**Suxamethonium-induced myalgia**

Sir,—I read with interest the paper by Kahraman and colleagues on the effect of i.m. diclofenac on suxamethonium-induced myalgia [1]. Diclofenac, administered i.m. to conscious patients, is painful and has a tendency to cause sterile abscesses. Its use to ameliorate suxamethonium myalgia could be a case of a “remedy worse than the disease”.

Pretreatments have been tried previously but all have disadvantages. Pre-curarization complicates neuromuscular pharmacology [2] while other methods could cause complications, for example i.v. phenytoin, as advocated by Hatta, Saxena and Kaul [3] which, whilst effective, exposes the patient to a potentially toxic drug and substantially prolongs induction time.

I believe that the incidence and severity of myalgia in the study of Kahraman and colleagues was high (thus providing better material for study) because they used the largest recommended dose of suxamethonium (1.5 mg kg$^{-1}$). In an unpublished pilot study in 20 patients, I compared the effect of oral diclofenac 75 mg with placebo, using suxamethonium 1 mg kg$^{-1}$ for intubation and found no significant difference in myalgia assessed by visual analog scores.

Reducing the dose of suxamethonium prevents suxamethonium myalgia, is simple and economical. Stewart, Hopkins and Dean [4], in their controlled trial used, respectively, suxamethonium 1.5 mg kg$^{-1}$ and 0.5 mg kg$^{-1}$. They found intubating conditions satisfactory in both their groups but the incidence and severity of myalgia was significantly reduced in the group receiving suxamethonium 0.5 mg kg$^{-1}$.

The answer may be to avoid the use of suxamethonium unless specifically indicated (i.e. rapid sequence induction). Beck and co-workers [5] and Alcock and colleagues [6] have shown that intubation is possible without neuromuscular block if laryngeal reflexes are sufficiently suppressed.

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Sir,—We thank you for the opportunity to reply to the comments on one of our recent papers regarding the prevention of suxamethonium-induced myalgia [1]. Despite the known disadvantages associated with the use of suxamethonium, it is normally used in emergency cases with a potentially full stomach. In these patients we prefer to use a parenteral premedicant rather than an oral drug. A review of 10167 cases of i.m. diclofenac showed an incidence of 6 (0.05%) cases of abscess formation and 3 (0.02%) of necrosis [2]. Another review of 1873 cases reported a total incidence of 0.01% of any reaction at the injection site [3]. De Courcy and Nicholls [4] have recently reported three patients with causalgia, Ali and Mathias [5] reported three patients with prolonged local reaction and abscess formation, while Tweedie [6] reported a patient with swelling and fat necrosis at injection sites after i.m. injection of diclofenac. In these reports, all injections were made into the thigh contrary to the recommended deep intragluteal site which we used in our study.

To assess suxamethonium-induced myalgia correctly by eliminating postoperative pain caused by intraoperative positioning or surgical intervention (all patients had given informed consent), we used an elective group of patients. By doing this we were also able to provide a safe environment to simulate emergency situations in which administration of suxamethonium is indicated. It is well known that in patients at high risk of aspiration, neuromuscular block has to be rapid and profound. If neuromuscular block is inadequate, attempted intubation may lead to vomiting. Therefore, we advocate the use of adequate doses of suxamethonium for safe intubation. It was also shown in the study by Stewart, Hopkins and Dean [7] that high doses of suxamethonium provided superior intubating conditions than low doses (excellent in 85% vs 56%). Furthermore, in our study the incidence of myalgia (76.5%) was comparable with the incidence reported in previous studies, that is 74% after suxamethonium 1 mg kg$^{-1}$ in the study of Alcock and colleagues [8].

Other methods of facilitating tracheal intubation [8–11] do not reliably produce good intubating conditions. We believe that although pretreatment with NSAID have been shown to be effective in previous studies [12, 13], further studies in large groups are warranted.

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