Correspondence

Anaemia in childhood coeliac disease

Sir,

There is considerable variation in the reported incidence of anaemia in childhood coeliac disease (Hamilton *et al.*, 1969; Walker-Smith, 1975). Both iron and folic acid deficiency may be present, but how often is not certain, and the value of red cell folate as a screening test is controversial. With these problems in mind, we examined the records of 91 children aged 2 months to 9 years, who had coeliac disease confirmed by jejunal biopsy over a 10-year period (1966-76) at the Bristol Children's Hospital.

The Figure shows the haemoglobin levels of children with coeliac disease and indicates which of these children had normal and which had low red cell folate levels (normal range of haemoglobin, Lascari, 1973). 37% of children were anaemic at diagnosis. The incidence of anaemia will depend on the population and the definition of anaemia. The incidence varies from 19% (Walker-Smith, 1975) to 80% (Hamilton *et al.*, 1969). Our results show that the incidence of anaemia is affected by the age distribution of the children at diagnosis. Mean haemoglobin was lower, and incidence of anaemia much greater

(16/23 compared with 18/68, $P = <0.05$) in children of at least 2 years. The reason for this difference with age is not clear. The duration of the illness before diagnosis may be important because of the time needed to deplete body stores of iron before erythropoiesis is effected. The mean duration of symptoms was much longer (184.4 weeks compared with 16 weeks) in the older children.

Coeliac children, whether they are anaemic or not, are likely to have low serum iron levels at the time of diagnosis. 87% (40/46) serum iron estimations were $<12 \mu\text{mol/l}$ ($<67 \mu\text{g}/100 \text{ ml}$), and percentage saturation of transferrin was below 16% in 93% of estimations. Blood film examinations showed that all anaemic children had moderate or pronounced red cell hypochromia. There was little morphological evidence of megaloblastic change. Three older children, all with low red cell folate levels, had some macrocytic red cells but hypersegmented neutrophils were not seen. Half (9/18) of red cell folate estimations in anaemic children were normal. Red cell folate is a poor screening test for childhood coeliac disease because half (17/34) of the estimations were normal in coeliac children at diagnosis.

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Figure Haemoglobin levels in 91 children with coeliac disease.

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Coxsackievirus type A16 infection in a neonate

Sir,

Coxsackievirus type A16, commonly associated with the characteristic syndrome of hand, foot, and mouth disease, is an unusual infective agent in children under one year of age, particularly in the neonatal period. A short non-specific illness in a newborn baby was shown to be associated with hand, foot, and mouth disease in his mother, and Coxsackievirus type A16 was recovered from both.

Case report

A 3-week-old baby boy was admitted with a 24-hour history of drowsiness and refusing feeds. Delivery had been normal at 35 weeks' gestation after premature rupture of membranes and intermittent labour pains for 10 days. Birthweight was 2.7 kg, and the baby had been nursed in the special care unit for 10 days because of a feeding problem associated with mild jaundice. Breast feeding had been maintained.

He was a well nourished but drowsy and slightly jaundiced infant; temperature 34.6°C; Dextrostix 25mg/100 ml. A full infection screen failed to show any focus of infection, and a provisional diagnosis of cold injury was made. It was found that his mother had been ill for 4 days previously, with a febrile 'flu-like' illness, associated with painful ulceration of her mouth, feet, and hands. Coincidentally with the infant's illness, a sibling also had nonspecific malaise.

Coxsackievirus type A16 was grown in monkey-kidney tissue cultures from maternal throat swab and vesicle fluid, and from the infant's throat swab; the infant's CSF was acellular and sterile.

The infant initially required tube feeding, and was nursed in an incubator until his temperature rose to

normal. He was discharged home clinically well 5 days later.

Coxsackievirus type A16 infections are most commonly associated with hand, foot, and mouth disease, but have also been found in encephalitis, meningitis, myocarditis, and pericarditis. The highest incidence is in the 1- to 3-year-old age group (Gamble, 1962), and the incubation period is short, between 3 and 6 days. The disease is highly contagious, primary cases occurring in children, and spreading horizontally from sibling to sibling, and to parent.

The present case is interesting with regard to the age of the patient and the symptoms, which were relatively mild and atypical. Previously, neonatal infection with this agent has been reported in association with fatal myocarditis (Wright *et al.*, 1963; Golgberg and McAdam, 1965), but neonatal infections are rare, probably because of protection by maternal antibody (Gear, 1958; D. R. Gamble, 1977, personal communication). There are no previous reports of this infection being acquired post-natally from the mother. In this instance breast milk was not examined virologically, which might have shown the route of transmission.

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Bronchodilator drugs and young children

Sir,

In their paper (*Archives*, 1978, **53**, 532), Lenney and Milner concluded that wheezy children under age 18 months did not respond to treatment with nebulised salbutamol, as measured by respiratory resistance or thoracic gas volume. They also quoted two other studies (Radford, 1975; Rutter *et al.*, 1975) which had similar conclusions. All these studies were performed in the recovery stage of an acute attack. In my experience, at the height of an attack, in the most severe stage, two-thirds of infants under one year show improvement in auscultatory findings when treated with nebulised salbutamol or isoetharine (König, 1978). Although no pulmonary function tests were done on infants of this age, there was a significant reduction in respiratory rate and dyspnoea score.