LETTERS TO THE EDITOR

Preclinical diagnosis of abdominal tumours by ultrasound examination

EDITOR,—Papanicolaou *et al*¹ reported their experience of using abdominal ultrasound for the preclinical diagnosis of neuroblastoma in seven infants. The authors suggest that this may be a useful screening technique and urge paediatricians to perform this examination as it is “non-invasive, painless, and safe”.

Unfortunately, the authors are clearly unaware of the controversy which surrounds infant screening for neuroblastoma. It has been used throughout Japan since 1985 and has been studied in Europe and North America.² Screening infants for neuroblastoma greatly increases the observed cumulative incidence of the disease, and up to 75% of all infants detected by biochemical screening have tumours which would otherwise have undergone spontaneous regression and would have been of no clinical consequence.³ Papanicolaou *et al* detected seven cases in a population of 7500 babies; at least six of these children must have had regressing disease and were not in need of any intervention. In contrast to the technique used for primary screening, surgical removal of an abdominal tumour is neither non-invasive, painless, nor safe—it is associated with significant mortality and morbidity.

Despite more than 20 years of infant screening for neuroblastoma there is no convincing data to suggest that preclinical detection of neuroblastoma reduces the death rate from this disease.

In 1991, the International Paediatric Oncology Society (SIOP) issued a statement that there was no case for the universal implementation of infant screening for neuroblastoma. The claim by Papanicolaou *et al* that their preliminary results may justify the use of abdominal ultrasound as a screening method for the general population is unwarranted. No screening programme should be introduced until its efficacy has been shown in a controlled trial. The only controlled trial of infant screening published so far began in Quebec in 1990 and to date has shown no advantage of screening.⁴ In Germany, a controlled trial of over a million children screened at the age of 1 year is underway and should report early in the next century.

Screening infants under the age of 1 year for neuroblastoma is a potentially hazardous procedure and is not recommended.

LOUISE PARKER
ALAN W CRAFT

Sir James Spence Institute of Child Health,
University of Newcastle upon Tyne,
Queen Victoria Road,
Newcastle upon Tyne, UK

1 Papanicolaou A, Panagopoulou-Ktistakis M, Moschovi M, Papathanasiou D, Tzortzatou-Stathopoulou F. Preclinical diagnosis of abdominal tumours by ultrasound examination [letter]. *Arch Dis Child* 1998;78:96.

2 Parker L, Craft AW. Neuroblastoma screening: 20 years and still no answer [editorial]. *Eur J Cancer* 1996;32A:1540–3.

3 Parker L. Screening for neuroblastoma. *Current Pediatrics* 1997;7:177–9.

4 Woods WG, Tuchman M, Robison LL, *et al*. A population-based study of the usefulness of screening for neuroblastoma. *Lancet* 1996;348:1682–7.

EDITOR,—Papanicolaou *et al* present early data on their population based study to evaluate the use of abdominal ultrasound as a screening method to detect early abdominal tumours and conclude that ultrasound is useful in the early diagnosis of neuroblastoma.¹ However, all of the tumours so identified were localised. Two required no interventional treatment and five—although the details of other staging methods is not described—are presumed to have been stage I neuroblastomas. It is now conventional wisdom that these types of tumour also do not require intervention, especially major invasive surgery, with its resultant morbidity. If it were not for this current study we believe that they would have remained asymptomatic and never diagnosed.

Many population based studies have looked at the usefulness of urinary screening for neuroblastoma.^{2,3} In general, they conclude that screening for neuroblastoma increases the incidence in infants without decreasing the incidence of unfavourable advanced stage disease in older children. It does not appear that screening for neuroblastoma in infants will reduce the mortality of this disease by enabling early intervention. In our opinion this preliminary report does not justify abdominal ultrasound as a screening method for abdominal tumours, even if performed for other reasons. Moreover, it may encourage unnecessary intervention at a cost to both the child and the health service.

B M D BRENNAN
O B EDEN

Paediatric Oncology Unit,
Royal Manchester Children's Hospital & Christie
Hospital NHS Trust, Manchester, UK

1 Papanicolaou A, Panagopoulou-Ktistakis M, Moschovi M, Papathanasiou D, Tzortzatou-Stathopoulou F. Preclinical diagnosis of abdominal tumours by ultrasound examination [letter]. *Arch Dis Child* 1998;78:96.

2 Woods WG, Tuchman M, Robison L, *et al*. A population-based study of the usefulness of screening for neuroblastoma. *Lancet* 1996;348:1682–7.

3 Bessho F, Hashizume K, Nakajo T, Kamoshita S. Mass screening in Japan increased the detection of infants with neuroblastoma without a decrease in cases in older children. *J Pediatr* 1991;119:237–41.

Developing injury surveillance systems in accident and emergency departments

EDITOR,—David Stone and colleagues are to be congratulated for producing a succinct and readable annotation explaining the criteria and pitfalls of injury surveillance systems.¹ However, their brevity might lead the unsuspecting reader to underestimate the practical difficulties, and overestimate the value of injury surveillance systems in accident and emergency departments.

