Correspondence

Research ethics

Sir,

The councils of the Medical Protection Society and the Medical and Dental Defence Union of Scotland have considered the guidelines which emanated from the Working Party set up by the British Paediatric Association.¹ In the opinion of both councils these guidelines constitute a most valuable contribution towards the solution of the problem of the apparent conflict between the rights of the individual child and the need for paediatric research in the interests of all children.

Reference

- 1 British Paediatric Association Working Party on Ethics of Research in Children. Guidelines to aid ethical committees considering research involving children. *Arch Dis Child* 1980; 55: 75-7.

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Water intoxication by the oral route in an infant

Sir,

We read with interest the Short Report by Etzioni *et al.*¹ and we wish to say that cystic fibrosis can resemble water intoxication in infants, especially in countries with warm climates—such as Greece and Israel. During the last 16 years 10 infants with cystic fibrosis have been admitted to our unit with hyponatraemia and hypochloraemia.

A typical case report concerns a 27-month-old girl, born after a normal pregnancy and delivery, the third child of the family. The first child had developed vomiting and dehydration at age 13 months and died in hospital within 5 hours of the onset of the illness. His development had been normal (weight 13 kg, 97th centile). The second child, likewise of normal development, had died suddenly in a private clinic at age 3 months with a presumptive diagnosis of septicaemia. The third child thrived until 14 months old when she suddenly developed vomiting,

lethargy, and convulsions. Examination showed a well-nourished child who reacted weakly to painful stimuli and was unconscious for short periods. The following investigations were normal: haemoglobin, cerebrospinal fluid, urine microscopical examination, urinary chloride, blood, throat, urine, and stool cultures, blood sugar, serum phosphorus, serum bicarbonate, and serum potassium—the last two on many occasions.

Abnormal investigations were: calcium 7.8 mg/100 ml (1.9 mmol/l), serum sodium 118-128 mmol/l, and serum chloride 62-85 mmol/l on four occasions, white cell count $12.5-20.0 \times 10^9/l$ on 3 occasions with an increased polymorph count.

The infant was treated with intravenous 0.9% isotonic sodium chloride, hydrocortisone, and antibiotics. She improved in 24 hours and started extra salt by mouth. Hydrocortisone was stopped. She was discharged after one week taking only added salt by mouth. Serum electrolytes were normal. No firm diagnosis had been made. For 4 months she remained well on salt which was then stopped. Eight months later, at 27 months, she again presented with the same sudden clinical picture of vomiting, dehydration, and collapse. Biochemical findings and treatment were the same as on the first admission. Sweat tests were abnormal (sweat chloride 100 and 120 mmol/l), and a diagnosis of cystic fibrosis was made (2 further sweat tests a year later were abnormal also).

The patient is now 16 years old and takes extra salt by mouth without pancreatic enzymes. She has had no further problems.

We suggest that Etzioni *et al.* did not exclude in their patient the possibility of an atypical presentation of cystic fibrosis. In well-nourished infants with unexplained hypochloraemia, cystic fibrosis should be excluded. Barbero and Sibinga² reported a 5-year-old patient who presented for the first time with hypochloraemia. Pancreatic enzymes in their patient were normal, but sweat tests were not.

References

- 1 Etzioni A, Benderley A, Levi Y. Water intoxication by the oral route in an infant. *Arch Dis Child* 1979; 54: 551-3.
- 2 Barbero G J, Sibinga M S. The electrolyte abnormality in cystic fibrosis. *Pediatr Clin North Am* 1964; 11: 983-1001.

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