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NEUROLEPTIC MALIGNANT SYNDROME

DEAR SIR,

Scott (*Journal*, January 1984, **144**, 98) reported on the specific use of dantrolene for the treatment of neuroleptic malignant syndrome (NMS). The probable mechanism of this drug is to inhibit the release of calcium into the myoplasmic reticulum in muscle and so prevent contraction (Denborough, 1978).

Review of the pathophysiology of NMS shows:

1. A severe and widespread extrapyramidal side-effect resulting in a sustained, generalized muscular contraction which may cause hypertonicity, dysphagia, dysarthia, mutism, posturing, akinesia, hyperthermia, a lowering of consciousness, respiratory collapse and death (Weinberger & Kelly, 1977; Delay & Deniker, 1968); 2. An extrapyramidal side-effect with extension of the dopamine blockage effect of neuroleptics to the dopamine innervated temperature regulating centres in the hypothalamus (Henderson & Wooten, 1981); 3. An overlapping illness or even an extension of the pre-treatment illness caused by treatment with neuroleptics (Weinberger & Kelly, 1977); 4. Pre-existing organic brain damage (Delay & Deniker, 1968) or physical exhaustion and dehydration (Itoh *et al*, 1977); and 5. Changes in the muscle of individuals susceptible to the NMS that are comparable to those produced by anaesthetics in the malignant hyperpyrexia syndrome (Caroff *et al*, 1983).

It also shows: 6. That the improvement in the clinical state coincides with the fall in the concentration of neuroleptic breakdown products in the urine to negligible levels (Allan & White, 1972); 7. That challenging afterwards with neuroleptics does not result in symptom recrudencence i.e. it is not a hypersensitivity reaction (Meltzer, 1973); 8. That intravenous diazepam or curare reduced the rigidity but not the temperature of NMS, a feature not seen in malignant hyperthermia (Morris *et al*, 1980); and 9. That the dopamine agonist bromocriptine mesylate should be useful in the management of NMS as has been recently reported (Zubenko & Pope, 1983).

Even though our knowledge of the aetiology of NMS remains incomplete, current treatment should entail removal of the patient to a clinic with a life support system, the immediate cessation of neuroleptic administration, general supportive therapy, cooling, prevention of sepsis and skin lesions, physiotherapy as well as muscle relaxants.

PHILLIP CUMMINS

Assessment Unit,
St Brendan's Hospital,
PO Box 418, Ruthdown Road,
Dublin 7

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CHANGE OF DIAGNOSIS

DEAR SIR,

I read with interest Dr Logsdail's report (*Journal*, February 1984, **144**, 209–10) on three elderly patients whose diagnosis changed from affective illness to paranoid state. However, the claim that such a change in clinical picture had not been reported before is surprising in view of the fact that three other cases are mentioned on page 127, Volume 3, of *Handbook of Psychiatry* (1982) edited by J. K. Wing and Lorna Wing. Cambridge University Press.

MADHU H. PADI

The Central Hospital,
Hatton,
Warwick CU35 7EE