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Total Occlusion of Oral Cavity by Mandibular Sarcoma for Resection: To Intubate Nasally or Proceed to an Awake Tracheostomy?

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Case Presentation: A 70-year-old man presented for elective resection of a large mandibular sarcoma. The patient had been sitting upright for the last 6 months secondary to total occlusion of the oral cavity. Nasal obligate breathing and marked bedside halitosis were evident. He had received nutrition via a percutaneous endoscopic gastrostomy tube. Other significant medical history findings included marked hypovitaminosis B complex, various individual low vitamin levels, smoking two packs per day for 60 years, and syphilis. The anesthesia-surgical team made the decision to proceed with awake nasal fiberoptic intubation with a dexmedetomidine infusion and postoperative mechanical ventilation until the patient could be weaned and successfully extubated. Awake intraoperative tracheostomy by an otolaryngologic surgeon was a backup surgical option.

The nasal passages were prepared with 4% xylocaine, with surgical packing of the nose. A transtracheal induction of 4% xylocaine was performed, since the tumor did not extend into the trachea. The nasal passages had been vasoconstricted with neosynephrine and oxymetazoline spray. A loading dose of dexmedetomidine 1 µg/kg over 20 minutes was followed by a basal target-controlled infusion of 0.7 µg/kg. The right nasal passageway was visualized with a fiberoptic scope, which had the added safety benefit of the patient's spontaneously breathing, thus avoiding apnea. When the endotracheal tube had achieved safe passage through the vocal cords and into the trachea, the carina was visualized. The cuff inflated, providing positive evidence of end-tidal carbon dioxide. The operative estimated blood loss was greater than 1 liter, and was replaced with 4 units of packed red blood cells. The dexmedetomidine infusion was continued when the patient was transferred to the surgical intensive care unit, where he remained intubated until controlled extubation was achieved.

Discussion: Oral cavity cancers represent 4% of malignancies and involve anterior and posterior tonsillar pillars as well as lips, tongue, cheeks, and tonsils. They are more common in older men, where the incidence is four times greater than in women. Chronic smoking, B complex global hypovitaminosis, and syphilis are all relevant features in the history. The use of controlled dexmedetomidine infusion loading and maintenance permitted safer perioperative endotracheal intubation, postoperative management, and extubation in this patient.