

LETTERS TO THE EDITOR

Cough, wheeze and sleep

EDITOR.—Rona *et al*¹ have related sleep disturbance to sociocultural factors associated with ethnicity and respiratory illness and concluded that these are important risk factors for sleeping disorders in childhood. We have recently completed a study examining the relation between nighttime cough and sleep in inner city children,² and found that although there is an association, it is very weak (regression coefficient 0.13, SE 0.036). Of 96 subjects eligible for the study, 65 (67%) were child co-sleepers or room sharers, 32 (33%) were from social class V, and English was not the first language of 29 (30%) families. We filmed children in their homes.³ Sleep behaviour was compared with the only other study using an objective measure of sleep. This was in a Canadian university town.⁴ No difference was found in the number of awakenings (median = 3), although the total length of time asleep (10 hours) was one hour longer than our children's sleep (9.1 hours). Sleep then seems to be similar across classes even though our children were coughing.

In a pilot study looking at the perception of respiratory symptoms, we asked 20 parents of recurrently wheezy children "How do you know when your child is wheezy?", and 13 gave as the main reason "because he/she coughs". Could the subjects in the study by Rona *et al* be considered wheezy because their parents heard them cough? Parents are not good at judging sleep and nocturnal respiratory symptoms in children when compared with objective measures,^{5,6} and obviously parents are asleep for part of the night themselves. It could be that some of Rona *et al*'s observations reflect parental waking because of their children's cough rather than wheeze, and because of their own sleep disturbance.⁷ Cough is better associated with atmospheric pollution than wheeze, which is related to atopy.⁸ Poor atmospheric conditions and overcrowding could cause children's cough and parental sleep disturbance. In summary, difficulties in sleep due to what parents perceive as "wheeze" could be considered normal waking in children as our study suggested. We believe there is a need for more objective observation of what goes on at night in families' homes.

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Obstructive sleep apnoea in children

EDITOR.—We agree that sleep disorders in children are an underrecognised problem and that at least one third of the children with severe problems may have coexisting physical or behavioural problems. However, it is surprising that Rona *et al*¹ make no mention of obstructive sleep apnoea syndrome (OSAS) as a significant cause of disrupted sleep and daytime morbidity in the children. "Sleeps poorly but lies quietly when awake" might be considered typical of OSAS, and the lack of improvement with age seen in this group may be in part result from the persistence of OSAS (although it is true that many cases may spontaneously improve owing to the regression of adenotonsillar hypertrophy from age 5 years onward). Snoring, a hallmark symptom of OSAS, is a very common symptom in children² and was not included in Rona *et al*'s questionnaire, but is easily recognised by most parents and may therefore have excluded many children with OSAS from the behavioural problems group. Parental perception of expiratory wheeze is not accurate (authors' experience) and is easily confused with inspiratory stridor and stertor, potentially exaggerating the impact of asthma in this group. In addition, nocturnal enuresis is a common association with OSAS³ and one that may be highly responsive to curative measures directed at OSAS.

OSAS is underrecognised in children (variously reported incidence approximately 0.7%) and, in addition to its disruptive effects on sleep pattern, it has a profound effect on daytime performance and may lead to irreversible pulmonary hypertension. It is readily diagnosed by polysomnography, and when not associated with craniofacial malformation or neuromuscular disease it can almost be totally cured by adenotonsillectomy.⁴ Greater awareness of this condition is needed.

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Dr Rona *et al* comment:

We believe that Davies and colleagues may have misunderstood our study—we did not ask parents whether their child's sleep disturbance was caused by wheezing. The explanatory variables used in our analysis were asked in the same questionnaire, but as separate items. Indeed, the questions on respiratory illness came before the item on disturbed sleep in our questionnaire. The cross sectional design prevented us from establishing a causal link, but the strength of the association and the increased risk of disturbed sleep with increasing frequency of wheezy symptoms is highly suggestive.

Rees and colleagues have highlighted an issue that we did not have in mind when the study was designed. In a recent review Greene and Carroll, although supporting the seriousness of the diagnosis of severe obstructive sleep disordered breathing, are uncertain about the clinical consequences and the management of less serious cases.¹ We suggest that the condition deserves research based on rather more than the personal experience, clinical series, and non-randomised studies implied in their letter.

- Greene MG, Carroll JL. Consequences of sleep-disordered breathing in childhood. *Current Opinion Pulmonary Med* 1997;3:456-63.

Men need masculinism

EDITOR.—Professor Davies¹ is entitled to his views on gender roles, although I do not share his opinions. Leaving aside the philosophical considerations, there are important and immediate practical issues to be faced. Today, most trainee paediatricians are female² and this clearly presents a challenge to the profession in adapting to inevitable changes in working practices for both the male and female consultants of the future. Fortunately, our specialty welcomes women and the difficulties of being a woman in a man's world are fading fast as we become the rule rather than the exception.

