clinically beneficial for infants with reflux due to a partial thoracic stomach.^{7,8} I would therefore require much more clinical evidence than is at present available to change my opinion regarding the value of this form of treatment for infants with gastro-oesophageal reflux due to a partial thoracic stomach. On the other hand, infants with gastro-oesophageal reflux but no partial thoracic stomach do not, in general, require to be treated by posture; thickening of the feeds is usually the only treatment needed.

References

- Carré JJ. Clinical significance of gastro-oesophageal reflux. *Arch Dis Child* 1984;**59**:911-2.
- Meyers WF, Herbst JJ. Effectiveness of positioning therapy for gastroesophageal reflux. *Pediatrics* 1982;**69**:768-72.
- Orenstein SR, Whittington PF, Orenstein DM. The infant seat as a treatment for gastroesophageal reflux. *N Engl J Med* 1983;**309**:760-3.
- Orenstein SR, Whittington PF. Positioning for prevention of infant gastroesophageal reflux. *J Pediatr* 1983;**103**:534-7.
- Jolley SG. The infant seat as treatment for gastroesophageal reflux. *N Engl J Med* 1984;**310**:527.
- Boix-Ochoa J, Lafuente JM, Gil-Vernet JM. Twenty four hour esophageal pH monitoring in gastroesophageal reflux. *J Pediatr Surg* 1980;**15**:74-8.
- Carré JJ. Postural treatment of children with a partial thoracic stomach ('hiatus hernia'). *Arch Dis Child* 1960;**35**:569-80.
- Carré JJ. Postural treatment of infants and young children with a hiatal hernia (partial thoracic stomach). In: Gellis SS, ed. *Gastroesophageal reflux*. Report of the 76th Ross Conference on pediatric research. Columbus, Ohio: Ross Laboratories, 1979:86-94.

Factors predisposing to abnormal pulmonary function after adenovirus type 7 pneumonia

Sir,

I appreciate that Sly and coauthors could label the morbilliform rash before adenovirus type 7 pneumonia only as a 'measles-like' illness.¹ It would be of interest, however, to review the data that stopped them making the diagnosis of measles. The four patients which the late W C Marshall and I described in 1976² had measles preceding crippling bronchiolitis and pneumonia due to adenovirus. Two eventually died from respiratory failure after prolonged illness, one now has a unilateral small hyperlucent lung (McLeod syndrome), and one has severe bronchiectasis and cor pulmonale. The diagnosis of measles was based on a typical illness, occurring at the same time as siblings and other contacts had measles. In fact, in one of our patients, and subsequently in a similar child under my care, the measles antibody response in the siblings was entirely normal. Yet the immunological responses to measles in these patients were abnormal, with low or undetectable concentrations of measles HI antibody in three. Early measles complement fixation titres were normal, however, though in one child they fell to undetectable values in nine months, which is unusual. Kipps and Kaschula³ have described six cases of fatal adenovirus pneumonia after measles in underprivileged non-white children less than 4 years of age. They described an additional four patients

whose fatal post-measles pneumonia was due to herpes virus. They postulated, like Warner and Marshall, that measles rendered the child immunodeficient, and susceptible to overwhelming secondary viral infection. Thus it is not surprising that among Sly's patients those with a 'measles-like' illness before adenovirus pneumonia had more severe sequelae.

References

- Sly PD, Soto-Quiros ME, Landau LI, Hudson I, Newton-John H. Factors predisposing to abnormal pulmonary function after adenovirus type 7 pneumonia. *Arch Dis Child* 1984;**59**:935-9.
- Warner JO, Marshall WC. Crippling lung disease after measles and adenovirus infection. *Br J Dis Chest* 1976;**70**:89-94.
- Kipps A, Kaschula ROC. Virus pneumonia following measles: a virological and histological study of autopsy material. *S Afr Med J* 1976;**50**:1083-8.

J O WARNER
Brompton Hospital,
London SW3 6HP

Dr Sly comments:

I thank Dr Warner for his interest in our paper.¹ We described a worse prognosis for children with a previous 'measles-like' illness and this diagnosis was based on historical evidence provided by parents and local medical practitioners. No measles serology was available.

I agree with Dr Warner that it is likely that these children suffered from measles before contracting adenovirus infection but as this could not be proved, it was thought prudent not to claim that the illness was measles. I do not believe that this lack of proof weakens the message of the paper, that is that adenovirus type 7 pneumonia is associated with long term pulmonary sequelae and that young children or those with a history of a prior 'measles-like' illness are at increased risk.

Neck radiographs in croup syndrome

Sir,

I read Dr Goel's letter¹ with interest and a little surprise. The main concern with croup syndrome in Britain, where most cases have acute laryngotracheobronchitis, is to avoid missing cases of acute epiglottitis, because they are more dangerous and require more vigorous management. On top of the clinical pointers (for example shorter history, more severe obstruction, toxic child, high fever), may I suggest that the radiograph and the laryngoscope are alternative ways of doing this. Which is chosen will depend on circumstances. Direct laryngoscopy in acute epiglottitis carries a risk of precipitating complete obstruction with cardiorespiratory arrest.² It must only be done by a doctor skilled in intubation, with correct equipment and staff at hand;³ otherwise catastrophe may ensue.⁴ Because of the risk, some take lateral soft tissue radiographs of the neck to show the size of the epiglottis⁵ instead. Evidently the former is practised in Glasgow. The latter was routine in

Aberdeen when I was there a few years ago. Handling for radiography is probably less risky than direct inspection.

