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Short communication

Nasendoscopically-assisted placement of a nasogastric feeding tube

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Abstract
Nasogastric tube placement is desirable for the short-term administration of calories when oral feeding is not possible. Enteral nutrition is superior to parenteral nutrition. In some patients this method of feeding is impossible because of repeated failure of nasogastric tube placement, necessitating either general anaesthesia for enteral access, or total parenteral nutrition. We describe a new method for nasogastric tube placement aided by a fibre-optic nasendoscope which has resulted in the successful placement of over 20 nasogastric tubes in our unit and the avoidance of more invasive methods of establishing nutrition with their associated complications.

Key words: Enteral nutrition; Intubation, gasterointestinal; Endoscopy

Introduction

Calories supplied by the enteral route are of greater benefit to patients than calories supplied by parenteral administration (Alvery *et al.*, 1985; Deitch *et al.*, 1987; Moore and Moore, 1991). Enteral feeding by a nasogastric tube is the standard method of maintaining nutrition in the short term. When enteral nutrition is required over a longer period of time percutaneous endoscopic gastrostomy (PEG) or radiological gastrostomy (RG) are superior to surgical or open gastrostomy, resulting in less morbidity and mortality (Wollman *et al.*, 1995).

In some patients, such as stroke or head and neck malignancy patients, attempts at nasogastric tube placement often lead to tracheal intubation and failure to establish an enteral route for nutrition. The situation is further worsened in head and neck cancer patients as PEG is often impossible with obstructing pharyngeal lesions and with no nasogastric tube *in situ* there is no route for the air insufflation, necessary for RG (Wills and Oglesby, 1983). These patients, therefore, often require a general anaesthetic for either open gastrostomy or pharyngoscopy and insertion of a feeding tube.

We have recently developed a technique for nasendoscopically-assisted nasogastric feeding tube placement which can be performed at the bedside with the use of topical nasal local anaesthesia. This has resulted in over 20 patients avoiding general anaesthesia and the associated delays in the establishment of feeding.

Materials and methods

After explanation of the procedure to the patient, 10 per cent lignocaine hydrochloride and 0.1 per cent xylometazoline hydrochloride is applied by aerosol to both nasal cavities, achieving local anaesthesia and vasoconstriction. One operator performs a nasendoscopic examination of the pharynx. Simultaneously, a second operator advances the nasogastric tube into the contralateral nostril until it is seen by the nasendoscopist. Both the tube and endoscope are then advanced until the larynx is clearly visualized. The nasogastric tube is then advanced and manipulated by rotation until the pyriform fossa is intubated (Figure 1). At

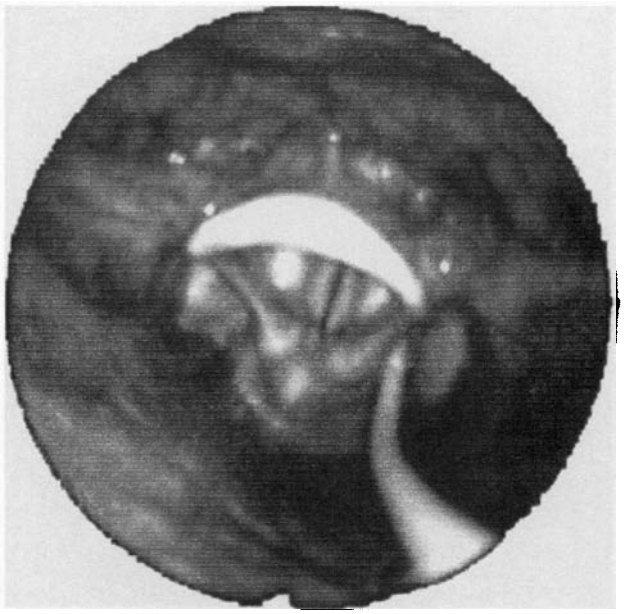

FIG. 1
The nasogastric tube is manoeuvered into the pyriform fossa.

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this point the nasogastric tube can be safely advanced quickly with the patient swallowing, if able. Swallowing is not essential, however, and tube placement can be achieved without conscious help from the patient.

Discussion

This method of nasogastric tube placement is simple and straightforward. It requires skill in the use of the nasendoscope and careful co-operation between operators. It has been used by the authors in over 20 cases where previous attempts at nasogastric tube placement have either failed or resulted in tracheal intubation. It has been accomplished by two otolaryngologists or one otolaryngologist and one nurse working together. These patients have avoided the trauma and additional risks of general anaesthesia or total parenteral nutrition. It is recommended for use in all patients where conventional blind nasogastric tube placement has failed and can be used to facilitate RG.

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