

the safe use of epidural and intrathecal narcotics demands monitoring for as long as the effect on ventilatory control can be shown to be significant in order to prevent serious, avoidable complications. We agree, therefore, with Knill *et al.* that based on their findings the minimum duration of monitoring should be twelve to twenty-four hours following a single dose of epidural morphine.

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## Why Routinely Pretreat?

*To the Editor:*—The recent article by Blitt *et al.*<sup>1</sup> evaluating nondepolarizing neuromuscular blockers for pretreatment prior to administering succinylcholine (SCh) has prompted this letter. Although the authors demonstrated that metocurine was as effective as gallamine and *d*-tubocurarine in preventing the muscle fasciculations that follow SCh, they failed to demonstrate any real clinical benefit from the use of metocurine for this purpose. “Self-taming,” a technique using a small dose of succinylcholine prior to administering a larger paralyzing dose of SCh is also effective in preventing fasciculations.<sup>2,3</sup>

Blitt *et al.* stated that the low incidence of postoperative myalgia they observed may be related to studying “patients in whom the likelihood of muscle pain was not high.” Postoperative muscle pain occurs in 0.2–89 per cent of patients who receive SCh.<sup>4</sup> The many factors believed to influence postoperative muscle pains, such as age and sex of patient, anesthetic technique, length and type of surgical procedure, intraoperative patient position, postoperative care, medications, and time and extent of ambulation all differ between studies and often within the same study making it difficult to compare reports.<sup>5</sup> None of these factors were addressed by Blitt. The extremely low incidence of myalgia they noted only emphasizes how uncommon the problem is. SCh-myalgias are believed to be more frequent after outpatient,<sup>6</sup> dental,<sup>7</sup> or other “minor” procedures.<sup>4,8</sup> Muscle pains following these minor procedures may be modified by a variety of techniques including pretreatment with a

subparalyzing dose of nondepolarizing muscle relaxant,<sup>4,6,7,9</sup> intravenous lidocaine,<sup>10,11</sup> thiopental,<sup>8</sup> vitamin C,<sup>12</sup> and/or diazepam.<sup>13</sup> Pretreatment with nondepolarizing relaxants did not reduce the incidence of postoperative myalgias in two well-controlled studies of patients undergoing major abdominal surgery.<sup>5,14</sup> Are SCh-myalgias after major surgery a true clinical entity? There were no differences in postoperative myalgia after staging laparotomy in patients receiving only pancuronium for intubation compared to patients receiving only SCh.<sup>15</sup>

This gets me to the point I wish to make. Why do we continue the routine practice of pretreating with a nondepolarizing muscle relaxant prior to the use of SCh? SCh-myalgias after major surgery, if they really do occur, are very rare. Certainly, if one wishes to avoid fasciculations, “self-taming” with SCh will do this and provide excellent intubating conditions as well.<sup>2,3</sup> I do not feel comfortable using the pretreatment technique for a patient with an open eye injury, or for a patient at risk from hyperkalemia since pretreatment may not be totally effective and does not completely protect susceptible patients.<sup>16</sup> In these situations it is safer to avoid SCh completely. As for the rise in intragastric pressure with SCh, the potential dangers of pretreatment may offset any benefit.<sup>17</sup> Nondepolarizing muscle relaxants and SCh are antagonistic, their combination may delay the onset of paralysis and result in an incomplete block. I prefer the sure, rapid onset of paralysis with SCh alone, plus cricoid pressure to minimize the risk of aspiration in patients with a full stomach.

I think anesthesiologists should critically re-evaluate the routine use of a nondepolarizing muscle relaxant before giving SCh for patients undergoing abdominal or thoracic surgery. The pretreatment technique may reduce myalgias after minor surgery; but it still remains to be seen if metocurine has any advantage (or disadvantage) for this group of patients.

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### Life-threatening Similarity in Drug Packaging

*To the Editor:*—Doctors Freund and Ward reported a misadventure which stemmed from confusion due to the similarity in drug packaging of 30-ml syringes of 0.5 per cent bupivacaine and 50-ml syringes of sodium bicarbonate (44 mEq)<sup>1</sup> Both of these products are manufactured by Abbott Laboratories.

As you can observe in figure 1, there is also a similarity in packaging of 5-ml syringes of 2 per cent injectable lidocaine and 10-ml syringes of 1:10,000 epinephrine (0.01 per cent), which are also Abbott Laboratories products which may possibly lead to drug misadventure. The only difference in appearance between Abbott's epinephrine and lidocaine solutions in these syringes is the size of the syringe. The plastic syringe barrel, the yellow needle protective sheath, the color of the identifying let-

tering on the drug insert (piston), as well as the shape, are identical. Both lidocaine and epinephrine often are stored in the same medication box in cardiac surgical operating rooms, as well as in emergency crash carts in many hospitals. The cardboard containers in which the syringes are packaged are different in color and easily distinguished, but once they are removed from the original carton the syringe similarity can lead to misadventure. Since epinephrine and lidocaine solution are commonly stored and utilized together, misadventure might occur more frequently than with bupivacaine and sodium bicarbonate which are less commonly used at the same time. Misadventure is also probably more life-threatening with inadvertent intravenous epinephrine administration than with bupivacaine intravenously, particu-