Letters to the Editor

Amantidine in neuroleptic malignant syndrome

Sir,

We read with interest the case report by Woo *et al.*¹ regarding successful treatment of an unusually long case of neuroleptic malignant syndrome (NMS) by amantidine.

Though we agree with the diagnosis of NMS, we feel that some useful information about the case has not been provided by the authors. Despite the fact that the diagnosis was made prospectively the authors have failed to give detailed description. Since most of the literature on NMS is limited to case report material, for further understanding of this condition it is highly desirable that maximum information about the case should be made available. In fact it has been commented earlier by different reviewers on the subject that most of the case reports have provided information about only a limited number of variables choosing to be silent on variables which were not deranged.^{2,3} Even a statement about normality of a particular variable may be useful for further research.

The authors in this case have made a blanket statement about absence of any haematological, biochemical or microbiological abnormalities in blood or cerebrospinal fluid. It would have been better if the authors had mentioned specifically about serum CPK levels, total leucocyte count and serum levels of liver enzymes. Even if the aforementioned parameters were normal a specific statement would have been useful as these parameters are more often deranged in NMS. Surprisingly, despite such a long duration of NMS in this case, the authors did not plan a muscle biopsy though it is not essential for making the diagnosis.²

What is unusual in this case is the abnormally long duration of NMS which persisted for 3 weeks after cessation of neuroleptics. Such a duration has been seen more commonly with depot neuroleptics rather than oral owing to the greatly extended half-life of depot neuroleptics.²

Relapse after a further 17 days of amantidine treatment is another unusual feature hitherto not mentioned in the literature. The clinical course suggests that the neuroleptic or its active break-down products persisted in the circulation for more than 5 weeks. We wonder whether this had something to do with the metabolic characteristics of this patient. Absorption characteristics and first-pass metabolism have been known to cause wide inter-individual variations in plasma levels of neuroleptics. Racial and genetic differences in the metabolism of neuroleptics like ethanol may explain such an unusually long course.

The dogmatic statement by the authors about this being the second case successfully treated with amantidine is really not true. There are at least four case reports prior to this.^{4,5,6,7} Recently there was another case report about successful treatment of NMS with amantidine.⁸ The reference to Buze and Baxter should have read Guze and Baxter.⁹

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This letter has been shown to Dr Woo who replies:-

Sir,

We thank Dr Jee for the points raised in his letter.

It is precisely because of the unusual features he mentioned that we were prompted to report the case. These being, the long duration of the NMS which persisted for 3 weeks after stopping neuroleptics, and relapse after completion of a 17 day course of amantidine.

The blanket statement that no laboratory abnormalities were found was made to emphasize the absence of other causes of fever. The limitation of space precluded a full description of normal results: these included a complete blood picture, sedimentation rate, renal and liver function tests, blood glucose, blood and cerebrospinal (CSF) serology for viral antigens including Japanese B encephalitis, blood for ANF and RA titre, LE cell screen; CSF cell count, protein, glucose, smear for acid fast bacilli and cryptococcus; blood, CSF, urine, sputum and stool cultures for ordinary bacteria and mycobacteria. The serum GPT was transiently elevated to 76 IU/l (upper limit: 60 IU/l) 5 days after the onset of fever. As the diagnosis was not made at presentation, the serum creatine kinase was not done. Though a muscle biopsy would have been of interest, it could not be justified on diagnostic grounds.

The review mentioned¹ was published after submission of