By excluding from radiological examination the five cases of acute epiglottitis the Glasgow workers have excluded the five cases in which neck radiographs would have been diagnostic, so it is not surprising that Goel concludes that neck radiographs were unhelpful.

References

- ¹ Goel KM. Are neck radiographs necessary in the management of croup syndrome? *Arch Dis Child* 1984;**59**:908.
- ² Illingworth RS. *Common symptoms of disease in children*. 7th Ed. Oxford: Blackwell Scientific Publications, 1982:152.
- ³ Tooley WH, Lipow HW. Inspiratory obstruction. In: *Pediatrics*. 17th ed. Rudolph AM, ed. Norwalk, Connecticut: Appleton-Century-Crofts, 1977:1424.
- ⁴ Medical Defence Union Annual Report. London: 1982:16-17.
- ⁵ Forfar JO. Acute epiglottitis. In: Forfar JO, Arneil GC, eds. *Textbook of paediatrics*. 3rd ed. Edinburgh: Churchill Livingstone, 1984:538.

F N PORTER
Grantham and Kesteven General Hospital,
Grantham NG31 8DG

Dr Goel comments:

I was interested to read Dr Porter's comments on my letter.¹ I think most would agree that the diagnosis of acute epiglottitis should be made on the history, general appearance of the child, and the quality of stridor. A lateral radiograph of the neck as suggested by Dr Porter is a useful diagnostic investigation provided expert radiological interpretation is available. This is not always the case, especially at night. Furthermore we would not recommend this procedure in infants in whom acute epiglottitis is suspected simply because the handling necessary to obtain adequate films may be very disturbing to the child and may also precipitate acute obstruction. In view of this, if there is doubt about the diagnosis direct inspection is the only appropriate method. I agree entirely with Dr Porter that under no circumstances should this be carried out unless there are adequate facilities available to relieve acute obstruction immediately should it occur.

In this hospital routine radiographs of the neck and chest are now carried out only to exclude the possibility of a foreign body inhalation and are not included in the work up of croup syndrome.

Parental reaction to auditory response cradle testing

Sir,

I was interested to read the paper by Drs Bhattacharya, Bennett, and Tucker on the follow up of newborn babies tested with the auditory response cradle.¹ The devastating consequences of delayed diagnosis of hearing loss to language and speech development are only too well known. I should like to ask how parents accepted the news that their babies might be unable to hear? Were many

frustrations expressed by the parents with regard to possible over optimistic expectations raised as a result of such an early diagnosis of hearing loss without immediately available treatment? So many of the problems of screening do not relate to the test itself but to coping with the many consequences, medical, psychological, and social, of making a diagnosis.

Reference

- ¹ Bhattacharya J, Bennett MJ, Tucker SM. Long term follow up of newborns tested with the auditory response cradle. *Arch Dis Child* 1984;**59**:504-11.

D P DAVIES
Chinese University of Hong Kong,
Shatin, N.T., Hong Kong

Dr Tucker and co-workers comment:

We thank Professor Davies for drawing attention to the aspect of parental reaction to auditory response cradle testing. In our paper, we did not discuss this in any detail, but it is an essential part of our general approach with the parents. At the onset of the testing the parents are informed that this is a screening technique only and not a diagnostic one, and should the baby fail the cradle on two occasions further diagnostic tests will be done almost immediately to confirm whether there is indeed hearing loss. As we are able to confirm the diagnosis within a day or two of the cradle test, we have been able to observe the parents' reactions to this early diagnosis and there were few adverse comments by any of the parents concerned. The ability to make an early diagnosis of hearing loss without being able to provide treatment is self defeating, so we have researched this aspect in some detail, and try to provide amplification as early as possible. We would agree with Professor Davies completely in his philosophy inherent in making an early diagnosis, and we therefore spend considerable time discussing the medical, psychological, and social implications of such a diagnosis with the parents. The advantage of reliable early diagnosis together with the ability to offer immediate treatment outweighs all the other disadvantages, but we remain deeply concerned and involved in helping parents accept the diagnosis.

Selective bronchial intubation for pulmonary emphysema

Sir,

During the past 10 months we have encountered in our neonatal unit five preterm infants (mean birthweight 1.24 kg, range 0.94 to 1.64 kg; mean gestation 29 weeks, range 27 to 30 weeks) with unilateral pulmonary interstitial emphysema. Our experience with selective bronchial intubation as a treatment for this condition is not as encouraging as that reported by Drs Campbell, Zarfin, and Perlman.¹

Three of the five infants were treated with selective intubation. One infant was suffering from a right sided and two from left sided lesions. A total of four selective intubations were carried out for a mean duration of 60