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## Anesthetic Management of Emergency Tonsillectomy and Adenoidectomy in Infectious Mononucleosis

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Although infectious mononucleosis is usually benign, the disease may be fatal if severe airway obstruction develops.<sup>1,2</sup> The possible causes of airway obstruction include hyperplasia of tonsils and adenoids, edema of the uvula, epiglottis, or arytenoids, formation of a pseudomembrane, or combinations of these. In past reports, tracheostomy has been performed as a life-saving measure prior to tonsillectomy.<sup>3,4</sup> Anesthetic technique was not discussed. This report describes our anesthetic management of a case in which tracheostomy was avoided in the presence of airway obstruction due to enormous necrotic tonsils.

### REPORT OF A CASE

A 16-year-old Caucasian girl had been healthy until a week prior to admission, when she developed fever, tonsillitis, and swelling of cervical lymph nodes. During the four days prior to admission she had been able to swallow only liquids; she was given a course of penicillin, but her temperature remained elevated (38.3 to 39.4 C. orally). Her tonsils on admission were described as

being "markedly inflamed with a whitish exudate," and so enlarged that they met in the midline. Marked cervical lymphadenopathy was present. Oral temperature was 38.8 C.

Pertinent abnormal laboratory findings included: heterophil agglutination 1:640; leukocyte count 5,300/cu mm with 44 segmented neutrophils, 53 lymphocytes (42 of which appeared young with nucleoli and scanty basophilic cytoplasm), and 3 monocytes. Culture of a specimen from the throat produced a few alpha streptococci, a heavy growth of *Hemophilus influenzae*, and moderate growth of *Neisseria*.

The night after admission the patient's sputum was bloody and she could speak only in a high-pitched whisper. Increasing airway obstruction developed despite administration of steroids and placement in a tent containing high humidity and supplemental oxygen. Insertion of a soft rubber nasal airway resulted in marked improvement of ventilation. Early the next morning the tonsils appeared necrotic, friable, more swollen, and firmly opposed in the midline. A nasal airway was still necessary for airway maintenance. The patient appeared ill and lethargic; cervical adenopathy was further increased. The decision to perform an emergency tonsillectomy and adenoidectomy was made.

Report was established and awake intubation of the trachea discussed with the patient. She was premedicated with droperidol, 2.5 mg, and atropine, 0.5 mg, intramuscularly one hour preoperatively. In the operating room she was given hydrocortisone sodium succinate, 100 mg, intravenously. The pharynx was sprayed with 2 ml lidocaine 4 per cent. The larynx was carefully exposed with a #3 MacIntosh blade. A 6-mm I.D.

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Ohio cuffed endotracheal tube previously moistened with sterile lubricant was inserted atraumatically at the first attempt with full cooperation of the patient. Anesthesia was immediately induced with thiopental, 250 mg, and maintained with  $N_2O-O_2$  and succinylcholine infusion. Ventilation was controlled. Vital signs were stable throughout anesthesia and operation. Blood loss was minimal. At the end of the operation the patient initiated spontaneous ventilation. The trachea was extubated and she was returned to the intensive care unit, where she was given humidified oxygen by face mask for several hours. She was discharged from the hospital on the third postoperative day after an uncomplicated course.

#### DISCUSSION

This patient's respiratory obstruction could have worsened had she been anesthetized and unable to maintain her airway. The tonsils and adenoids were necrotic, friable, and likely to bleed, making the risk of aspiration of blood and infected tissue considerable if the patient is unable to protect the airway. Tracheostomy could have been utilized to assure the airway, but it is associated with significant morbidity and, therefore, was avoided.

Nasotracheal intubation was avoided because the adenoid tissue was thought to be infected. Awake orotracheal intubation was chosen as the method of airway maintenance. This was facilitated by good rapport and enlistment of the patient's cooperation, adequate premedication with droperidol, which does not depress ventilation, anesthesia of the posterior pharynx to inhibit the gag reflex, and utilization of a lubricated small endotracheal tube. The patient recalled no discomfort associated with intubation.

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## Bilateral Hypertrophy of the Coronoid Processes

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Limitation of motion of the mandible caused by abnormalities of the coronoid processes is rare.<sup>1</sup> Enlargement of the coronoid processes is most frequently the result of osteochondroma, although other causes may include exostosis, osteoma, hypertrophy, and hyperplasia. Since 1943, 27 cases of coronoid process enlargement, either unilateral or bilateral, have been reported.<sup>1,2</sup> I was unable to find a report of this entity in the anesthesia literature. A case of bilateral

coronoid process enlargement is presented. It is emphasized that the patient may not be aware that the ability to open the mouth is diminished. We were fortunate in that we recognized this problem prior to anesthesia.

#### REPORT OF A CASE

A healthy 44-year-old man was admitted to the oral surgery service with the complaint of increasing inability to open his mouth and pain when attempting to exceed his "normal opening." He related this to a facial injury two years prior to admission, although there had been no facial bone fractures at that time. Examination revealed that he could open his mouth 2.2 cm, a distance that he could not increase even when forced. There was no palpable deformity of the facial skeleton, especially none of the zygomatic arches. Roentgenograms revealed no evidence of previous facial bone injury, but did reveal bilateral hypertrophy of the coronoid processes of the mandible. Otherwise,

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