that omphalocele could be inherited. In the present family omphalocele occurred only in male children and both male siblings of the 2nd generation were affected. All the children in the 3rd generation were female and none had omphalocele. Both male siblings in the 4th generation had omphalocele.

The distribution of the defect in this family suggests an X-linked recessive inheritance with the males being affected and the females acting as carriers.

References

Correspondence to Dr S. Havalad, Department of Paediatrics, Southmead General Hospital, Westbury on Trym, Bristol BS10 5NB.

Nonaccidental poisoning in childhood

J. B. G. WATSON, J. M. DAVIES, AND J. L. P. HUNTER
Children’s Hospital, Sheffield, and Scartho Road Hospital, Grimsby

SUMMARY A boy aged 7 years 10 months was admitted to hospital on several occasions in an unconscious state with twitching and apnoeic episodes. Initial investigations failed to show a specific cause. During his time in hospital he had recurrent episodes of loss of consciousness and, on the last occasion, hypotension and ventricular tachycardia. A diagnosis of imipramine poisoning was established by the presence of imipramine in stomach washings and blood. The drug was being given to the child, both at home and in hospital, by his mother. The possibility of nonaccidental poisoning must be considered if there is no obvious cause for a child’s illness. In this case the mother responded to psychiatric treatment.

The syndrome of child abuse incorporates a wide range of features including nutritional and emotional deprivation and violence. However, reports of non-accidental poisoning are relatively rare. Meadow (1977) and Rogers et al. (1976) stated that occasionally parents may assault their children by administering a drug overdose. We describe the case of a child who was systematically and deliberately given toxic doses of a drug for a period of 2 months before the cause could be proved.

Case history
A boy aged 7 years 10 months was admitted to Scartho Road Hospital, Grimsby, in an unconscious state. He was twitching and had apnoeic episodes. Investigations at that time, including a full blood count, blood urea and electrolytes, and cerebrospinal fluid, were normal. He recovered consciousness over a period of 48 hours and was well on discharge from hospital 14 days later. At that time his parents, in response to specific questioning, denied that there was any possibility of the child having had an overdose of drugs. The inquiry was specific as the patient had been treated for enuresis in 1974, 1976 and, in the month before this illness, with amitriptyline. After discharge he vomited each day and was readmitted to hospital in a drowsy but rousable state one month later. He was treated with intravenous fluids for mild dehydration and his level of consciousness gradually improved. During the next week while in hospital, he had episodes of drowsiness and disorientation associated with bizarre jerking of eyes and limbs. These episodes occurred mainly in the evenings after his mother had visited him. He was referred to Dr J. Lorber at the Sheffield Children’s Hospital for further assessment. At the time of transfer he was drowsy and had writhing movements of the limbs. There were no other neurological abnormalities. Again, his parents specifically denied that he had had any access to toxic drugs. He fully recovered within 12 hours of admission, and therefore no further investigations were carried out.

He was discharged but readmitted 12 days later because of gradual loss of consciousness during the previous 24 hours. He was unconscious, had myoclonic twitching of his limbs, nystagmus, hypotension,
and ventricular tachycardia (Fig. 1). In consultation with the general physician (D.B.C.) he was treated with synchronised DC currents 75, 100, and 200 joules without effect. The ECG reverted to normal (Fig. 2) after IV practolol and lignocaine. Treatment with IV lignocaine was continued for 24 hours. He gradually regained consciousness and was symptom-free within 3 days. Blood samples taken at the time of admission did not contain amitriptyline. 48 hours after he had become symptom-free he had further symptoms and on this occasion blood and stomach washings showed imipramine, which is the active constituent of Tofranil, to be present, together with its major metabolite desipramine, in the following amounts: stomach wash: 0.5 mg/100ml; blood: 0.15 mg/100 ml. Such a blood level could only be reached by the ingestion of several 25 mg Tofranil tablets.

On this occasion the mother admitted that she had been giving large doses of imipramine to her son, both at home and in hospital. The drug had been prescribed for her own use.

**Discussion**

The child's mother was found on psychiatric assessment to have a character disorder with superimposed depression. A baby girl had died suddenly just before our patient was conceived and this appeared to be the trigger factor which culminated in the administration of drugs to our patient. This projection and defence against the reality of the boy not being her 'dead daughter' was thought to lead to her giving drugs to the boy to reinforce his feminine and infantile traits and, failing this, to ensure his death just as her baby girl had died. The mother was confined to a psychiatric hospital after the incident and her depressive symptoms responded to treatment.

The father was supportive throughout the period of his wife's hospital treatment. The boy returned home and after a long period of psychotherapy the mother is now also at home and under close supervision.

Nonaccidental poisoning is an unusual but potentially lethal form of child abuse. The patient may present with a variety of symptoms depending on the drug, and an awareness of the possibility of poisoning in any patient with unexplained symptoms is vital. It is not always possible, as it was in this case, to ascertain why such deliberate poisoning may occur.

We thank Dr J. Lorber for his permission to report on this patient, Dr D. B. Carron for successfully treating the child's ventricular tachycardia, Mrs P. Johnson, clinical psychologist, and the Forensic Science Laboratory at Harrogate for the estimation of amitriptyline and imipramine.

**Addendum**

Since this case was reported we have seen another child to whom the mother had given a drug at home and in hospital, and a solution to the problem evaded us for some time.

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Correspondence to Dr J. B. G. Watson, Department of Paediatrics, Children’s Hospital, Western Bank, Sheffield S10 2TH.
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J B Watson, J M Davies and J L Hunter

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