

Postoperative CXR showed a reexpanded left lung with considerable atelectasis. She improved with oxygen therapy and chest physiotherapy and was discharged well on the fourth postoperative day.

Compared with open cholecystectomy, laparoscopic cholecystectomy offers quicker recovery and less postoperative pain. However, this procedure is not without risk.¹⁻³ Our patient developed a unilateral tension pneumothorax during abdominal insufflation. Since the lungs were normal preoperatively and the ventilatory pressure was not excessive, this pneumothorax most likely resulted from CO₂ being forced from the abdomen, by the increased intra-abdominal pressure into the pleural cavity either via anatomical communications around the aorta or oesophagus or through a congenital pleuroperitoneal canal that had normally been occluded by loose adherence of its walls. A similar mechanism had been postulated for spontaneous pneumothorax following artificially induced pneumoperitoneum.⁴⁻⁶ The absence of subcutaneous emphysema over the chest ruled out the possibility of a misplaced Verres needle or trochar causing gas to track into the pleural cavity.

Pneumothorax is a recognized though rare complication of pneumoperitoneum. It can result from barotrauma, malposition of the Verres needle or trochar or pressure effects from the pneumoperitoneum. This case emphasizes the importance of vigilant intraoperative monitoring to minimize perioperative morbidity and mortality.

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Cervical oro-pharyngeal oedema and severe hypoacusia: complication of antecubital vein catheterization

To the Editor:

Although catheter erosion of vessels remains an important clinical problem, neck swelling and severe hypoacusia secondary to axillary vein erosion is unusual.¹

A 59-yr-old man was admitted to the SICU with acute alimentary tract bleeding. A central venous catheter (Drum-Cartidge®) was inserted in the right basilic vein without difficulty. Aspiration of blood was easily performed and postinsertion CXR showed the distal tip of the catheter in the axillary vein close to the axillo-subclavian junction. Surgical haemostasis of the ulcer with vagotomy and pyloroplasty was performed 48 hr after admission. During surgery, oedema of the cervical region, oro-pharynx and tongue appeared and the trachea was displaced to the left. Immediately after surgery the oedema progressed rapidly and blood could not be withdrawn from the catheter which led to the suspicion of an aberrant central venous catheter. Accordingly, all fluid administration was stopped and 0.3 ml · kg⁻¹ hydrosoluble contrast was infused. Chest x-ray revealed a regular oval spread of 2-3 cm at the distal end of the catheter, which was interpreted as venous perforation² at the level of the axillo-subclavian junction (Figure). The catheter was immediately withdrawn which led to stabilization of the oedema. Following extubation (36 hr later), the patient complained of bilateral severe hypoacusia. Simple otos-

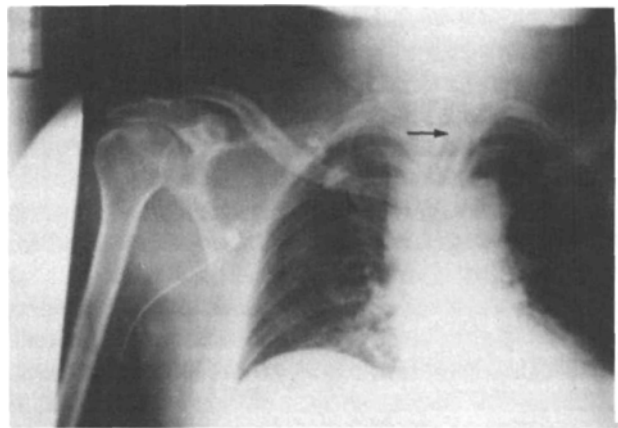


FIGURE Following contrast administration an increase in density is observed around the catheter tip. Cervical oedema and tracheal displacement can also be seen.

copy, tympanometry, and pneumatic otoscopy revealed acute bilateral Eustachian dysfunction which was more severe on the right. This subsided within ten days after treatment with nasal vasoconstrictors. Total clinical and radiological remission of the cervical oedema was observed on the fifteenth day after surgery.

Several precautions have been proposed to decrease the risk of late venous perforation,^{1,2} such as introducing a catheter of a length only equal to the distance between the insertion site and the sternal manubrium or notch, placing the end of the catheter in the distal superior cava vein, and avoiding administrations of fluids at rapid rates or at high pressure. Catheters, especially those in the arms, should have their distal ends securely sutured to the skin.³⁻⁴ The management of central venous erosion include^{1-2,5} the immediate discontinuation of perfusion, followed by CXR, using contrast infused through the catheter. If erosion is confirmed, the catheter should be withdrawn immediately.

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"Pre-emptive analgesia" may follow epidural anaesthesia

To the Editor:

In our previous report "A comparison of epidural tra-

madol and epidural morphine for postoperative analgesia,"¹ it was interesting to note in 20 patients undergoing major abdominal surgery under epidural lidocaine combined with light general anaesthesia, that a single dose of epidural morphine 4 mg or tramadol 100 mg could provide prolonged and low pain scores during the first 24 hr after surgery. This prolonged postoperative analgesia may be attributed to the phenomenon of "pre-emptive analgesia," which implies that analgesia given before the painful stimulus prevents or reduces subsequent pain.²

Surgical nociceptor activation, leading to C-fibre-evoked activity in the dorsal horn, results in the development of a facilitated state, such that spinal cord neurones display an exaggerated response to subsequent noxious stimuli.³ The spinal hyperexcitability is eliminated or reduced if the afferent barrage is prevented from reaching CNS by pre-injury neural block with local anaesthetics, or if the excitability of CNS is suppressed with systemic or spinal opioids before it receives nociceptive input.²⁻⁹

It is therefore possible that the epidural anaesthesia used in our patients resulted in "pre-emptive analgesia" which can attenuate surgery-induced central excitability, with a consequent decrease of postoperative pain. It has been previously shown that patients who receive epidural anaesthesia complain of less postoperative pain than those who have general anaesthesia.¹⁰

The nociceptive stimuli and central sensitization may be generated not only during surgery, but also in the postoperative period from the wound site.⁷ In our patients, the preoperative administration of epidural narcotics in addition to the epidural lidocaine may have extended the "pre-emptive analgesia" beyond surgery into the postoperative period. We should always consider the possibility that "pre-emptive analgesia" has prolonged effects which long outlast the presence of drugs.⁶

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