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Letter to the Editor

Anesthesia management of a patient with schwannoma of tongue base

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Dear Editor,

Schwannoma or neurilemmoma is a rare benign tumor that arises from the Schwann cells of the peripheral nerves. This lesion often occurs in the soft tissues of the head and neck region and has complicated growth trends. Schwannomas of the head and neck account for approximately 25-48% of all cases. Only 1% of schwannomas are found in the oral cavity, and the tongue is most frequently affected organ. It is usually a slow-growing, solitary, well-circumscribed and encapsulated tumor (1).

Videolaryngoscopy is increasingly used in order to facilitate tracheal intubation. It is a recommended technique that increases the chance of intubation success in current difficult airway management guidelines (2). In this case report, we aimed to present the successful perioperative airway management of a Schwannoma case, originated from an affected tongue and narrowed oropharynx.

A 32-year-old female patient was admitted to the Otorhinolaryngology (ENT) outpatient clinic of our hospital with difficulty in swallowing, change in voice quality, sensation of sting in her throat, and dyspnea. In the fiber optic nasal endoscopic examination of the patient who had no reported significant medical history, a lump of 3x3 cm in size with a smooth surface and natural overlying mucosa on the base of the tongue was detected. It was reported as "a nodular mass lesion in the posterior aspect of the sublingual area, approximately 35x45 mm in size, had a well-defined border that narrowed oropharyngeal passage and intense contrast enhancement" with diffusion-weighted magnetic resonance imaging (MRI) of the head and neck. Carotid angiography performed by interventional radiology revealed dilated vascular structures, and distal embolization with PVA (polyvinyl alcohol) and proximal embolization with coils was applied to the lingual branch of the left external carotid artery. After the procedure, an excisional biopsy was planned. The patient's laboratory examination was normal. The patient's preoperative airway assessment revealed a standard mouth opening and neck movement and a Mallampati score of 3. In the light of the findings as mentioned above and considering the localization of the mass, intubation was planned with videolaryngoscopy after the induction of general anesthesia. The procedure was explained to the patient, and informed consent was obtained, including approval of tracheostomy in case of a failed intubation. İn addition, laryngeal maske airway, equipment for fiber optic laryngoscopy, and emergency tracheostomy was prepared for the possibility of difficult intubation. Routine monitoring and preoxygenization with 100% O2 for 3 minutes were applied to the patient followed by 1 µg/kg fentanyl and 2.5 mg/kg propofol induction of anesthesia was completed with 0.5 mg/kg rocuronium. Sugammadex was made available for can't ventilate cannot intubate situation. It was identified that the mass narrowed the posterior oropharynx when the base of tongue was reached with McGrath® Series 5 Video Laryngoscopy. Videolaryngoscopy was progressed slowly without pressing the mass against the possibility of trauma. Cormack-Lehane (CL) score was recorded as I. The patient intubated in a single attempt using 7.00 mm, cuffed, a spiral-flex endotracheal tube with a stylet. Anesthesia was maintained by controlled ventilation of 2.5% sevoflurane in 50% O2-air. Dexamethasone 8 mg IV was performed to prevent the risk of laryngeal edema. The hemodynamic parameters were stable, bleeding control was performed, 2 mg/kg IV sugammadex was administered for recovery from the neuromuscular block

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after the operation lasting for 60 min. Moreover, the patient was extubated without any problem after her spontaneous breathing was sufficient. There was no development of postoperative edema in the upper airway. Histopathology result of the resected tissue was reported as encapsulated Ancient Schwannoma.

Schwannomas usually do not produce any symptoms, but sometimes they can cause pain and paresthesia due to their size and compress on the surrounding tissues (2,3). In our case, dysphagia, dyspnea and voice change were present because of the mass effect. A Schwannoma does not recur if excised completely. A final diagnosis was made after the histopathological evaluation (4). Anesthesia management in surgical excision of the base of tongue masses depends on the location, size of the mass and the possibility of bleeding due to trauma. Surgical excision with trans-oral approach under local or general anesthesia can be performed on small and well-encapsulated tumors that do not cause distortion of airway. Although the lumps in the base of the tongue are asymptomatic, we can face with difficult airway after induction of anesthesia because of the mass causing distortion of airway (5). In our symptomatic case, mask ventilation was comfortable after the induction of anesthesia and no distortion of the airway developed. If there are symptoms such as dysphagia, loss of voice or change, shortness of breath or wheezing, the anesthesiologist should be alert for potential airway problems. Preoperative the fiber optic nasal endoscopic examination performed by the ENT department of the patient revealed that the mass narrowed the posterior oropharynx but did not completely occlude. In light of this information, we prepared for difficult intubation.

It has been reported that the use of videolaryngoscopy, is widely used in difficult airway management, it is a useful tool for difficult airway management and may be a good alternative to fiber optic bronchoscopy in some cases where direct laryngoscopy fails. In our case, we performed intubation via videolaryngoscopy because its offers large and clear visualization of the anatomical structures, it causes less complications. Videolaryngoscopy, the gold standard alternative method recommended in the difficult airway (2) and we have sufficient experience in our clinic.

Considering the possibility of difficult intubation and ventilation in patients with a mass in the base of tongue, a thorough clinical examination, a rigorous preoperative airway evaluation including CT and/or MRI scans, as well as preparing difficult intubation equipment before in induction are necessary. In such cases, intubation can be performed by videolaryngoscopy with its proven advantages as a preferred method for performing tracheal intubation.

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REFERENCES

1. Patnayak R, Anuradha SV, Uppin SM, at al. Schwannoma of tongue - A case report and short review of literatüre. Acta Oncol 2007;46:265-6.
2. Law J, Morris I. Historical cohort study of 10 288 tracheal intubations facilitated by videolaryngoscopy. Br J Anaesth 2018;121:e1-e2.
3. Martins MD, Jesus LA, Fernandes KP, at al. Intra-oral schwannoma: Case report and literature review. Indian J Dent Res 2009;20(1):121-5.
4. Hatziotis JC, Asprides H. Neurilemoma (schwannoma) of the oral cavity. Oral Surg Oral Med Oral Pathol 1967;24:510-26.
5. Davies S, Ananthanarayan C, Castro C. Asymptomatic lingual tonsillar hypertrophy and difficult airway management: a report of three cases. Can J Anaesth 2001;48:1020-4.