Twenty minutes later, anaesthesia was again induced using the same agents. Myoclonic jerking of the legs again appeared three minutes after induction. It was noted that these jerking movements were exacerbated by tactile stimulation of his shoulders. The operation was canceled. Infusion of propofol was terminated and the patient awakened shortly without any neurological deficits. After regaining consciousness, myoclonic jerking was not observed. Magnetic resonance imaging scan of the spinal cord was normal.

The patient underwent shoulder surgery 12 days later under brachial plexus block and propofol infusion. The myoclonic movements of his legs appeared shortly after induction and persisted during two hours of surgery. Recovery was uneventful and myoclonus was not observed after the patient awakened.

Our patient was fully awake and alert after each of three anaesthetics and showed no post-ictal state, which makes the diagnosis of seizure unlikely. Intraoperative movements of his legs were most likely to be spinal myoclonus, a result of inhibition of supraspinal control. It is suggested that subcortical excitatory-inhibitory centre imbalance may persist during maintenance with propofol infusion.¹⁻⁴

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Intravenous obstruction and PCA machines

To the Editor:

Several PCA overdoses have been reported,¹⁻⁵ but I wish to report a near fatality from an unusual cause.

A 65-yr-old obese lady underwent right total knee replacement. A PCA pump (Abbot Lifecare 4100 PCA plus 11 inhaler) was ordered after the epidural analgesia

had been discontinued. Meperidine was prescribed with: bolus 20 mg; lock-out - eight minutes; total four hour maximum - 300 mg total. Surgery and anaesthesia were uneventful and the patient returned to the floor at about 1600. She complained of pain in the knee all afternoon and evening and continued to push the PCA button without relief. At 0025 the following morning, it was noted that the *iv* infusion had gone interstitial. At 0210 the *iv* site was changed, the tubing was reconnected but, very rapidly, the patient became cyanotic and suffered a respiratory arrest. With naloxone and positive pressure ventilation, the patient was successfully resuscitated and transferred to the ICU for observation.

The message is that the patient's *iv* had been occluded at the skin site for some time and the opioid accumulated in the *iv* double lumen bag. Opioid accumulated in the *iv* bag throughout the afternoon and evening, the safety features of the PCA machine were bypassed and the patient received a potentially lethal dose of opioid when the *iv* was reconnected to a new cannula. Our *iv* nurses now change the *iv* tubing and solution when re-establishing an *iv* infusion that has a PCA pump attached.

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Intrapleural placement of a nasogastric tube

To the Editor:

We read with interest the case report "Intrapleural placement of a nasogastric tube: an unusual complication of nasotracheal intubation."¹ The authors believed that several factors may predispose to oesophageal perforation by nasogastric tubes includ-

FIGURE Control chest radiograph, with nasogastric tube passing through the thoracic oesophagus

ing altered mental status, preexisting anatomical abnormalities, cervical osteophytes, etc.

Recently, our anaesthesia service was asked to assist in the changing of a feeding tube in a 77-yr-old debilitated man. The tube had been changed six months earlier. After some difficulty in insertion, a chest radiograph showed that thoracic oesophageal perforation had occurred (Figure). No pneumothorax was present and the patient had no respiratory problems. Analysis of fluid aspirate showed: pH 7, glucose 67 mg·dl⁻¹, protein 1.3 g·dl⁻¹, LDH 189 U·l⁻¹ confirming its pleural origin. The tube was repositioned and the patient had no complications.

The difficulty in identifying naso-gastric tube misplacement is compounded by the minimal resistance encountered as the tube enters the lung in patients with weak or absent gag and cough reflexes.² On the other hand, feeding tubes may be left in place for six weeks³ or, in our case, for six months. This may irritate the oesophageal mucosa and also predispose to oesophageal perforation.

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A practical tracheal tube tie

To the Editor:

Endotracheal tubes once placed, are usually fixed inexpensively with either adhesive tape or a cotton tie. The disadvantage of a cotton tie is that it may slip on the tube so allowing migration in the trachea. Our institution supplies half inch waterproof, zinc oxide based, adhesive tape to secure ET tubes. The type of fixation becomes a problem for patients who have very thick beards that leave no skin exposed on the cheeks or neck. If there are no cotton ties or ribbon gauze to hand, a simple solution is to take a surgical mask and place it under the occiput of the patient. The four cotton ties are long enough to reach around an adult's face and lasso around the tube providing a sturdy double tie. This technique is a lot less expensive than using Velcro straps that are commercially available for tube fixation.

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