Correspondence

Intervention after birth asphyxia

Sir,

In his article on this subject Dr Whitelaw rightly stresses the reality that 300–400 children per year are surviving birth asphyxia with serious brain damage.¹ He also mentions that withdrawal of intensive care in the worst cases is viewed as both ethical and humane by many paediatricians. He then questions whether we are being too negative.

His final sentence fills me with alarm. He suggests trials of newer treatments in those infants with the worst prognosis. While this may be most satisfactory for the scientist, I would suggest it is least satisfactory for the humanitarian as it is precisely these infants who would be eligible for a policy of withdrawal of intensive care. If a trial is undertaken and infants receive maximal support for the duration of the trial, there is a high risk that a negative therapeutic result will result in an increased survival of severely brain damaged infants. This appears to have already happened in Eyre's work on thiopentone induced coma to which Dr Whitelaw refers. This is an area where scientific and therapeutic enthusiasm can be a vice not a virtue.

Surely Dr Whitelaw's recommendations should be reversed and newer treatments should only be used on those mild and moderately affected infants who seem destined to survive. This will have the disadvantage that differences will be harder to prove, but will have the advantage of being perfectly justifiable on ethical grounds.

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Dr Whitelaw comments:

I am grateful for Dr Speight's thoughtful contribution. I cannot agree with his view that trials of new treatments in birth asphyxia should be restricted to mild and moderate cases. Such infants have, with current treatment, a good outcome in nearly all cases. To use new agents such as calcium channel blockers or glutamate antagonists in infants with a good prognosis is not justified as there is a real risk of the treatment itself having adverse effects. Research conferences have already heard anecdotal reports of circulatory depression with calcium channel blockers.

To use a new treatment with the possibility of adverse but manageable effects is surely more justifiable in desperate clinical situations where current therapy usually fails. Thus I favour trials of new treatments being limited to infants who have a bad prognosis by objective criteria.

Let us examine Dr Speight's suggestion that one possible outcome of such a trial of new agents could be increased

survival of severely brain damaged infants. It would be essential for parents of infants eligible for such a trial to be fully informed about the range of likely outcomes and the available options. Parents would be free to refuse entry to the trial and free to withdraw at any time. Just as parents (or staff) are free to discuss withdrawal or support now, so would they be in a trial.

The experimental evidence suggests that the 'therapeutic window' during which intervention is likely to protect the brain, is probably less than 48 hours and therefore prolonged intensive care support need not be part of the trial protocol. Thus a decision to stop treatment could be made after a few days if parents and staff were unanimous on the failure to show any improvement.

Reference

- ¹ Whitelaw A. Intervention after birth asphyxia. *Arch Dis Child* 1989;64:66–80.

Intraspinal tumours

Sir,

This leader usefully stresses the subtle, often insidious presenting features of intraspinal tumours.¹ However, there are a number of important omissions and errors of fact, as follows:

(1) Space occupying lesions below L1–2 (L2–3 in infants) cause cauda equina compression, not spinal cord compression. The distinction is important because the risk of myelography, and of lasting neurological handicap, is less in the case of cauda equina compression. In making management decisions, there is a lesser degree of urgency.

(2) In the case of neuroblastoma the lesion causing cord/cauda equina compression is most commonly the *primary* tumour but, in 20–40% of cases a secondary (metastasis) is responsible.² This distinction is critical because the treatment strategy (see below—No 6) may be quite different in these two sets of circumstances.

(3) There is no 'predilection' for neuroblastoma to present in the newborn period: in fact, the peak (median) age incidence is in the third year of life.³ It is, however, true to say that neuroblastoma is the commonest malignant tumour occurring in the neonatal period.

(4) Dr Cole's claim that '... refinements in radiotherapy have led to an ... improved outlook, especially in intramedullary tumours' is unreferenced (the three references cited are for improved *surgical* techniques). Though refinements in radiation therapy technique may reduce 'late effects',⁴ to which young children are particularly vulnerable,² we would like to know the evidence for this statement, which implies improved survival.

(5) The important role of radiotherapy in the palliative