Symptomatic zinc deficiency in a breast-fed infant

Sir,

Like Ahmed and Blair\(^1\) we were treating an entirely breast-fed infant with symptomatic zinc deficiency at the time of publication of the paper by Aggett et al.\(^2\) We had hoped that our patient’s symptoms were a transient manifestation of postnatal deficiency but at age 1 year she has now relapsed twice and must be considered as a case of acrodermatitis enteropathica.

Case report

A girl was born at 32 weeks’ gestation weighing 1620 g. There were neonatal problems including a superficial pustular abdominal skin rash (Staphylococcus aureus) which desquamated after treatment. On the special care baby unit she was fed almost exclusively on breast milk and was discharged fully breast feeding 6 weeks after birth.

Two weeks later an eruption started on the neck and perianal regions. From these two sites the eruption spread by lateral extension to affect the face, particularly around the mouth, lower abdomen, gluteal cleft, and upper inner thighs. The toes were also affected. At its onset (and at times of relapse) the mother described the eruption graphically as looking like a burn and seeming sore; the skin became crinkled and then started to peel. On examination the eruption consisted of two large sheets affecting the above sites which were remarkably symmetrical. The edges were scaly and crusted while the skin of the central areas was returning to normal. The nails and hair seemed to be unaffected. Local treatment with a potent steroid-antibacterial-antifungal ointment was effective initially but when stopped the eruption recurred, she became intensely irritable, and stools were loose. At 15 weeks the infant’s serum zinc was 5·8 \(\mu\)mol/l (normal 8·4–23·0), the mother’s serum zinc was 11·4 \(\mu\)mol/l (normal) and her breast milk zinc was probably low at 5·2 \(\mu\)mol/l.\(^3\)

The skin eruption and the baby’s demeanour improved strikingly within 24 hours of starting zinc sulphate 50 mg three times a day. Treatment was stopped after 5 weeks when the serum zinc was normal but 8 weeks later she relapsed and the zinc level had fallen to 5·6 \(\mu\)mol/l. Rapid clinical response occurred when zinc sulphate was reintroduced. A second relapse and response has occurred at age 12 months.

Unlike Aggett’s case, our patient appears to be permanently zinc-dependent, but it is important again to stress that fully breast-fed (preterm) infants can show overt signs of zinc deficiency and that the skin eruption has a characteristic appearance.

References


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