

<b>Title</b>	Airway Complication Following Functional Endoscopic Sinus Surgery
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**Introduction:** Chronic sinusitis is one of the most commonly reported medical conditions (1). Initial treatment is medical; however, many patients will require surgical procedures. Functional endoscopic sinus surgery (FESS) is the most commonly used technique for the surgical treatment of chronic sinusitis (2). This technique is usually performed on an outpatient basis and involves the use of an endoscope and small instruments to remove diseased tissues and thus widen drainage pathways to improve sinus function. FESS has been shown to improve pulmonary function in some patients with asthma (2). Primary complications of FESS may include bleeding, infection, orbital or intracranial injury (3). Secondary complications associated with general anesthesia such as aspiration, embolism, or myocardial infarction may also occur.

**Case History:** A 28-year-old 80 kg man (ASA I) with chronic sinusitis was scheduled for FESS after failure of medical management. Past medical history and physical examination were unremarkable. On the morning of the procedure he was afebrile with a normal white cell count and hemoglobin (14mg%). An IV line was established and midazolam (2mg) was given in the preoperative area before transport to the operating room. Monitors included EKG, non-invasive blood pressure monitoring and capnography. After preoxygenation, a successful induction of anesthesia with fentanyl (100µg), midazolam (1mg) and propofol (200mg) was performed. The trachea was intubated (with a Grade I view) and was facilitated atraumatically on the first attempt with vecuronium (7mg). Anesthesia was maintained with oxygen, N<sub>2</sub>O, isoflurane, vecuronium, morphine and fentanyl. The operation lasted two-and-a-half hours with a blood loss of approximately 900 ml. No oral packs were used during the procedure. A nasal posterior pack was placed at the commencement of FESS. After surgery the nasal pack was removed and small hemostatic sponges were placed in the ethmoid cavities. The inferior nasal vault was not packed. An oral-gastric tube was easily passed on the first attempt, suction was applied, and gastric contents were seen to emerge. The tube was then removed. The pharynx was gently suctioned blindly using a Yankauer suction. With the patient fully awake and able to follow commands, the endotracheal tube was easily removed.

Initially in the recovery room the patient was comfortable with vital signs stable. However, 5-6 minutes later he complained of difficulty breathing. Despite supplemental oxygen (6 L-min<sup>-1</sup>) via an oxygen mask, his oxygen saturation fell to 86%. His chest revealed minimal scattered expiratory stridor. Racemic epinephrine was commenced with minimal improvement. The oxygen saturation is now 83% and the patient is extremely distressed. What would you do?

The management of this case will be discussed, with the treatment used to achieve a successful outcome.

#### References:

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3. Ikeda K, Tanno N, Tamura G, et al. Endoscopic sinus surgery improves pulmonary function in patients with asthma associated with chronic sinusitis. *Annals of Otolaryngology, Rhinology and Laryngology*, 1999 Apr; 108(4): 355-9.