presentation were delivered vaginally and spontaneously, suggesting a pituitary insult during vaginal delivery. Isolated growth hormone deficiency was also often found in association with induction of labour. These data and those reported elsewhere indicate that even a mild birth trauma may result in growth hormone deficiency.3,4

We therefore stress that non-cephalic presentations are definitely an important risk factor for the subsequent development of growth hormone deficiency. Postnatal growth should be monitored carefully in these infants in order to detect early growth impairment due to growth hormone deficiency.

References


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Sir,

We read with interest the paper of Herber and Kay1 about the perinatal risk factors for the development of growth hormone deficiency.

We report a study of 99 children (72 boys and 27 girls) admitted to our clinics with growth hormone deficiency. The mean (SD) age of boys was 11.5 (4-1) years and that of girls 11.7 (4-7). The ratio of boys to girls was 2:67:1, similar to that reported by Rona and Tanner.2 In our study the percentage of premature deliveries was higher than that in the general population (p<0.01), confirming the observation of Herber and Kay. We did not, however, find a significant difference between the gestational ages of boys and girls. As previously reported, we found a high percentage of breech deliveries (39%).3 The mean birth weight of children delivered at term was 3310 g (0-65) for boys and 3070 g (0-60) for girls. Compared with national data, girls were significantly lighter (p<0.01), and boys had a mean birth weight within the normal range.

In conclusion, our experience in an Italian cohort partly confirms and adds further evidence to the findings obtained by Herber and Kay in the United Kingdom.

References


Psychological adjustment and diabetic control

Sir,

I was interested to read the evidence presented by Fonagy et al suggesting that indications of psychological disturbance in diabetic children and their parents predicted lower concentrations of glycosylated haemoglobin in the children’s blood.1 We published a study last year2 in which we similarly showed that contrary to expectation and popular dogma diabetic children who seemed potentially depressed and had low self esteem had better glycaemic control as reflected by the concentration of glycosylated haemoglobin. Apart from the central finding that poorer psychological indices are associated with better glycaemic control, there are two other similarities between the studies.

Specific symptoms of emotional compared with behavioural disturbance correlate better with low glycosylated haemoglobin concentrations. We also noted an external locus of control in this subgroup of children (a person with an ‘external’ locus of control believes that his own actions have little effect on his destiny, and that other people or other forces control what happens to him). Fonagy et al showed that diabetic children who were perceived as being less independent and less responsible for their own treatment had better glycaemic control.

The clinical lessons from these studies, however, are difficult to decipher. I am sure one should still strive for excellent biochemical control on the one hand and good diabetic adjustment (the psychosocial condition of the child) on the other and not assume that the two objectives are mutually exclusive. Perhaps those who seem to achieve good biochemical control should be assessed in terms of emotional well being and happiness and given appropriate psychological support and advice, and one should intensify efforts to improve the techniques of the happy well adjusted diabetic who has a high glycosylated haemoglobin concentration. I am, however, doubtful whether there will be a pronounced improvement in the management of diabetic children until the physical means of treatment are not dependent on such a high and unnatural degree of compliance.

References


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Dexamethasone in bronchopulmonary dysplasia

Sir,

Dexamethasone is useful for the treatment of bronchopulmonary dysplasia in premature infants and it is likely that its use will increase. Several side effects have been reported, including an increased incidence of infection. Because glucocorticoids are known to produce neutrophilia in adults (probably through a combination of increased release of neutrophils from the marrow, and prolongation of their circulating half life), and because neutrophilia is sometimes an indication of infection in the newborn, it is possible that a false suspicion of the presence of infection may be raised in babies being treated with steroids. We describe the neutrophil counts of eleven babies whom we have treated with steroids during the past year.

Each baby was treated with 0.6 mg/kg/day of dexamethasone for one week. The table shows the neutrophil counts before and during the period of treatment with steroids. In four babies a pronounced neutrophilia (>20×10⁹/l) developed during treatment. In three of these the blood film was reported as shifted to the left with a band neutrophil:neutrophil ratio greater than 0.25:1. In two babies a left shift with an increase in band neutrophil:neutrophil ratio occurred in the absence of neutrophilia. None of these babies showed other signs of infection, no pathogens were grown on serial blood cultures, and C reactive protein estimations yielded negative results.

We recognise that neutrophilia alone is not a sensitive indicator of infection however pronounced it is, and an increase in the proportion of immature neutrophils is bound to raise the suspicion of infection. We report our experience to make the point that this may occur as a result of the treatment of premature babies with steroids as it does in adults.

References


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Giving drugs per rectum for systemic effect

Sir,

I read the annotation by Dr Choonara with interest.1 To prevent paraldehyde given rectally, however, from being prematurely considered as part of the history of anti-convulsant treatment I should like to make the following points.

In Canada and the United States of America it remains current practice to give paraldehyde rectally in the treatment of status epilepticus,2 3 and 83% of the dose given this way is absorbed.4 Absorption after intramuscular administration depends on blood flow within the muscle; in a child having convulsions this may be reduced and absorption therefore delayed.

A 50% solution of paraldehyde given rectally infrequently produces intestinal irritation and rarely causes perforation of the large intestine. An intramuscular injection results in extreme pain at the site of the injection and sterile abscesses, fat necrosis, sloughing of the skin, and muscle irritation have occurred even when the drug is injected deep within the muscle. Severe and permanent nerve damage has occurred when the drug has been injected too close to nerve trunks.5 The frequency and severity of these complications militate against the use of paraldehyde intramuscularly. Finally, paraldehyde produces less respiratory depression than do the benzodiazepines.

In an emergency department in which intravenous access is not readily available, an emulsion or solution of diazepam given rectally may well be the preferred treatment of status epilepticus. Paraldehyde given rectally offers a safe and effective alternative. There is also

Table Neutrophil counts in 11 babies treated with steroids

<table>
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<tr>
<th>Case No</th>
<th>Gestation (weeks)</th>
<th>Age (weeks)</th>
<th>Maximum neutrophil count during seven days before treatment with steroids (×10⁹/l)</th>
<th>Maximum neutrophil count during treatment with steroids (×10⁹/l)</th>
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</tr>
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</table>

*One baby received two courses of steroids; †total white cell count; ‡baby developed septicaemia.