Tracheostomy for a Patient of Sleep Apnea Syndrome in an Emergency Situation

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We present a case of emergency tracheostomy on induction of anesthesia for intubation difficulty to a patient who was already undergoing surgical operation under local anesthesia in a private office. A cause of the tracheostomy is enlarged tonsils which obstructed the orotracheal intubation.

After the operation, he was diagnosed as a sleep apnea syndrome with his history.

Case

A twelve-year-old boy was undergoing surgical procedure for hemangioma at right anterior neck under local anesthesia in a private office. During the procedure, massive and uncontrollable bleeding occurred from branches of right external carotid artery. Because the surgical procedure became prolonged and manipulated roughly, the patient could not tolerate the operation. An anesthesiologist was called in urgently and then halothane anesthesia was induced under mask. The patient began snoring and his airway was obstructed progressively correspondingly to anesthetic depth. Orotracheal intubation was attempted but unsuccessful because of his enlarged tonsils obstructing his oral airway. In addition, a surgeon was compressing the neck for hemostasis towards the opposite tonsil with which, we thought, caused further obstruction of his airway. The anesthesiologist tried to insert a finger between tonsils to compress enlarged tonsils laterally but it was impossible because of tightly adhered tonsils completely obstructing the finger to insert. His respiration was assisted but became severely depressed, and tachycardia occurred. We concluded that we should perform tracheostomy to maintain the airway and tracheostomy was performed. The operation finished with 1800 ml bleeding for the size of 1 cm by 1.5 cm tumor two and a half hours after the tracheostomy. His history revealed enlarged tonsils and adenoid, and loud snoring during sleeping. Few moments later of cessation of snoring, his snoring resumed and became louder than it ceased abruptly. He was diagnosed as a sleep apnea syndrome.

Discussion

One of the most serious complication of anesthesia is asphyxia by airway trouble at induction. At induction

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of anesthesia, an unpredicted airway trouble will occur even with careful preanesthetic examination according to Zmyslowskis' recommendation[1] of tracheal intubation. The oral examination may be forgotten sometimes, especially when general anesthesia should be inducted to the patient who is already undergoing surgical operation under local or regional anesthesia.

The patient had enlarged tonsils which caused nearly complete airway obstruction during induction of anesthesia with relaxed musculatures just as it occurs in sleep apnea syndrome[2].

If we had detected the enlarged tonsils in the patient before induction of anesthesia, I would have tried awake intubation. Unfortunately there was no time to examine the patient before induction of anesthesia because the patient was groaning in pain. The stage of operation was in urgency. As an additional cause of tracheostomy, there was no device for transtracheal ventilation such as transtracheal puncture systems[3] or transtracheal jet ventilation systems[4].

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