

Anesthetic Complication Following Surgical Extirpation of a Cyst in the Thyroglossal Duct

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This is a report of a completely unexpected and nearly fatal mishap that occurred during endotracheal intubation in a patient who needed reoperation for bleeding after a thyroglossal duct cystectomy. So far as the authors know, this complication has not been reported.

REPORT OF A CASE

A healthy, 28-year-old, white man entered the hospital for excision of a draining thyroglossal duct cyst. Physical examination disclosed no other abnormality, and results of laboratory studies were within normal limits.

On the day of operation, after premedication with 100 mg pentobarbital and 0.5 mg atropine, anesthesia was induced at 8:15 AM with 350 mg thiopental and 80 mg succinylcholine, iv. Endotracheal intubation with a no.-9 cuffed tube was without difficulty. Anesthesia was maintained with nitrous oxide, oxygen, and halothane.

The operation started at 8:30 AM and consisted of excision of the fistulous tract, a portion of the hyoid bone, and the foramen caecum. A Penrose drain was left in the wound. The surgical procedure was finished at 10:45 AM, and termination of anesthesia and extubation of the trachea were without incident.

The patient was admitted to the recovery room at 11:00 AM. At 11:50 AM, the neck dressing was reinforced because of bleeding. At 12:10 PM, re-exploration of the neck wound was deemed necessary because of continued bleeding. There was no sign of respiratory obstruction at this time, but the tongue was slightly elevated from the floor of the mouth.

At 1:00 PM, anesthesia was induced with 200 mg thiopental and 60 mg succinylcholine, iv. On insertion of the laryngoscope blade (Miller #3), a sudden and unexpected gush of clotted blood from a huge hematoma at the base of the tongue filled the oral cavity and prevented visualization of the larynx. Brisk, fresh intraoral bleeding followed. Despite vigorous suctioning, identification of the normal laryngeal landmarks could not be made because of the bleeding and blood clots in the glottic area. Attempts at intubation were made by senior anesthesiologists—all were unsuccessful. Blind intubation failed. Endotracheal intubation appeared impossible in these circumstances. The patient could not be ventilated by face mask. Peripheral cyanosis became obvious, and hypoxic bradycardia with some premature ventricular contractions quickly ensued. Fortunately, an emergency tracheostomy was rapidly performed and ventilation and anesthesia re-established.

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The wound was reopened, bleeding points were ligated, the area was drained, and the wound was closed.

Laryngoscopy revealed clotted blood completely obstructing the hypopharynx and glottic area. The clots were removed, and examination of the larynx disclosed no abnormality. The tracheostomy tube was left in place for three days postoperatively, and the patient made an uneventful recovery.

DISCUSSION

Bleeding following operations on the neck and oral cavity is a notorious, hazardous postoperative complication,¹ and occurred in this case even though the wound was drained. The rapid-induction technique was selected for the second anesthetization because there was no obvious sign of respiratory obstruction and the previous intubation had been uneventful. The slight elevation of the tongue from the floor of the mouth was the only abnormality. Intubation with the patient awake, using topical anesthesia, was not considered. During reanesthetization of this patient, insertion of the laryngoscope blade ruptured a huge, unsuspected hematoma at the base of the tongue, completely obstructing the larynx with blood clots and preventing endotracheal intubation. Transient edema of the epiglottis has been reported to occur following thyroglossal duct cystectomy,² and laryngeal obstruction has been caused by blood clots from ruptured esophageal varices,³ but so far as we could determine there has been no case of respiratory obstruction due to rupture of an intraoral hematoma following surgical extirpation of a thyroglossal duct cyst. Examination of the base of the tongue is recommended when these patients need general anesthesia and reoperation for postoperative bleeding; intubation with the patient awake or tracheostomy with local anesthesia may be necessary if a hematoma is found at the base of the tongue.

The authors thank Dr. Tae Young Park for permission to report this case.

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