

■ Does Lithotomy Position Cause Motor Neuropathies?

According to Warner *et al.* (page 6), patient-related characteristics and duration of lithotomy are most strongly predictive of postoperative lower extremity motor neuropathies. A retrospective review of surgical procedures performed upon patients in a lithotomy position from 1957 to 1991 at the Mayo Clinic revealed a low incidence of persistent neuropathy (55 out of the total 198,461 consecutive cases), for a rate of 1 per 3,608. Patients with a body mass index (kg/m^2) of 20.0 were especially predisposed to motor neuropathy. Patients who had smoked within 1 month of surgery were 15 times more likely to experience peripheral motor neuropathy than patients who had never smoked or who stopped smoking at least a month before their procedure. Increased patient age and preexisting diabetes or vascular disease, as well as prolonged duration in lithotomy position, also increased susceptibility to motor neuropathy. Because of the independent predictive effects of low body mass index and history of smoking on lower extremity motor neuropathy, reducing time in lithotomy for these patients may be worthwhile.

■ Etiology of Postpartum Back Pain: Is Epidural Anesthesia the Culprit?

Obstetric patients often may perceive epidural anesthesia administered for labor or delivery as the cause of postpartum back pain. Indeed, postpartum back pain is reported in 30–45% of women who receive epidural anesthesia during delivery. Breen *et al.* (page 29) evaluated the relationship between postpartum back pain and epidural anesthesia *via* interviews within 12–48 h after delivery and followup questionnaires 2 months later, thus avoiding possible recall bias seen in previous studies. In a nonrandomized, nonblinded prospective study of 1,042 women who delivered viable singleton infants, predisposing factors to postpartum back pain included history of back pain during pregnancy, heavier weight, younger age, and shorter stature, but not epidural anesthesia.

■ Predicting Difficult Laryngoscopy

Although previous studies suggested that degree of visibility of oropharyngeal structure (OP class) and man-

dibular space (MS) length can predict difficulty of intubation, descriptions of body and head positions for testing often are omitted or unclear. To determine which method of testing best predicts difficult laryngoscopy, Lewis *et al.* (page 69) used 24 method combinations to measure MS length and to determine OP class. Reliable assessment of OP class was performed with the patient seated, head in extension, and tongue out, with or without phonation. MS length was also best accomplished with the patient seated, with head extended, measuring the distance from the thyroid cartilage to inside of the mentum. The two tests, nevertheless, will fail to predict some difficult laryngoscopies. In addition, some OP class and MS length tests may predict difficult laryngoscopies that actually result in easy intubations.

■ Step Increases of Desflurane Stimulate Cardiovascular System

Substantial, rapid increases in desflurane and isoflurane concentrations can transiently increase heart rate, mean arterial blood pressure, and plasma epinephrine concentrations during induction or maintenance of anesthesia. Moore *et al.* (page 94) found that attempting to treat this cardiovascular stimulation with an immediate further rapid increase in desflurane concentration is likely to provoke further cardiovascular stimulation rather than blunt the initial response. Anesthesia was induced in 13 healthy male volunteers with 2 mg/kg intravenous propofol and ventilation-controlled to maintain normocarbida. Four-percent end-tidal desflurane in oxygen was given for 32 min. Successive 1% increases in end-tidal desflurane concentration were imposed and maintained for 4 min, to a final concentration of 12%. After 4 min of each 1% step increase of desflurane, heart rate, mean arterial blood pressure, and plasma epinephrine transiently increased. However, the magnitude of the response was considerably less than that after a single, larger increase of desflurane concentration.

■ On-line Assessment of Liver Graft Function

Pittet *et al.* (page 168) compared the effect of liver exclusion and graft reperfusion on the level of vecuronium-induced neuromuscular blockade in nine pigs. During control studies, the mean infusion rate of ve-

curonium was $1.30 \pm 0.33 \text{ mg} \cdot \text{kg}^{-1} \cdot \text{h}^{-1}$, and the recovery index was $3.4 \pm 0.5 \text{ min}$. During liver dissection, the infusion rate was similar to control values but considerably decreased during the anhepatic phase ($0.05 \pm 0.03 \text{ mg} \cdot \text{kg}^{-1} \cdot \text{h}^{-1}$). After reperfusion of the autograft, the recovery index was markedly prolonged to $35.5 \pm 15.8 \text{ min}$. Metabolism of ^{14}C -labelled aminopyrine, measured by collecting expiratory breath samples before and after administration of the intravenous bolus of ^{14}C -labelled aminopyrine, increased progressively during reperfusion phase. Using a muscle relaxant such as vecuronium, with a high hepatic uptake, and recording neuromuscular transmission during liver transplantation could serve as a continuous, easy to perform assessment of liver graft function. Rapidly assessing hepatic function after reperfusion of liver graft would allow for early detection of incipient hepatic graft failure.

■ Contributing Factors in Infant Hypothermia

Infants are more susceptible to hypothermia during anesthesia than are older individuals. To investigate whether infant hypothermia is caused by anesthetic inhibition of brown-fat-derived nonshivering thermogenesis, Ohlson *et al.* (page 176), using a collagenase digestion method, isolated brown adipocytes from hamsters. Cells were stimulated with norepinephrine, and heat production, as measured by oxygen consumption, was monitored polarographically. Stimulation with norepinephrine led to a 20-fold increase in the rate of oxygen consumption. When preincubated with 3% halothane, however, brown adipocyte response to norepinephrine stimulation was reduced by

more than 70%. Although the results do not necessarily dictate any changes in clinical practice of infant anesthesia, the relatively slow recovery from halothane's inhibitory effect may indicate postoperative inhibition of brown adipose tissue, leading to a prolonged postoperative thermal recovery phase.

■ Preventing Release of Compounds A and B in Anesthesia Circuits

Release of sevoflurane degradation products, particularly compounds A and B, is potentially toxic to patients if present in sufficiently high concentrations. No practical methods have been developed yet for preventing their formation or removing them from the anesthesia circuit. To determine whether soda lime temperature influences generation of compounds A and B, Ruzicka *et al.* (page 238) operated an anesthesia circuit for 8 h with both chilled and nonchilled soda lime. When the experiment was run under conditions allowing the soda lime temperature to freely increase, a maximum core soda lime temperature of approximately 46°C was measured, and compounds A and B increased to a maximum of 23 and 9 ppm, respectively. Chilling the soda lime canister produced a core soda lime temperature of 26°C maximum. Neither compound B nor C/D was detected during the 8-h chilled period. Compound A was present at 10 ppm, but did not increase, as it did under nonchilled conditions. Preventing the release of sevoflurane degradation products by chilling the soda lime did not interfere with carbon dioxide absorption, nor did it alter the sevoflurane concentration.

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