

with DMD to malignant hyperthermia (MH) when exposed to triggering agents. Richard's report of 61 uneventful general anaesthetics in 43 patients with DMD¹ is countered by recent case reports of cardiac arrest and MH during general anaesthesia in patients with DMD.^{2,3}

We conducted a retrospective study to investigate our experience in providing general anaesthesia to patients with DMD. The anaesthesia and recovery room records of all patients with DMD who underwent surgery between the years 1980 and 1990 were reviewed. Most of the surgical procedures were tendon transfers, releases and posterior spinal fusions. Only those patients with a muscle biopsy confirmed diagnosis were included. Induction technique, anaesthetic agents and the use of muscle relaxants were recorded. In addition, any clinical sign or laboratory changes suggestive of MH were sought.

We administered 84 general anaesthetics to 36 patients. The patients' ages at the time of surgery ranged from 5 to 21 yr (mean 11.2 ± 4.6 yr). The induction techniques were as follows: 52% received inhalational induction with halothane, 45% received *iv* induction using thiopentone, propofol, midazolam or ketamine and one patient received a nitrous oxide/narcotic technique. Except in one patient anaesthesia was maintained with a halogenated volatile agent. One patient received succinylcholine and nondepolarizing muscle relaxants were used in 31%.

None of the patients developed signs or symptoms suggestive of MH. The uneventful perioperative course of our patients parallels Richard's experience and is quite different from that of Sethna *et al.*⁴ Despite our uneventful experience with the administration of MH triggering agents to patients with DMD, the relationship between DMD and MH remains unclear and the experience of previous investigations should not be overlooked.

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- 2 Kelfer HM, Singer WD, Reynolds RN. Malignant hyperthermia in a child with Duchenne muscular dystrophy. *Pediatrics* 1983; 71: 118-9.
- 3 Brownell AKW, Paasuke RT, Elash A, *et al.* Malignant hyperthermia in Duchenne muscular dystrophy. *Anesthesiology* 1983; 2: 180-2.

- 4 Sethna NF, Rockoff MA, Worthen MH, *et al.* Anesthesia-related complications in children with Duchenne muscular dystrophy. *Neurology* 1986; 36 (suppl. 1): 152.

Axillary block

To the Editor:

I would like to comment on several aspects of the study "Axillary brachial plexus block using a peripheral nerve stimulator: single or multiple injections," by Dr. Lavoie *et al.*¹

First, I wish to congratulate the authors on their work. Second, the authors claim that this study was "double-blind." Assessment of the blocks may have been "blinded," but the performance of each block certainly was not. In addition, how was the patient blinded? Editors, reviewers and investigators are fixated on prospective, randomized, double-blind study designs. This is often difficult, if not impossible, to do with regional anaesthetic techniques and is not necessarily desirable. What is important is that this study was prospective, randomized and the same endpoint (i.e., muscle twitch at 0.5 m.a.) was used on every patient. The fact that the endpoint that was accepted as indicating proper needle position was constant, provides objective evidence that there was no attempt, deliberate or otherwise, to influence the results of this study during the performance of the blocks. Blinded assessment assures that there is not an opportunity to direct the study results during this phase only. Finally, it is not entirely clear how the axillary brachial plexus blocks were performed from the manuscript. The authors claim that "stimulation of two nerves inside the axillary sheath was not performed" (Discussion - Line 11). This does not seem compatible with the study design (Methods: G-1 and G-2).

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REFERENCE

- 1 Lavoie J, Martin R, Tétrauit J-P, Côté DJ, Colas MJ. Axillary plexus block using a peripheral nerve stimulator: single or multiple injections. *Can J Anaesth* 1992; 39: 583-6.

REPLY

We appreciate the interest of Doctor Lang in our paper. We consider that our study was double-blind because the patient did not know what aspect of his axillary block was studied specifically (all the patients had at least one nerve stimulated) and the anaesthetist who did the block was not the one who evaluated it. We considered the musculo-cutaneous nerve as being outside the axillary sheath. Consequently no group had stimulation of this