Difficulty in assessing the correct position of the laryngeal mask airway

Sir,—Accurate assessment of the position of the laryngeal mask airway (LMA) is important during controlled trials involving the LMA. Radiography or magnetic resonance imaging (MRI) show the position of the LMA precisely [1, 2]. A fiberoptic bronchoscope is used frequently for assessment in the clinical setting [3-5]. I have noticed recently that fiberoptic cannot confirm the correct position of the LMA, although it provides valuable information.

Brain designed the LMA to enclose the larynx. He decided that the internal length of the long axis of the LMA aperture should always be greater than the distance between the upper border of the thyroid cartilage and the lower border of the cricoid cartilage and he confirmed this in adult cadavers [6]. Thus because of individual variation in the size of the larynx, the LMA sometimes encloses the epiglottis even when the tip of the LMA cuff correctly occupies the hypopharynx. Therefore, it is difficult to determine if the LMA is positioned correctly based on the view of the epiglottis through the bronchoscope. Thus we may need to revise the results of studies on the positioning of the LMA. For example, Dr Wilson stated in his Editorial [7] that “one clear difference between adults and paediatric use of the LMA is the incidence of an imperfect position diagnosed by fiberoptic”. This statement was based on the statements of Rowbottom, Simpson and Grubb [3] and Mizushima, Wardall and Simpson [4] that the position of the LMA was “perfect” in 49% of children and 44% of infants; these figures are smaller than those in adults [5]. They considered that the position of the LMA was perfect when only the glottis was seen through the fiberoptic bronchoscope. However, as described above, the LMA may be in a correct position even when the epiglottis is seen also in the LMA aperture. If we arbitrarily consider that the position of the LMA is correct when only the glottis, or the glottis and posterior surface of the epiglottis are seen in the LMA aperture, the incidence of a suboptimal position is similar (about 20-35%) in infants, children and adults. Therefore, the true incidence of a suboptimal position of the LMA in adults and children may not be as different as was thought previously.

I suggest that assessment of the view of the larynx through the fiberoptic bronchoscope passed through the LMA tube is useful, but we should be careful about its interpretation.

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Difficult intubation

Sir.—M. E. Wilson suggested in a recent editorial [1] that the use of the gum elastic bougie had “quietly but radically altered anaesthetic practice” with respect to difficult intubation, as all that is required with its use is a view of the epiglottis.

This view is supported by observations made on 85 difficult intubations from the Australian Incident Monitoring Study [2]. The gum elastic bougie was reported to have been used on 32 occasions and was associated with successful intubation. This represented the greatest success rate of any intubation aid; the fiberoptic endoscope led to success on five of the 11 occasions on which its use was reported. Also of note was that one-third of the 85 difficult intubations was not predicted and that one-seventh was associated with difficulty with mask ventilation.

It would seem that a gum elastic bougie should be available immediately wherever tracheal intubation is to be undertaken and that, on the available evidence, it should be the first intubation aid that is tried.

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Treatment for post dural puncture headache

Sir.—Some 20 years ago, I encountered two elderly patients with post spinal headaches. No relief was obtained with analgesics, including opioids, and they lay curled up in bed holding the head and not wanting to speak or eat because of the pain. A local consultant physician, Dr Eric Smith, advised me to use long-acting ACTH 20 u i.m. and the headaches were relieved on the same day. He did not have a reference for this treatment and I have not found one, but since then I have used it when required and have recommended it routinely to other anaesthetists. On four occasions I have used a second dose 24 h later (the patient remains lying flat in bed). I have never resorted to a blood patch, considering this to be a potential focus for infection and adhesions.

Long acting adrenocorticotrophic hormone is no longer available, but we use tetracosactrin (Synacthen) 1 mg i.m. instead. I understand this consists of the first 24 amino acids occurring in the natural corticotrophic hormone sequence and that this displays the same physiological properties as ACTH. How does it work? I do not know, but surmised initially that it might stimulate the output of cerebrospinal fluid, thus rebathing the surface of the brain in fluid; later I thought it might stimulate endorphin output. It seems to me also that the pressure wave induced by injecting a volume of blood into the lumbar extradural space could possibly stimulate release of ACTH from the adrenals or induce endorphin output in the central nervous system.

I apologise for the lack of a formal study but as ACTH has not been mentioned as an alternative to a blood patch for the treatment of post dural puncture headache in any of the articles published recently on the subject in British Journal of Anaesthesia, I felt that other readers might be interested to try the treatment. It would be very interesting to hear of any alternative explanations for the action of ACTH in this respect. Incidentally, it should be
noted that depot adrenocorticotrophic hormone is not licensed for the treatment of post dural puncture headache.

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**Kinked inner tube of coaxial breathing system**

Sir,—Further to recent correspondence on difficulties with Mapleson D coaxial breathing systems (Bain systems) [1], we wish to report another problem encountered recently with the disposable Bain system.

After induction of anaesthesia, an ASA I patient was connected to a disposable Bain system (Intersurgical), but expiration was obviously obstructed. The problem was traced to the scavenging valve. This unidirectional valve (AGS release valve) fits in both directions to the scavenging part of this particular Bain system (as shown in fig. 1 connected correctly). If connected incorrectly, expiration is impossible (fig. 2).

This incident emphasizes again the need to check breathing systems, including scavenging devices, very carefully.

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**Apnoea and CPAP for restoration of spontaneous respiration**

Sir,—I read with interest the article of Karlsten and Englesson [1] concerning the use of apnoea and CPAP for restoration of spontaneous breathing at the end of anaesthesia after controlled ventilation. In their study, 45 adult patients underwent ventilation to normocapnia. At the end of surgery, the lungs were ventilated for 5 min with oxygen and then given CPAP of 8 cm H$_2$O.