THE BRONCHO-FIBERSCOPE AS AN AID TO ENDOTRACHEAL INTUBATION

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DESCRIPTION OF INSTRUMENT

The Broncho-fiberscope* consists of a flexible tube, containing a small internal channel 56 cm in length, and 5 mm in diameter. The distal end can be manipulated through an arc of 160° by operating the central lever attached to the eyepiece at the proximal end. Illumination is provided by a separate cold light source so that the object can be seen over a wide field of view in clear detail. The light intensity is sufficient for colour photography using a camera attached to the control unit.

then inserted together through the nose and advanced towards the naso-pharynx. The endoscope thus acts as a stilette for the tube as well as enabling the anaesthetist to visualize the progress of the tube towards the cords. The movable tip of the fiberscope can now be manipulated (using the control lever on the eyepiece) until a good view of the cords is obtained (fig. 2). Local anaesthetic solution is then sprayed on to the cords via the internal channel and the nasal tube with broncho-fiberscope inside is then passed through the cords. The endoscope is withdrawn leaving the tube in situ.

Laryngoscopy using this method in the conscious patient is a simple, safe and atraumatic technique which is acquired by any experienced anaesthetist.

Intubation can also be performed using this procedure under general anaesthesia, using either spontaneous respiration or a relaxant technique.

METHOD OF USE

For intubation in the awake patient, local anaesthetic solution is initially applied to the nose and pharynx using a suitable spray. The broncho-fiberscope is lubricated and inserted in the required size of nasal tube (fig. 1), so that the tip of the endoscope is visible. The tube and endoscope are

*Olympus Broncho-Fiberscope, Model BF-5B. Distributors: Key-Med, Maitland House, Warrior Square, Southend-on-Sea, Essex.
DISCUSSION

All anaesthetists are faced periodically with what may be described as the difficult intubation. This problem has been tackled in a variety of ways. Munson and Cullen (1965), Singh (1966) and Bearman (1962) described the use of a hook to facilitate intubation. Waters (1963) reported the use of a catheter passed through the cricothyroid membrane into the nasopharynx where it could be used as a guide for subsequent intubation.

We feel that the broncho-fiberscope is of value in such difficult intubations. Murphy (1967) described the use of the fibre-optic choledochoscope as an aid to nasal intubation. The movable tip of the broncho-fiberscope which enables it to be directed into any position necessary for it to pass through the cords is of great advantage in difficult cases. In addition, the internal aspiration channel permits efficient local analgesia of the cords to be obtained. This allows endotracheal intubation of the conscious patient in whom there is a danger of losing control of the airway once anaesthesia has been induced.

The introduction of the flexible fibre-optic endoscope into medical practice has had many applications in diagnostic clinical work. Its use in anaesthesia, we feel, has not been fully exploited. One reason for this may be that the apparatus for fibre-optic endoscopy is expensive. The light source is standard and useful for various endoscopies by surgeons, but in this hospital its expense has been offset by shared use and shared cost between the surgical and anaesthetic departments. Such an arrangement may bring it within the budget of most hospitals.

REFERENCES


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