Anaesthesia for carotid artery surgery

Sir,—The recent review article “Anaesthesia for carotid artery surgery” [1] gives a comprehensive overview of perioperative management of this challenging group of patients. However, we feel the emphasis on the role of haemorrhage in postoperative airway obstruction is, perhaps, misleading. Pharyngeal and laryngeal oedema have been cited as causes of airway obstruction after surgery in the neck [2,3]. We wish to report a case which illustrates this.

A 75-year-old male with 80-99% stenosis of the left carotid artery presented for endarterectomy. Induction of anaesthesia, tracheal intubation and surgery were uneventful. The patient was given an i.v. heparin infusion after operation. The initial postoperative period was complicated by labile hypertension treated with nifedipine and glyceryl trinitrate: 4 h after operation, swelling was noted in the neck, but the airway was not thought to be compromised. The patient was subsequently found to be oedematous and heparin was discontinued. Over the next 10 h the patient was noted to have stridor and increasing difficulty in breathing. Fourteen hours after operation an anesthetist was summoned to the ward when the patient developed further difficulty in breathing and decreasing level of consciousness. Respiratory arrest ensued rapidly. Attempted laryngoscopy revealed gross pharyngeal mucosal oedema which obscured the larynx. Fortunately, blind insertion of an 8.0-mm tracheal tube was successful. Subsequent surgical exploration of the wound produced only a very small volume (estimated at 5 ml) of haematoma; insufficient to produce the severity of airway compromise encountered. The patient’s trachea was extubated 3 days later. No permanent airway or neurological damage was apparent.

Some authors have argued that haematoma formation after surgery in the neck is unlikely to cause tracheal compression because of the rigidity of the structure [2,4]. We have found only one paper describing acute airway obstruction caused by haematoma after carotid surgery [5]. Tissue oedema is the more usual culprit. It may be consequent upon venous and lymphatic congestion caused by blood tracking into the strap muscles [2,6]. Swelling of this nature is unlikely to be relieved rapidly by reopening the wound. It has also been reported as a complication of internal jugular vein cannulation [7]. In this hospital it is our practice to administer dexmethylone i.v. if thyroid surgery is difficult or prolonged, to reduce the incidence of postoperative oedema. It may be that this would be advisable after carotid artery surgery. This case also emphasizes the requirement for adequate observation and early intervention as soon as the airway is threatened.

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Revision of total hip replacement in Jehovah's Witnesses

Sir,—We have reported previously surgery with uncentemted total hip replacement without blood transfusion in Jehovah's Witnesses [1]. Five of these patients have needed revision surgery and have received a Charnley prosthesis. The average time since primary surgery was 8 years.

The patients were managed as before, except that a low-molecular-weight heparin (Clexane) was used after operation as prophylaxis for deep vein thrombosis. The main difference in results was operative time; the mean time for the revisions was 1 h 55 min compared with 30.7 min for primary surgery. Mean postoperative haemoglobin concentration was smaller also (7.2 vs 8.5 g). Stay in hospital was not prolonged.

As total hip replacement becomes commoner in a younger age group, the chances of the patient needing further surgery will increase. Criteria for revision vary, but a surgeon taking on primary hip replacement in Jehovah's Witnesses should be prepared to perform revisional surgery. This is a more formidable procedure for patient, surgeon and anaesthetist, but in our limited experience is feasible.

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