SHORT REPORTS

Acute poisoning with maprotiline hydrochloride

Concern has been expressed about the increasing number of deaths from overdosage with tricyclic antidepressants.[1] In recent years there has been a proliferation of such compounds but whether any one has particular advantages over another in therapeutic dosage, far less overdosage, is doubtful. More recently tetracyclic compounds, such as maprotiline hydrochloride (Ludiomil; CIBA) have become available for the treatment of depression. Self-poisoning with maprotiline in two patients has already been reported,[2 3] and further cases will inevitably occur. Information on acute poisoning with this drug is limited, however, and we report six cases of overdosage treated by us in 1976.

Patients

Each of the six patients (four women, two men) obtained his overdose from the manufacturer's blister packs, each of which contains 14 75-mg tablets. The important clinical features of acute poisoning were depression of consciousness, convulsions, and urinary retention followed by a variable period of confusion, disorientation, agitation, and visual hallucinations during recovery (table). Each patient underwent gastric aspiration and lavage. None required endotracheal intubation or assisted ventilation, and none was hypotensive. Cardiac monitoring was carried out in five patients, and though three had a sinus tachycardia no dysrhythmia or conduction defect was noted. None of the patients was epileptic. The duration of coma was measured from admission to hospital till the patient could obey a simple verbal command. The duration of delirium in unconscious patients was measured from the time of regaining consciousness. Every patient recovered completely.

Comment

The effects of maprotiline poisoning on two patients have been reported.[2 3] Both had convulsions but only one had impaired consciousness, and in neither was there urinary retention or delirium. The clinical features of maprotiline poisoning are clearly no different from those encountered in overdosage with tricyclic antidepressants, and are presumably due to anticholinergic effects. In the first half of 1976 we treated 126 patients with tricyclic antidepressant poisoning and found that 91 (72%) were unconscious, 7 (6%) had convulsions, 47 (37%) urinary retention, and 19 (15%) delirium during recovery. Though experience with maprotiline overdosage is small, comparison of the two types of poisoning suggests that delirium and convulsions are commoner with maprotiline. The latter, particularly, could have an important influence on mortality. Several deaths are recorded.[2 4]

Disturbances of cardiac rhythm and conduction after maprotiline poisoning have been reported only by the manufacturers.[4] Even in the case of poisoning with tricyclic antidepressants they are by no means as common as the reports suggest (5 (4%) of our 126 patients). All our patients with maprotiline poisoning survived with supportive measures alone. In view of the anticholinergic nature of some of the clinical features, physostigmine salicylate might be valuable for desperately ill patients, but would have to be used with great caution because it may precipitate fits. Haemodialysis, forced diuresis, and haemoperfusion would be unlikely to remove therapeutically effective quantities of drug. A recent review of maprotiline in therapeutic doses[5] concluded that it had no obvious advantages over established antidepressives. Unfortunately the same conclusion may be valid for maprotiline in overdosage.

[1] Brewer, C, *British Medical Journal*, 1976, **3**, 110.
[2] Szeless, S, Von, *et al*, *Wiener Klinische Wochenschrift*, 1975, **87**, 7.
[3] Meek, D, *et al*, *British Medical Journal*, 1975, **2**, 275.
[4] CIBA, *Ludiomil*. Horsham, CIBA Laboratories, 1975.
[5] *Drug and Therapeutics Bulletin*, 1975, **13**, 95.

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Clinical details of patients with maprotiline poisoning

Sex	Age (years)	Stated ingested dose (g)	Depth of coma	Duration of coma (h)	Convulsions (No)	Urinary retention	Approximate duration of delirium (h)	Other drugs ingested
F	28	0·75	Conscious			No		Ethanol
F	27	0·85	Conscious; drowsy		2	No	12	None
F	28	2·25	Conscious; drowsy		2	No	48	Ethanol
F	44	3·2	Unconscious; maximal response to pain	6		No	30	Ethanol; diazepam
M	31	2·25	Unconscious; maximal response to pain	12		Yes	48	Paracetamol
M	24	3·2	Unconscious; minimal response to pain	14	2	Yes	30	Ethanol

Plasmapheresis in systemic lupus erythematosus

We describe here the findings in two patients from a group we treated with various forms of plasmapheresis. In these two cases the effects of substituting plasma protein fraction (PPF) or fresh-frozen plasma (FFP) were compared.

Case reports

In both patients bound C1q and IgG in immune complexes were estimated after precipitation from serum by 2% polyethylene glycol. Results were expressed as a percentage of total serum C1q or IgG. Plasmapheresis, using the Haemonetics cell separator Model 30, exchanged 2·5 litres of plasma daily.

CASE 1

This 24-year-old girl had had lupus nephritis for 18 months. After episodes of thrombocytopenia, alopecia, and polyarthritis she deteriorated with pleuritic pains, recurrent pleural effusions, rash over face and arms, vomiting, and hypertension of 200/120 mm Hg. Daily azathioprine 150 mg and prednisolone 40 mg did not control her symptoms.

Investigations—Proteinuria averaged 12 g daily, with plasma creatinine at 167 μmol/l (1·9 mg/100 ml). Antinuclear factor (ANF) was positive to 1/320. DNA binding (Amersham) was raised at 33 units/ml. Many immune complexes were present, 2·5% of total IgG was present in complexes, and all detectable C1q was bound. Total complement (CH_{50}) was always below 20% of normal.

Results—Six plasmaphereses in three weeks with PPF relieved her rash