TREATMENT OF PHENOTHIAZINE DRUG INTOXICATION WITH BENZTROPINE

A Parkisonian syndrome, dystonia, dyskinesia, and akathisia are well known toxic effects of the phenothiazine drugs, particularly the piperazine derivatives which include perphenazine, fluphenazine, prochlorperazine, and thiopropazate. Dyskinetic states appear early and may be severe, suggesting a diagnosis of tetanus (Ramsden and Froggatt, 1972; Snowdon, 1972). 2 cases of such reactions are reported, 1 presenting with a pseudo-tetanic state and the other with a generalized epileptiform convulsion.

Case reports

Case 1. A 10-year-old girl was admitted in October 1972 with a history of having had 2 separate episodes of arching her back, rolling her eyes, and protruding her tongue, accompanied by rigidity of her arms and legs. Each episode lasted only a few minutes and had started about 4 hours previously. On further questioning she had started vomiting 3 days before and had been put on perphenazine 3 mg three times a day by her general practitioner.

On examination she was quite alert and orientated; her neck was extremely stiff but Kernig's sign was negative. Her eyes deviated upwards intermittently but there was no nystagmus, photophobia, or papilloedema. The upper limbs appeared normal, though in the lower limbs the tone was increased and the reflexes very brisk.

Case 2. In March 1973 a 7-month-old boy was admitted having been given five 3 mg doses of perphenazine syrup. This had been prescribed as a tranquilizer for his mother who had confused it with a similar-looking cough medicine given to the child. Apart from being miserable and sleepy on the day of admission he had no symptoms. On examination he was drowsy and irritable and had increased tone in his upper and lower limbs. There was no neck stiffness. He was admitted for observation.

Six hours later he developed marked rigidity of his limbs accompanied by jerky, dyskinetic movements of his arms and spasms of his facial muscles. The arms were held stiffly up in the air and if pressed down to his sides and then released, immediately returned slowly to their original position. The dystonia and dyskinesia steadily increased in severity until he appeared to be having a grand mal convulsion. Remembering our experience of 6 months before, we gave him benztropine 0.25 mg intravenously; within 1 minute the increased tone diminished, the dyskinetic movements ceased, and a look of relief came over the child's face. There were no further symptoms and he was discharged the next day.

Discussion

These 2 cases show severe forms of the dystonic reactions to a phenothiazine drug. Gupta and Lovejoy (1967) reviewed 20 similar patients under 15 years of age and found the commonest symptoms to be drowsiness, cogwheel rigidity, opisthotonus, and hyper-reflexia, and 2 patients had trismus with convulsions and oculogyric crises. The time of onset was up to 50 hours after the original dose, but in 6 out of 7 cases of accidental ingestion it was within 5 hours. The erroneous diagnosis of tetanus is easily made on the physical signs and referral to an infectious disease unit is not unknown (Mandal and Sengupta, 1972). Diagnoses of encephalitis and, in
children with malignant disease receiving phenothiazines for nausea, cerebral metastases or irradiation effects may be considered (Cottom and Newman, 1966).

The acute toxic reactions to phenothiazines are self-limiting, the symptoms subsiding in 24 to 48 hours. They can, however, be rapidly and specifically relieved by the anticholinergic/antihistamine group of drugs commonly used for the treatment of Parkinsonism. Such a drug is benzotropine methanesulphonate which has been in use since 1952 and is especially effective in relieving 'frozen states' (Doshay, 1956). It has very few side effects, these being mainly due to its mild anticholinergic actions. Given intramuscularly it acts in about 10 minutes and maximally at half an hour, but intravenously it relieves a highly alarming and stressful state almost instantly.

The phenothiazine group of drugs are frequently prescribed to children for their anti-emetic action and the serious nature of the toxic reactions is not widely appreciated. They are commonly seen with overdoses, but may also occur with therapeutic doses. Intoxication is particularly liable to occur in children and is predisposed to by states of fever or dehydration (Duffy, 1971). It is suggested that the phenothiazines should be used with great caution in childhood and avoided if possible. In any case of dyskinesia it is most important to take a full drug history including those prescribed for other members of the household.

Summary

Two cases of perphenazine-induced dyskinetic toxic state are described. In each the symptoms were rapidly relieved by intravenous benzotropine. Toxic extrapyramidal reactions after phenothiazine administration are common in children and the diagnosis should be considered in any case of obscure dyskinesia.

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Prolonged obstructive jaundice and haemangiomatosis

Report of 2 cases

Haemangiomas are often present at birth, or may appear within the first few months of life. They are for the most part confined to the skin or subcutaneous tissue, but occasionally involve other organs. Few cases require treatment, as spontaneous regression is almost invariable by 6 to 7 years of age (O'Brien, 1964).

Prolonged jaundice of the obstructive type in patients with haemangiomatosis of the skin and placenta have not been previously described, and 2 such patients are presented.

Case reports

Case 1. A male infant of 3 weeks was admitted on account of prolonged jaundice. There was no family history of jaundice or vascular tumours. Pregnancy and delivery were uncomplicated. The birthweight was 3.35 kg, length 52 cm. A large tumour (7 × 5 × 5 cm) on the placenta at the insertion of the umbilical cord had been noted. Shortly after birth, small red raised spots 2–5 mm diameter on the patient's face were noted, and within the next few days several similar lesions of the 'strawberry naevus' type appeared on other parts of the body. Sepsis was suspected, and a course of ampicillin and kanamycin was given.

On admission the infant was severely jaundiced, but his overall condition was good. Physical examination revealed haemangiomas (diameter 1–4 mm) on the skin, buccal mucosa, anal mucosa, and iris (Fig.). Moderate hepatosplenomegaly was present.

While in hospital his stools were described as being light yellow, but never clay-coloured. Bile was present in the urine. Weight gain was normal. Jaundice of the obstructive type was suspected and exploratory laparotomy was considered. Liver function tests were inconclusive, with normal alkaline phosphatases, raised SGPT (Table), and a high fraction (~70%) of conjugated bilirubin. Thrombocyte count and coagulation status (fibrinogen, prothrombin, thromboplastin time, kaolinclupeiferin time, and fibrinolysis) were normal. A liver scintigraph was normal. From the age of 5 weeks the haemangiomas started to diminish, and simultaneously the serum bilirubin level began to fall.
Treatment of phenothiazine drug intoxication with benztropine.

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