There are no controlled trials, as there have been for other forms of surveillance,² or studies of effectiveness or cost-benefit of injury surveillance systems^{3,4} in relation to the objectives stated under “who needs injury surveillance?” The statement that “evidence suggests that injury surveillance systems in accident and emergency departments are worthwhile and achievable” is not tenable even “when coupled with professional commitment and appropriate operational conditions”.

The cost of injury surveillance systems that meet all the specified criteria is likely to be high,⁵ and some observers have questioned whether this is the best use of limited resources.^{6,7} Rather than develop injury surveillance systems in every accident and

emergency department, consideration should be given to:

- Implementing interventions that work^{8–14}
- Researching the risk factors that are amenable to change in the events leading to injury¹⁵
- Ensuring that routinely collected data (from the health sector, coroners, and emergency services) are used to maximum effect^{16,17}
- Developing a single nationally representative injury surveillance system to produce good descriptive epidemiology
- Developing alternative methods to accident and emergency departments injury surveillance systems to meet specific injury control objectives.^{4,18}

SIMON LENTON
Specialist Registrar (Public Health)

PHILIP MILNER
Director of Public Health, Wiltshire Health Authority
Southgate House, Pans Lane, Devizes, UK

- 1 Stone DH, Ohn TT. Developing injury surveillance in accident and emergency departments. *Arch Dis Child* 1998;78:108–10.
- 2 Thacker SB, Redmond S, Rottenberg RB, *et al*. A controlled trial of disease surveillance strategies. *Am J Prev Med* 1986;2:345–50.
- 3 Higginson I. *Health of the nation accident targets: what further research is needed?* London: London School of Hygiene and Tropical Medicine, 1994.
- 4 Ing RT, *et al*. Injuries and surveillance systems: strengths and weaknesses. *Public Health Report* 1985;100:582–8.
- 5 Harrison J, Tyson D. Injury surveillance in Australia. *Acta Paediatr Jpn* 1993;35:1718.
- 6 Lenton SW. *Striking a balance*. MSc dissertation. London: London School of Tropical Medicine and Hygiene, 1996.
- 7 Robertson LS. Child injury control: surveillance and research questions. *Am J Med Sci* 1994;308:88–91.
- 8 Pless IB. *The scientific basis of injury prevention: a review of the medical literature*. London: Child Accident Prevention Trust, 1994.
- 9 Dowsell T, Towner E, Simpson G, Jarvis SN. Preventing childhood unintentional injuries what works? A literature review. *Inj Prev* 1996;2:2.
- 10 Nuffield Institute for Health. *Preventing unintentional injuries in children and Young Adolescents*. NHS Centre for Reviews and Dissemination. University of York, 1996.
- 11 Mulligan J, Law C, Speller V. *Interventions to control injury in children and young people: a literature review*. Wessex Institute of Public Health, 1994.
- 12 Stone DH. *Accident prevention research: an overview*. Edinburgh: Scottish Office and Health Department, 1993.
- 13 Kendrick D, Marsh P. *The effectiveness of intervention programmes in reducing accidental injuries to children and young people: a literature review*. Trent Regional Health Authority, 1994.
- 14 Christoffel KK. *Saving children: a guide to injury prevention*. *Accident Analysis and Prevention* 1993;25:489–90.
- 15 Robertson LS. Traumatic injury. In: Holland W, editor. *Oxford textbook of medicine*. Oxford: Oxford University Press, 1991.
- 16 Benson A. *The collection and dissemination of accident data*. London: Child Accident Prevention Trust, 1993.
- 17 Department of Health. *Public health information strategy. Improving information on accidents*. London: DoH, 1993.
- 18 Declish S, Carter AO. Public health surveillance: historical origins, methods, and evaluation *Bull WHO* 1994;72:285–304.

Serum bicarbonate and the severity of dehydration in gastroenteritis

EDITOR,—The claim by Narchi¹ that serum bicarbonate concentration does not reflect the severity of dehydration in children with gastroenteritis cannot be substantiated by the data; the clinical assessment of dehydration used in the study has already been shown to be unreliable. Mackenzie *et al*² showed that there is a marked discrepancy between the

degree of clinically estimated dehydration and the actual degree, when calculated on the basis of early weight recovery in hospital. Many of the variables used in Narchi's assessment were found to be poor predictors of dehydration, and the severity of dehydration was overestimated by, on average, 3.2%. Perhaps most importantly, the authors found a highly significant correlation between base deficit and the degree of (accurately estimated) dehydration. It would therefore be interesting to see if there was a similar correlation in Narchi's data between dehydration (estimated on the basis of weight gain) and bicarbonate concentrations. In the meantime, Narchi's conclusions are potentially flawed and should therefore be treated with the utmost caution.

I W BOOTH
Institute of Child Health,
University of Birmingham, UK

- 1 Narchi H. Serum bicarbonate and dehydration severity in gastroenteritis. *Arch Dis Child* 1998;78:70-1.
- 2 Mackenzie A, Barnes G, Shann F. Clinical signs of dehydration in children. *Lancet* 1989;ii:605-7.

