Correspondence

Trigeminal nerve blockade, following inadvertent dural puncture – was there a connection?

To the Editor:

The insertion of an epidural for pain relief in labour was complicated by a dural puncture. During the subsequent infusion the patient complained of numbness over her face. There was no accompanying tinnitus or circumoral numbness and pulse and blood pressure remained within normal limits. On examination an area of numbness, to pain and cold, was confined to the bilateral distribution of the maxillary division of the fifth cranial nerve. The epidural infusion was stopped and the numbness regressed over the next 20 min.

Trigeminal nerve block following epidural analgesia has been reported before^{1,2} but this patient did not have Horner's syndrome. In previous reports there was no associated dural puncture. One possible mechanism is excessive cephalad spread of the local anaesthetic eventually reaching the spinal tract and/or nucleus of the trigeminal nerve and the cervical sympathetic fibres accounting for the trigeminal nerve block and Horner's syndrome in previous reports.

It has been suggested that excessively high subarachnoid blocks can occur, when there has been a subsequent epidural injection or infusion, due to increased pressure in the epidural space that causes cephalad spread.³ Some local anaesthetic may have entered the subarachnoid space through the dural puncture site and with the concomitant epidural infusion caused a greater cephalad spread than would normally occur thus explaining the trigeminal sensory loss, it is unlikely that the catheter entered the subarachnoid space as there was no evidence of a subarachnoid block, other than hypotension, which can be explained by other mechanisms.

The occurrence of trigeminal nerve blockade in this patient may or may not be related to the previous dural puncture. Patients with epidural infusions may complain of odd facial symptoms. These may be due to high plasma concentrations of local anaesthetics or, alternatively, to excessive cephalad spread of local anaesthetic.

J. O'Hanlon BSc MB FFARCSI
I. Bali PhD FFARCSI
P. Leyden MB FFARCSI
Department of Anaesthetics
Royal Group of Hospitals
Grosvenor Road
Belfast, BT12 6BA
N. Ireland

REFERENCES

- 1 Sprung J, Haddox DJ, Maitra-D'Cruze AM. Horner's syndrome and trigeminal nerve palsy following epidural anaesthesia for obstetrics. *Can J Anaesth* 1991; 38: 767–71.
- 2 Gazmuri RR, Ricke CA, Dagnino JA. Trigeminal nerve

block as a complication of epidural anesthesia. *Reg Anesth* 1992; 17: 50–1.

- 3 Beck GN, Griffiths AG. Failed extradural anaesthesia for Caesarean section. Complications of subsequent spinal block. *Anaesthesia* 1992; 47: 690–2.

Visual evaluation of TOF and DBS fade using a rubber band

To the Editor:

After train-of-four (TOF) stimulation the thumb does not return to the baseline prior to the first three twitches.^{1,2} Recently Brull *et al.*¹ have shown that the TOF ratio may be overestimated by visual evaluation because of baseline shift of the thumb. We hypothesized that if the thumb was kept abducted using a rubber band when TOF or DBS_{3,3} was delivered, the TOF ratio (T_4/T_1) or DBS_{3,3} ratio (D_2/D_1) above which fades could no longer be detected visually would increase.

Thirty adult patients were studied. After administration of vecuronium 0.1 mg·kg⁻¹, TOF and DBS_{3,3} stimuli were applied. In the RB group ($n = 15$) the thumb of the investigated arm was kept abducted using a rubber band as a preload of 150 g (Figure) but in the control group ($n = 15$) the thumb was unrestrained.

FIGURE