Perhaps more of a worry for us should be our sons' futures. We need to consider ways to develop their self esteem and pride in their masculinity, which they will need to sustain them as they are increasingly threatened by the superior performance of their female peers. Equipping our sons for survival in the world of equal opportunity may turn out to be one of the more important challenges of parenthood and education as we enter the 21st century.

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- Davies JA. Masculinism disguised as feminism. *Arch Dis Child* 1998;78:497-9.
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Randomised controlled trial of sucrose by mouth for the relief of infant crying after immunisation

EDITOR.—The work of Lewindon *et al* has highlighted an important and a simple way of relieving the pain of common procedures in infants.¹ The use of sucrose solution seems to be a safe, cheap, and effective alternative to

the use of conventional analgesics. However, using a highly concentrated solution of sucrose (75%) may only be possible in a research setting. Its use in a clinical context may be associated with important complications relating to the storage of the solution and the risk of bacterial contamination. Currently, we are involved in a similar study evaluating the effectiveness of a concentrated sucrose solution as an analgesic in infants. The risk of bacterial contamination has emerged as a major problem that could impede the routine use of sucrose solutions on a busy clinical ward. We found that the 10% solution sucrose prepared and stored in the usual way for oral medications has a very short shelf life. Significant bacterial contamination was noted only 24 hours after the preparation when solutions were stored in the normal ward refrigerator. The significant level of unwanted bacterial growth has made it necessary for the sucrose solution to be prepared on the same day of use.

These problems imposed a great restriction in the successful use of such solutions in the clinical setting. For the purposes of research, the daily preparation of sucrose solutions may interfere with the strict blinding of the operators unless special precautions are taken. It would be very useful to know whether these problems were encountered by Lewindon *et al* and what precautions were taken to reduce the risk of bacterial contamination and to ensure the complete blinding of the operators. For the clinical application of the research data and before recommendations can be made regarding the use of concentrated sucrose solutions in infants to relieve pain, the issues of the safety and prevention of bacterial contamination need to be addressed. In particular, it is necessary to evaluate and test the methods of preparing and storing the solutions and the use of preservatives, if any, before any definitive recommendations can be made.

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- 1 Lewindon PJ, Harkness L, Lewindon N. Randomised controlled trial of sucrose by mouth for the relief of infant crying after immunisation. *Arch Dis Child* 1998;78:453-6.

Dr Lewindon comments:

Abu-Arafah and colleagues highlight the importance of microbiological safety of solutions recommended for administration to infants. In our study the solutions were prepared daily by one of the investigators not involved in the immunisation process; the issue of bacterial contamination was not addressed. However, the food industry can verify that carbohydrate solutions in excess of 48% (wt/vol) will inhibit bacteriological growth¹ giving such solutions a reasonable shelf life. Only osmotolerant yeasts and molds could be expected to survive the high osmotic environment of a 75% solution and even these would not expect to thrive in such concentrations.¹ The careful preparation

(with sterile water) and subsequent handling of this solution should permit researchers and clinicians to use a "stock" solution with a shelf life of at least one week and probably longer. This latter supposition is certainly in need of further clarification and I thank Abu-Arafah *et al* for highlighting this neglected aspect of our recommendation.

- 1 Vanderzant C, Splittstoesser DF, eds. *Compendium of methods for the microbiological examination of foods*. 3rd ed. Washington, DC: American Public Health Association, 1992:1007-13.

Randomised controlled trial of sucrose by mouth for the relief of infant crying by immunisation

EDITOR,—We welcome the study by Lewindon *et al* that looked at the effect of an oral sucrose solution on infant distress following immunisation.¹ The authors are correct in their use of the term distress rather than pain as this is a more appropriate description of the behaviour observed. We note that there was a significant reduction in crying time, suggesting that oral sucrose reduces distress following immunisation.

We are, however, concerned about the use of the Oucher scale with infants. The Oucher scale is a self report tool that has been validated for use by children between the ages of 3 and 12 years who can speak.² It is used as a measure of pain intensity. The child points to the facial expression or number that reflects the intensity of pain they are experiencing. The Oucher has not been validated for use by adults who try and match the face of the infant to a photograph on the scale.

