tions associated with IJV cannulation. The National Institute for Clinical Excellence[4] recommends 2-D imaging ultrasound guidance for insertion of central venous catheters into the IJV. Based upon our experience with this case, we are in favour of pursuing this evolving technology in anesthesia practice.

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References

1 *Muhm M.* Ultrasound guided central venous access. BMJ 2002; 325: 1373–4.
2 *Hind D, Calvert N, McWilliams R, et al.* Ultrasonic locating devices for central venous cannulation: meta-analysis. BMJ 2003; 327: 361.
3 *Hatfield A, Bodenham A.* Portable ultrasound for difficult central venous access. Br J Anaesth 1999; 82: 822–6.
4 *National Institute for Clinical Excellence.* Technology Appraisal Guidance - No 49. Guidance on the use of ultrasound locating devices for placing central venous catheters. London: September, 2002. Available from URL; www.nice.org.uk/pdf/ultrasound_49_GUIDANCE.pdf

FIGURE Successful placement of the fibreoptic catheter at the right jugular bulb on *x-ray* anteroposterior view, which shows the catheter tip situated cranial to a line extending from the atlanto-occipital joint space and caudal to the lower margin of the orbit.[4] The arrow indicates the catheter tip. The catheter line can be traced distally via the clavicle on the film.

Antecubital approach for monitoring jugular bulb venous oxygen saturation during carotid endarterectomy

To the Editor:

Monitoring of jugular bulb venous oxygen saturation (SjO_2) is one method used to detect changes in cerebral oxygen saturation during carotid endarterectomy (CEA).[1,2] However, it usually requires direct insertion of a catheter within the operating field to obtain either continuous or intermittent monitoring of SjO_2.[1–3] We have recently used a novel alternative method for insertion of the catheter which avoided disturbance of the surgical procedure.

The antecubital vein was used to cannulate the jugular bulb. We chose a 5.5 Fr fibreoptic pulmonary artery catheter (Opticath®, Abbott Laboratories, North Chicago, IL, USA). First, a 6 Fr introducer sheath was placed, and then the 5.5 Fr fibreoptic catheter was advanced through the indwelling introducer sheath. A fluoroscopic image guide was essential to advance the catheter with the arm positioned alongside the body and the head rotated 20 to 30° contralaterally. Usually, several attempts were required to introduce the catheter to the internal jugular vein. Changing the head and arm positions or rotating the catheter tip are additional maneuvers for successful advancement of the catheter based upon our initial experience. The catheter tip is advanced to the appropriate site for monitoring of SjO_2 with the aid of fluoroscopy. The Figure shows successful placement of the fibreoptic catheter at the right jugular bulb. We attempted this method in three patients. The first trial case failed due to our limited experience, but in the next two cases, the catheter was placed successfully.

The method we describe will require further detailed evaluation; however it presents clear advantages for monitoring SjO_2 during CEA. Further refinements may improve this technique, including use of a guide wire for introducing the catheter into the internal jugular vein. In addition, this method should be compared with the conventional technique of monitoring SjO_2 during CEA in terms of 1) accuracy and continuity of measurements, 2) time necessary to obtain the measurement and 3) cost effectiveness evaluation. Further improvement and experience are essential for establishing the effectiveness and safety of this potentially promising aproach to SjO_2 monitoring.

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References

1 *Niinai H, Nakagawa I, Shima T, Kawamoto M, Yuge O.* Continuous monitoring of jugular bulb venous oxygen saturation for evaluation of cerebral perfusion during carotid endarterectomy. Hiroshima J Med Sci 1998; 47: 133–7.
2 *Williams IM, Picton A, Farrell A, Mead GE, Mortimer AJ, McCollum CN.* Light-reflective cerebral oximetery and jugular bulb venous oxygen saturation during carotid endarterectomy. Br J Surg 1994; 81: 1291–5.
3 *Sahlein DH, Heyer EJ, Rampersad A, et al.* Failure of intraoperative jugular bulb S-100B and neuron-specific enolase sampling to predict cognitive injury after carotid endarterectomy. Neurosurgery 2003; 53: 1243–9.
4 *White H, Baker A.* Continuous jugular venous oximetory in the neurointensive care unit–a brief review. Can J Anesth 2002; 49: 623–9.

Use of Shikani Flexible Seeing Stylet for intubation via the Intubating Laryngeal Mask Airway

To the Editor:
The Intubating Laryngeal Mask Airway (ILMA; The Laryngeal Mask Company, LMA North America, Inc., San Diego, CA, USA) has been designed to allow easier intubation than the LMA.[1] A fibrescope is useful in facilitating intubation via the ILMA, but when it is not available, the "Shikani Flexible Seeing Stylet™" (Clarus Medical, Minneapolis, MN, USA; Figure) presents a useful alternative.[2–4] We assessed the efficacy of the ILMA and Shikani Flexible Seeing Stylet™ associated technique using an ILMA endotracheal tube, or a standard endotracheal tube.

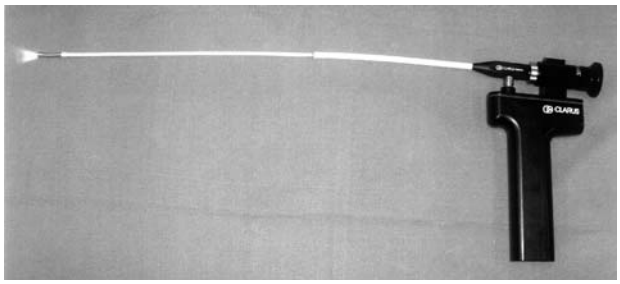

FIGURE The Shikani Flexible Seeing Stylet.

After obtaining written patient informed consent, the study was performed using the dedicated ILMA endotracheal tube on 13 patients (Group A), or a standard endotracheal tube into the ILMA in six patients (Group B). After positioning the ILMA, the operator introduced into the airway tube of the ILMA, the dedicated endotracheal tube or a standard endotracheal tube inside the Shikani's Stylet. While elevating the mandible, the endotracheal tube was advanced under direct vision through the vocal cords.

Twelve patients in Group A were successfully intubated: ten during the first attempt and two during the second attempt with an "up-down maneuvre". In one woman the technique failed after two attempts and she was intubated successfully by direct laryngoscopy (Cormack-Lehane 1). In Group B the technique failed in four patients during the second attempt; they too, were intubated by direct laryngoscopy. In one patient, intubation was interrupted during the first attempt (blood in the airway tube) and intubation was achieved by direct laryngoscopy. One patient in this group, was successfully intubated during the second attempt, with "up-down maneuvres".

The technique we describe does not seem to be useful with a standard endotracheal tube. This is unfortunate, as it may have been useful in an emergency situation. Jaw elevation was used for every patient, suggesting that experience with the ILMA is necessary. Our findings suggest that the ILMA is not indicated when the patient has a low posterior larynx (easy direct laryngoscopy, Cormack-Lehane 1), but