiovisual material; it is these aids that are of fundamental importance to informing the medical and non-medical personnel about the current state of the science, and also the art of epilepsy.

For too long childhood epilepsy has been perceived and has been treated as simply a type of epilepsy and has received scant attention in the major reference textbooks of epilepsy. This is somewhat bizarre as over

50% of epilepsy commences under the age of 16 years.

Epilepsies of Childhood comprehensively but succinctly redresses the balance and is appropriately titled, reflecting the heterogeneity of the condition. Continuing in a somewhat botanical theme, the condition could be considered the genus – 'epilepticus', with the various types, the 'species' (including 'hybrids').

Much of the bramble-like confusion (and I am certain the basis of the dislike of epilepsy among doctors) stems from the classification of epilepsy – or rather the *epilepsies*. The epilepsy syndrome was introduced in 1989 to try and simplify the classification – with considerable success. For the general paediatrician there is a very pragmatic benefit from this syndrome classification; it provides valuable information on the prognosis of the specific type of epilepsy and which is the most appropriate antiepileptic drug. All of these aspects are well covered in *Epilepsies of Childhood* and, importantly, are easily read and digested. Other areas where the non-specialist generalist may get bogged down include the indications for, and type of, investigations used in epilepsy, the intractability of epilepsy in certain children, the uneasy (and almost parasitic in some peoples' eyes) relationship between epilepsy and learning difficulties/mental handicap and the emotional/psychiatric complications of epilepsy. Professor O'Donohoe has provided some excellent literary stepping stones in these potential sloughs of despond; I would endorse fully one of Professor O'Donohoe's points that when confronted with a child with 'intractable epilepsy', 'does the child really have epilepsy?' should be your first question. The author's rich and invaluable clinical experience is superbly communicated throughout this book emphasising that epilepsy (as in medicine in general) is an art as well as a science.

Are there any weeds in this literary orchard? Perhaps, but they are far too few to mention. As Professor O'Donohoe has (correctly) anticipated, the subject has moved on, and in some areas quite dramatically, during preparation of the book; in particular the troubled relationship between febrile convulsions and epilepsy is being increasingly challenged to the point where there may be no cause and effect association; however, this depends to a large extent on how a 'febrile convulsion' is defined.

I was a mere sapling of a medical student when the first edition of *Epilepsies of Childhood* was published; in woeful ignorance I glanced at the second edition. Between the second and third editions, I learnt a little about the facts and fascination of epilepsy; the current edition has taught me much more. I have no doubt that it will teach and inform many others – including those that want to know, and also those that ought to know more about epilepsy in childhood. Read it. Buy it. Enjoy it.

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Atlas of Procedures in Neonatology. 2nd Ed. Edited by Mary Ann Fletcher, Mhairi G McDonald. (Pp 464; £34 paperback.) JB Lippincott, 1993 ISBN 0-397-51195-7.

There are great variations in the way neonatal procedures are conducted. We have all experienced that stare or heard the words 'that's not how we do it here'. Therefore,