Pain assessment in young children and infants is difficult^{3,4} but possible with the appropriate use of pain assessment tools. It is, however, crucial that a tool appropriate for the age group and the type of pain is chosen. It is also essential that any pain assessment scale is used in the correct manner.⁴

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- 1 Lewindon PJ, Harkness L, Lewindon N. Randomised controlled trial of sucrose by mouth for the relief of infant crying by immunisation. *Arch Dis Child* 1998;78:453-6.
2 Beyer JE, Denyes MJ, Villarruel AM. The creation, validation and continuing development of the Oucher: a measure of pain intensity in children. *J Paediatr Nursing* 1992;7:335-46.
3 Horgan M, Choonara I, Al-Waidh M, Sambrooks J, Ashby D. Measuring pain in neonates: an objective score. *Paediatr Nursing* 1996;8:24-7.
4 Beyer JE. Key issues surrounding the assessment of pain in children. *Paediatric Perinatal Drug Therapy*. [In press.]

Dr Lewindon comments:

The comments by Choonara and Beyer as experts in the field of pain assessment in young children are well taken. In our study, the parents and the nurse were given the Oucher scale and specifically asked, "to rate your infant's level of distress during the immunisations on a scale of 0-100, 0 being no distress, 100 being the worst possible distress". It is this visual analogue rating that was subjected to analysis. Parents, in particular, found the pictures of facial expressions help-

ful in understanding their task but they were not asked to specifically match the face of the infant to the photographs.

Munchausen syndrome by proxy abuse perpetrated by men

EDITOR,—Meadow reports unusual illnesses and death of family pets in families studied.¹ Dogs or cats died in unusual circumstances, animals were presented to a veterinary surgeon with recurrent illnesses supposedly caused by poisoning, and in one case the family pets and child appeared to be poisoned with the same drug.

Although Munchausen by proxy is a well recognised syndrome presenting to the medical profession, a literature search by the Royal College of Veterinary Surgeons failed to find any reference to this syndrome in the veterinary literature. By highlighting this condition to our veterinary colleagues we may be able to establish interprofessional liaison to ensure earlier detection of Munchausen by proxy in both children and animals.

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- 1 Meadow R. Munchausen syndrome by proxy abuse perpetrated by men. *Arch Dis Child* 1998;78:210-16.

BOOK REVIEW

The Pediatric Lung. Edited by RW Wilmott. (Pp 331 hardback; DM228.) Birkhauser Verlag AG, 1997. ISBN 3-764-35703-7.

One of a series on respiratory pharmacology and pharmacotherapy, *The Pediatric Lung* deals with the drug treatment of lung disease in children. Topics range from long established medications such as cromones and corticosteroids to recent developments such as gene therapy, nitric oxide, and the pharmacological manipulation of non-CFTR ion channels in cystic fibrosis. These are dealt with comprehensively and systematically, and the editor has succeeded in imposing uniformity of style, which makes the book easy to read, and even easier to dip into. Each chapter is prefaced by a summary of its contents—which is just as well given the very brief index. For instance, accurately but obscurely, DNase (otherwise known as dornase α or Pulmozyme) is indexed under recombinant human deoxyribonuclease. Macrolide antibiotics, the non-antibiotic effects of which are discussed in the chapter on mucoactive agents, are not indexed at all.

The editor describes his remit as being "to cover the more common of the pediatric respiratory disorders in a way that will be useful for the clinician, and with enough detail to be of value to the clinical researcher." This is a

tall order, and has resulted in a compromise between the breadth required by the clinician and the depth required by the researcher, in which breadth is usually the loser. Despite the excellence of the individual chapters, paediatric respirologists will need to have more on their shelf than this volume if they are to cope with the drug management of the wide variety of lung disorders encountered in everyday practice. Thus, although the excellent chapter on the management of viral pneumonia will be useful, there is no section on the lung infections associated with AIDS. There is nothing on pulmonary hypertension other than a brief reference in the nitric oxide chapter. The use of theophylline in acute asthma is well described, but its use in chronic asthma is dismissed as "uncertain"—which some might say is not a bad summary, but rather dismissive of the vast numbers of papers that have reported the use of theophylline as maintenance treatment in children.

This slim volume in unlikely to grace the shelves of many British paediatricians. It is attractive and well written, but is limited in its scope and rather expensive. It will certainly be of value to the teacher wishing to save a trip to the library while preparing a lecture, or the budding researcher looking for an informed and up to date summary of current knowledge—for both, the extensive well chosen reference list at the end of each chapter will be extremely useful, provided there is a chapter on the relevant topic. As one of a series, it is likely to be followed by later volumes that will plug the gaps. Meantime, it is a book for the departmental library rather than the personal bookshelf.

