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Partial Severance of an Oronasotracheal Tube during a le Fort I Procedure

To the Editor:—We wish to call attention to a potentially serious airway problem during le Fort I osteotomies and to point out the existence of a relatively simple measure introduced to prevent it.¹

REPORT OF A CASE

A 15-year-old patient received meperidine, 75 mg, and hydroxyzine, 75 mg, im, an hour prior to a planned osteotomy. Anesthesia was induced with thiopental (4 mg/kg). A Hilo® 7.5-mm endotracheal tube was passed through the right nostril and guided into the trachea under direct vision during succinylcholine-induced apnea (1 mg/kg). Anesthesia was maintained with 65 per cent nitrous oxide in oxygen and supplemented with fentanyl (0.1 mg), droperidol (5 mg), and pancuronium bromide (6 mg), iv, repeated in small increments when necessary. Ventilation was maintained with an Airshields Ventimeter® ventilator at a minute volume of 6 l/min.

Toward the end of the surgical procedure an osteotomy was done to separate the right maxilla from the anterior nasal spine. The osteotome entered the nasal cavity through the hard palate. Airway pressure was unchanged, breath sounds were normal in intensity, the disconnect alarm was silent, and no evidence of air leak could be found. Over the next 15 minutes of the operation, bubbles began to appear in the operative field. Inspiratory pressure was noticed to have decreased from 20 to 15 cm H₂O without triggering the disconnect alarm. Chest motion and heart sounds did not appear to change. After extubation of the trachea, the tracheal tube was found to have a spiral cut 2.5 cm long extending into the tube lumen, from the back wall to 2.5 cm distal to the machine end anteriorly.

Hought *et al.*¹ have recommended that a protective metallic shield be used to protect the endotracheal tube. This will protect only its anterior aspect in the nasal cavity. The possibility of the tube's being transected and its distal part lost in the trachea remains. In addition, major leaks and aspiration of blood into the trachea may occur. In fact, we suctioned 20 ml of blood-stained fluid from the trachea of our patient prior to extubation.

In other reported cases,²⁻⁴ only the pilot tube was cut, and all patients survived uneventfully. We have

recently had another case during which only the pilot tube was cut, in two places. Because the pilot tube must also be protected, use of a nasotracheal tubes, in which the pilot tube emerges from the tracheal wall 2.5 cm below the connector end, is preferable to use of the Hilo oronasotracheal tube, in which it emerges at midlength. During nasotracheal intubation this leaves a long, flabby pilot tube that may escape the protection of the metallic shield. We think it important to call attention to these protective measures and to recommend their use during nasal operations that expose the tracheal and pilot tubes to the knife of the surgeon.

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