Figure 1.
The Airtraq.

advanced through the vocal cords. Recently, there have been two manikin studies that have described its performance. The device was evaluated in normal and simulated difficult airways. Until now, there have been no descriptions of its use in live subjects. We describe two patients in whom the Airtraq®, compared with the Macintosh blade, provided superior views of the larynx facilitating endotracheal intubation.

The first case was an anxious 59-yr-old male who was to undergo a total laryngectomy for cancer of the larynx. Anaesthetics had been complicated previously by Grade 4 views at direct laryngoscopy necessitating awake intubations. Initially, topical anaesthesia was applied to the upper airway and glycopyrolate administered intravenously. A target controlled infusion of propofol and remifentanil was commenced at a sedation dose. A Grade 4 view was confirmed at direct laryngoscopy using a Macintosh laryngoscope. The Airtraq® was subsequently used providing Grade 1 views of the glottis and easy passage of an endotracheal tube.

The second case was a 42-yr-old female who presented for a routine septoplasy. Past medical history included pain in the temperomandibular joint during mastication and reduced mouth opening was noted on examination. Following induction of anaesthesia with propofol, fentanyl and atracurium, a Grade 3 view of the glottis was achieved at direct laryngoscopy using the Macintosh laryngoscope. When the Airtraq® was employed, a Grade 1 view of the glottis was observed and endotracheal intubation allowed to proceed uneventfully.

The Airtraq® is cheap and extremely easy to use, and we believe it should be included in the anaesthetist's armamentarium for the difficult airway. Unlike the intubating laryngeal mask, endotracheal intubation using the Airtraq® is achieved under direct visualization; however, more patient studies are required.

P. N. R. Ford
The Anaesthetic Department
Royal Devon and Exeter Hospital
Exeter, UK

C. Hamer, S. Medakkar
Torbay Anaesthetic Department
Torbay Hospital
Torquay, UK

References

1. Maharaj CH, Higgins BD, Harte BH, Laffey JG. Evaluation of intubation using the Airtraq® or Macintosh laryngoscope by anaesthetists in easy and stimulated difficult laryngoscopy – a manikin study. *Anaesthesia* 2006; **61**: 469–477.
2. Maharaj CH, Costello JF, Higgins BD, Harte BH, Laffey JG. Learning and performance of tracheal intubation by novice personnel: a comparison of the Airtraq® and Macintosh laryngoscope. *Anaesthesia* 2006; **61**: 671–677.

Subdural or subarachnoid catheter?

doi: 10.1017/S0265021507000270

EDITOR:
I read with interest a case of total spinal anaesthesia reported by Batra and colleagues [1]. I would like to comment on their reasoning for the unusual spread of local anaesthetic leading to total spinal anaesthesia. After a careful review of the events, one cannot resist thinking that it hardly resembles a subdural block.

'Soon after the administration of the test dose', their patient complained of dizziness and weakness. This clinical picture is typically due to a subarachnoid injection of local anaesthetic. The block spread with subdural is more like an epidural with much slower onset than subarachnoid block with minimal hypotension. Their patient was uncon-

Correspondence to: D. B. Chethan, Department of Anaesthesia, University Hospital of Wales, Heath Park Cardiff, Cardiff CF14 4XW, UK. E-mail: doddamane@gmail.com; Tel: +2920 743107; Fax: +2920 745489

Accepted for publication 7 February 2007 EJA 4309
First published online 11 April 2007

scious, apnoeic, severely bradycardic and hypotensive 'within a couple of minutes', which again confirms that the local anaesthetic was injected into the subarachnoid space.

The epidural catheter, they suggest, might have entered the subdural space through the hole in the dura made during multiple attempts at epidural. It is possible that the catheter might well have entered the subarachnoid space through an unrecognized dural hole made by the Tuohy needle. Although aspiration of cerebrospinal fluid (CSF) through the catheter facilitates identification of subarachnoid placement of the catheter, a negative aspiration does not confirm that the catheter is not in subarachnoid space. It is probably for this very reason that the test doses are so widely practised.

They also suggest that the attempts at spinal anaesthesia could have produced multiple punctures in the dura through which local anaesthetic agents could have seeped into the subdural or subarachnoid spaces. To have a total spinal anaesthesia in such a short time from injecting such a small volume of local anaesthetic (lignocaine 2% 3 mL) into the subdural space in the lumbar region in the sitting position is difficult to imagine from a clinical point of view. It could be argued that the arachnoid mater could be torn, thereby allowing the local anaesthetic to access the subarachnoid space. But again, the pressure from 3 mL of solution is highly unlikely to have been sufficient to have caused the tear allowing the local anaesthetic to enter subarachnoid space.

As to the seepage of local anaesthetic into the subarachnoid space, if the dural punctures made during the spinal attempts are close to the epidural catheter holes, then it is possible for the local anaesthetic injected via the catheter to seep into the subarachnoid space. But it is not clear from the case report whether the spinal attempts were made above or below the level of epidural insertion.

Radiological confirmation by injecting water-soluble contrast media has been suggested to confirm the correct position of epidural catheters by Collier [2]. Furthermore, aspiration of epidural catheter before removal may have provided some further clarifications. However, this information is not provided.

It may be that the dura was unintentionally punctured at epidural attempts, which allowed the CSF to leak out of the subarachnoid space into the epidural space. This may also have been facilitated by dural holes made at subsequent multiple attempts at spinal. This would then lead to a relatively low volume of CSF into which the local anaesthetic test dose could have been injected. The cephalad spread of the local anaesthetic is further facilitated by the mechanical compression of the dura by the CSF in the epidural space.

I would disagree with the authors that 'the clinical presentation suggests that the local anaesthetic was probably injected subdurally rather than epidurally'. It would be interesting to know what other readers think.

D. B. Chethan
Department of Anaesthesia
University Hospital of Wales
Cardiff, UK

References

1. Batra YK, Sharma A, Rajeev S. Total spinal anaesthesia following epidural test dose in an ankylosing spondylitic patient with anticipated difficult airway undergoing total hip replacement. *Eur J Anaesthesiol* 2006; **23**: 897.
2. Collier C. A high spinal or a subdural block? *Int J Obstet Anaesth* 2004; **13**: 243.

https://doi.org/10.1017/S0265021507000270 Published online by Cambridge University Press