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WESTMINSTER BRIEFING

The following items are from *Children & Parliament*, summer 1998. *Children & Parliament* is an abstracting service based on *Hansard* and produced by the National Children's Bureau. It covers all parliamentary business affecting children and is available on subscription via the internet (<http://candp.ncb.org.uk>). The *Children & Parliament* web site provides direct links to full text *Hansard*, government department sites, the sites of the Office for National Statistics, Ofsted, and other relevant organisations. For further details contact Lisa Payne, Editor, *Children & Parliament*, National Children's Bureau, 8 Wakley Street, London EC1V 7QE, UK (tel: +44 (0) 171 843 6000; fax: +44 (0) 278 9512). (The *Hansard* reference is given in parentheses.)

- Measures promoted by the government in an attempt to reduce suicides among young people include the piloting of a telephone helpline for young men, restriction of paracetamol and aspirin pack sizes, increased public and professional education about mental illness and depression, and improving mental health services.

(24 Mar 98, Col 135.)

- In areas where road bumps have been introduced there has been a halving of road accidents, and injury to children has fallen by 57%.

(26 Mar 98, Col 249.)

- Of 2500 children currently thought to be available for adoption only 140 are infants under 1 year of age. The government does not regard the setting up of a national independent and accountable adoption authority as being in the best interests of the children.

(26 Mar 98, Col 1334–1336.)

- The government is to aid the expansion of out-of-school child care to the tune of £300 million. It has also introduced a new working families tax credit which includes a child care tax credit worth up to 70% of child care costs with a limit of £100 a week for one child and £150 for two. Child care providers will be supported.

(Mar 98, Col 673–674.)

- Greater protection will be given to child witnesses. An interdepartmental review of their needs will soon be completed.

(30 Mar 98, Col 390.)

- The local provision of short term respite care breaks for disabled people and carers is being assessed by the Social Services Inspectorate who are expected to produce a report during 1998.

(30 Mar 98, Col 8–11.)

- From 5 October 1998 children under 16 will need their own passports unless they are already included on their parents' passports, in which case they will need their own once the current passport has expired. A main aim is to make child abduction more difficult.

(7 Apr 98, Col 173, 120.)

- Child care in local authority nurseries costs about £90 per week. The number of children in day nurseries in England was 29 800 in 1995 and 25 700 in 1996.

(6 April 98, Col, 128.)

- The Department for International Development is committed to promoting education for children in developing countries. It strongly supports key targets of equity for boys and girls in primary and secondary education by 2005 and primary education for all by 2015.

(6 April 98, Col 17.)

- Other priorities currently prevent the Department of Health and the National Health Service supporting research on the physiotherapy or occupational therapy needs of children in schools.

(2 April 98, Col 645.)

- Government figures indicate that girls under 16 are more than twice as likely to seek contraceptive advice from a family planning clinic than from a general practitioner. The main sources of advice are the Brook Advisory Centres, which are government funded.

(27 April 98, Col 49–50.)

- The European Community Parental Leave Directive, to be implemented by the government by December 1999, will entitle mothers and fathers to take three months' unpaid leave on the birth or adoption of a child. It will also provide for time off for urgent family reasons.

(27 April 98, Col 26.)

- England and Wales have one of the highest teenage pregnancy rates in the developed world, exceeded only by the United States.

(28 April 98, Col 23.)

- National curriculum requirements mean that all primary school teachers and all secondary school science teachers will be trained in drug (including alcohol) education. Drug and alcohol education already forms part of science studies for 7–11 year olds.

(28 April 98, Col 106.)

- The Department for Education and Employment is to publish a review of published research findings on educational programmes for children with autism during the summer of 1998. The Written Declaration of the European Parliament on the Right of People with Autism will be taken into account by the government in reviewing provision for all children with special educational needs. The Local Government Association is also commissioning research on educational interventions in autism.

(5 May 98, Col 279.)

- Some £300 million of government money has been targeted to set up after school clubs and it is hoped that a further 30 000 such clubs will be established over the next few years.

(6 May 98, Col 718.)

- The government holds the view that recruiting children under 15 to take part in armed conflict is a war crime and it has lobbied to bring it within the jurisdiction of the International Criminal Court.

(7 May 98, Col 83–84.)

- A sum of £35 million will go towards doing away with outside toilets in schools.

(7 May 98, Col 506.)

- The government is to consult on a proposal that it should be made illegal to sell gas lighter refills to children under 16.

(7 May 98, Col 934–940.)

- In 1995 the number of babies under 1 year adopted in the UK was 375.

(14 May 98, Col 133.)

- The Under Secretary of State for Health has been involved in discussions about the possibility of having a Children's Rights Commissioner. The second UK report on the implementation of the United Nations Convention on the Rights of the Child is to be published early in 1999.

(11 May 98, Col 39.)