BOOK REVIEWS

Paediatric Toxicology. Handbook of Poisoning in Children. Edited by Nicola Bates, Nicholas Edwards, Janice Roper, and Glyn Volans. (Pp 411). Macmillan, 1997. ISBN 0333 60951 4.

The National Poisons Information Service (London) is an exceptional source of information for the management of children with acute poisoning episodes. Two of the editors of this book are based at the above unit. The book provides valuable information in relation to the management of specific poisoning agents. These vary from widely used medicines to household products, ranging from disinfectants to nail varnish remover. It also includes information about plants, snakes, and luminous necklaces! As the book covers such a wide range it cannot/does not act as a textbook. Its aim is to be a practical handbook to aid health care professionals involved in individual care of paediatric poisoning. The book provides clear information about clinical effects and treatment. It also has key points in bold printing making the text more readable. It also provides adequate references for each individual poison.

Its biggest problem is what role does the book specifically have? It is not intended to replace contact with poison information centres, which is essential in all cases of suspected drug toxicity to ensure that the most up to date advice is available. The

greatest value of the book would therefore be in relation to giving reassuring advice about poisons which are unlikely to result in any significant clinical problems. From this point of view the book would be valuable either in the accident and emergency department or, alternatively, in the hospital pharmacy drug information library—assuming that there is an out of hours service.

IMTI CHOONARA
Professor in Child Health,
Derbyshire Children's Hospital, UK

Manual of Acute Pain Management in Children. Edited by Ian McKenzie, Philip B Gaukroger, Philip Ragg, and T C K Brown. (Pp224; £25). Churchill Livingstone, 1997. ISBN 0443 305321 9.

Recent developments in identifying and understanding pain in children have led to greater interest in strategies designed to prevent and control this fundamental medical and nursing problem. This manual has been written by staff with a special interest in acute pain management, each contributing in areas of their own expertise, providing concise and easy to read information.

The design of the manual is such that it provides both medical and nursing staff with the knowledge and education necessary to manage children's acute pain in various situations and circumstances. Diagrams used throughout the manual aid the understanding of practical aspects of pain relief when used in conjunction with written instructions.

The pharmacological and non-pharmacological aspects of pain control and relief are included in great detail with chapters covering areas in the use of nerve blocks and epidural treatment. The rationale for their use and the education and management required for successful control of pain are identified as integral parts of the treatment.

Education and training issues are represented and the authors have acknowledged these as being continuous and pivotal in the successful management of pain.

The layout in which the information is presented makes this an accessible and important resource book for all health professionals involved in the management of acute pain in children.

DAVID SOUTHALL
Professor of Paediatrics, North Staffs Hospital,
Stoke-on-Trent, UK

Sleep Disorders: Diagnosis and Treatment. Edited by J Steven Poceta and Merrill M Mitler. (Pp 232; hardback \$99.50). Humana Press, 1998. ISBN 0 896 03527 1.

"Despite many remarkable advances in the study of disorders of sleep...this knowledge has not been well disseminated to the public nor to the physicians caring for them. Thus, although our knowledge base has increased

exponentially, sleep disorders remain a significant and undertreated public health problem."

This paragraph from the foreword of this book is undoubtedly true. Recent surveys in the US and UK have shown the meagre content of medical and other professional education about sleep and its disorders. This must mean that many treatment opportunities are lost to the serious disadvantage of the large section of the population who suffer from sleep problems, not least children who are physically ill or have a learning disability.

A number of recent books have helped to correct these deficiencies. Commendably, this one aims at clinical practice in primary care. This is not the most basic level at which a better understanding of sleep and its disorders is required—public opinion needs informing about which sleep problems should and can be treated. Such sleep problems, however, deserve a knowledgeable approach in primary care, with referral to more specialised services as necessary.

The 10 chapters include an initial account of the recognition and assessment of sleep disorders, followed by discussion of topics selected (it is claimed) for their special relevance to primary care. The strength of the various chapters is their essentially clinical content with attempts to promote a logical approach to diagnosis and treatment, together with useful case illustrations. On the other hand, the content inappropriately presupposes a familiarity with sleep disorders medicine. This is reflected in the somewhat unbalanced choice of chapter topics which includes "the uses of bright light in an office practice". Some of the content is pitched at different levels, including at times quite technical and specialised material. The emphasis is clearly on adult sleep disorders with just one chapter on "common sleep problems in children"—the organisation of which could be improved.

This book is not a particularly satisfactory guide for staff working in the typical primary care setting. Something more basic is required. However, much useful up to date information is provided and, in the last two chapters, important general principles are well stated (although again with an American and essentially adult patient emphasis). These are concerned with the need to improve standards of diagnosis and treatment for sleep disorders, the way such improvement might be achieved, and also the health and economic preventative advantages of doing so. The unlikely sounding Walla Walla Project in the US is described in which primary care physicians were taught the basics of diagnosing and treating sleep disordered patients. This instruction improved accurate diagnosis and treatment significantly. A similar exercise in the UK, involving patients across the whole age range, would be worthwhile.

G STORES
Department of Psychiatry,
Park Hospital, Oxford, UK