CORRESPONDENCE

ATRACURIUM OR VECURONIUM FOR MHS PATIENTS?

Sir,—I am writing in regard to comments made by Hunter [1] in her review entitled “Adverse Effects of Neuromuscular Blocking Drugs”, on the use of vecuronium and atracurium in malignant hyperthermia-susceptible (MHS) patients. She states that “satisfactory use of both agents has been reported in patients susceptible to malignant hyperpyrexia” and refers to papers by Buzello and colleagues [2] and Michel and Fronfield [3].

Buzello’s study was on MHS swine, not patients, and one of eight swine triggered in response to vecuronium. The explanations offered by the authors did not fit the facts as presented [4]. A literature search done for me by Organon Canada Ltd in December 1986 revealed no other studies in MHS swine or patients on the safety of vecuronium.

Michel and Fronfield [3] reported an 8 yr-old girl with a history of a previous MH crisis who was given atracurium for eye surgery without incident. There is other, more definitive proof of the safety of atracurium in MHS swine and patients. Skarpa and colleagues [5] reported that atracurium did not trigger MHS swine. Morrell and Harrison [6] have also shown that atracurium did not trigger MH in susceptible swine.

Hunter goes on to state that “it is considered preferable to allow spontaneous recovery from any non-depolarizing neuromuscular blocking agent”. Ørding and Nielsen [7] reported the safe use of atracurium in 40 MHS patients, in all of whom blockade was antagonized with neostigmine and glycopyrrolate without incident. It is our practice to antagonize neuromuscular blockade in MH patients whenever reversal would otherwise be indicated.

In conclusion, there is support in the literature for the safe use of atracurium in MHS patients. There is as yet no such support for vecuronium.

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REFERENCES


Sir,—When my review article was written the interesting paper by Ørding and Nielson [1] on the use of anticholinesterases in MHS patients given atracurium was not yet in print, so I was unable to refer to it. Their work is reassuring over the use of neostigmine in such patients, but the authors themselves state that the antagonism of neuromuscular block in such circumstances “is still controversial.” I doubt that allowing spontaneous recovery from neuromuscular block in the MHS patient could be considered anything but diligent practice.

At the Malignant Hyperthermia Workshop held during the European Congress in Vienna in 1986, Mauritz [2] stated that the safe non-depolarizing neuromuscular blockers to use in MHS patients were “alcuronium, pancuronium, vecuronium and atracurium”. Workers from Denmark substantiated this with respect to vecuronium [3].

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REFERENCES


THE COAGULATION AND FIBRINOLYTIC RESPONSE TO SURGERY

Sir,—The paper by Davis and colleagues [1] provides further evidence that performing hip surgery under regional anaesthesia which blocks the neuroendocrine response, results in less derangement of the coagulation system. This is obviously relevant to the explanation of a reduced incidence of DVT when hip surgery is performed under regional anaesthesia [2].

The difference in Thrombin Generation Index between GA and spinal groups during operation is in broad agreement with the results of a study I performed using another test of blood coagulability, the thromboelastograph. Characteristically, the thromboelastograph shortens during operation under GA, but is back to its preoperative value by the next day [3]. When hip surgery was performed under spinal anaesthesia, the thromboelastograph remained at preoperative values during operation.

REFERENCES