

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

- Herber SM, Kay R. Aetiology of growth hormone deficiency. *Arch Dis Child* 1987;**62**:735-6.
- Van den Broeck J, Vanderschueren-Lodeweyckx M, Malvaux P, et al. Growth hormone deficiency: a hidden obstetrical trauma? *Eur J Obstet Gynecol Reprod Biol* (in press).
- Rona RJ, Tanner JM. Aetiology of idiopathic growth hormone deficiency in England and Wales. *Arch Dis Child* 1977;**52**:197-208.
- Steedijk R. Diagnostic and aetiological features of idiopathic and symptomatic growth hormone deficiency in the Netherlands. *Helv Paediatr Acta* 1980;**35**:129-39.

M VANDERSCHUEREN-LODEWEYCKX, G MASSA, and
E EGGERMONT
Department of Paediatrics,
UZ Gasthuisberg,
B-3000 Leuven, Belgium

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

- Herber SM, Kay R. Aetiology of growth hormone deficiency. *Arch Dis Child* 1987;**62**:735-6.
- Rona RJ, Tanner JM. Aetiology of idiopathic growth hormone deficiency in England and Wales. *Arch Dis Child* 1977;**52**:197-208.

- Bonati B, Morabito F, Della Casa L, Nicoletti I. *Difetti dell'accrescimento staturale*. Rome: Edizioni Pozzi, 1980.

A SARTORIO
Professor of Endocrinology,
School of Medicine, University of Milan,
Milan, Italy

G RIPAMONTI and F MORABITO
Italian Auxological Centre,
Milan, Italy

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

- Fonagy P, Moran GS, Lindsay MKM, Kurtz AB, Brown R. Psychological adjustment and diabetic control. *Arch Dis Child* 1987;**62**:1009-13.