
**REFERENCES**


**MINITRACHEOTOMY—IMPOSSIBLE CANNULATION**

Sir,—Minitracheotomy (MT), described initially by Matthews and Hopkinson [1], is a method for treating bronchial congestion. Until now, few complications have been reported [2, 3]. The following is a description of two patients in whom catheter insertion was impossible because the cricothyroid space was too small.

*Patient 1.* A few days after insertion of a ventricular-peritoneal shunt for hydrocephalus, a 60-yr-old female presented severe bronchial congestion. Because of the patient's poor neurological status it was decided to perform MT under local anaesthesia using the percutaneous technique. Although insertion of the leader was easy, cannulation was impossible. In order to assess the cause of this difficulty, it was decided to expose the cricothyroid space surgically. The height of the space was 4.8 mm—smaller than the external diameter of a standard cannula. MT was therefore not performed.

*Patient 2.* After undergoing 28 days of mechanical ventilation for bacterial pneumonia, a 62-yr-old male presented with severe bronchial congestion and MT was attempted in order to permit tracheal extubation. The technique used was similar to that in patient 1. Insertion of the leader was easy, but cannulation was impossible. Because surgical exploration revealed a cricothyroid space of 5 mm in height, MT was not performed.

MT by the standard percutaneous method is usually easy. However, difficulties can be encountered because of the anatomy of some patients (short, fat neck), especially females [4], or because of calcification of the cricothyroid membrane which may follow previous MT. Failure of cannulation because of a small sized cricothyroid space has not been reported previously.

Forced insertion of the cannula may cause cricoid cartilage lesions leading ultimately to severe subglottic stenosis [4]. Caparosa and Zavatsky [5], studying 51 adult larynxes, found a mean sagittal height of the cricothyroid space (between the antero-inferior edge of the thyroid cartilage and the antero-superior edge of the cricoid cartilage) of 9 mm (range 5–12 mm). Carter and Meyers [6] found slightly smaller dimensions in the female. Thus in most patients the cricothyroid space is larger than the MT cannula, which has an external diameter of 5.4 mm. In some subjects, especially in females, this space may be smaller than the cannula, but in the two patients reported, clinical examination did not permit anticipation of this difficulty.

We suggest that, when cannulation is difficult by the standard method, surgical exploration should be attempted in order to verify the size of the cricothyroid space.

D. D. KOBLIN
San Francisco

**REFERENCES**