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Technical Note

Debulking biopsy of a huge intraoral mass avoiding tracheostomy

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Abstract Managing a patient with a huge intraoral mass is always challenging. Manipulation or even a simple biopsy of the mass may lead to hemorrhage and further compromise the airway. An examination under anesthesia is not without risk. The method of securing the airway itself may become an issue if the mass is fully occupying the airway before intubation. Usually a tracheostomy is indicated. We share a gentleman presented with a huge intraoral mass occupying the oropharynx, which initially necessitates tracheostomy. We utilized the ultrasonic scalpel-assisted instrument to biopsy by debulking the tumour, thus avoiding the tracheostomy while waiting for the definitive treatment.

Keywords: airway, biopsy, mass, oropharynx.

Introduction

Managing a patient with a huge intraoral mass is always challenging. The situation is further complicated by the fact that the locations of the mass are sometimes compromising the airway. The oropharynx is the narrow lumen in between the faucial pillars. The opening is further constricted if the big mass is located at this area. Difficult intubation is anticipated. Furthermore, if the patient needs to have biopsy for histological assessment, the airway needs to be maintained.

Case summary

A 22-year-old gentleman presented with painless intraoral left lower jaw swelling of one-year duration, which was rapidly increased in size over six months. It was associated with gradually increased in size of a painless left submandibular swelling. He denied neither obstructive nor compressive symptoms due to the swelling. He also denied any constitutional symptoms. There was no history of dental problems.

Examinations revealed a diffuse hard left mandibular swelling extending from left ear lobule to the body and angle of mandible. There were no skin changes over the swelling. Paraesthesia was noted at the left mandibular region. Intraoral examination revealed a huge, firm left buccal exophytic mass measuring about 6x7 cm crossing the midline, with the base of the mass at left mandibular molar (36, 37, 38) and left alveolobuccal sulcus (Fig. 1). The left tonsil was not visualized. Other teeth were noted to be normal with fairly good hygiene. Other examinations were unremarkable. OPG is suggestive of ameloblastoma (Fig. 2).

In view of the mass occluding the oropharynx causing the impending airway obstruction; an elective tracheostomy was originally planned. However, another option was initiated by opening the airway without resorting to tracheostomy. We

have convinced the anesthetist team that the patient can be smoothly intubated, by showing the prior flexible nasopharyngolaryngoscopic view of the airway. The scope was inserted through the nose. The result showed that the obstruction was mainly at the anterior part of the oropharynx. The part posterior to the posterior pillar (palatopharyngeus) was free from any mass and the whole laryngeal inlet was easily visualized. With this information and a tracheostomy set standing by, the anesthetist managed to intubate the patient easily via the nose. As the tumour is potentially bled after debulking biopsy, we utilized the ultrasonic scalpel instrument. The intraoral part of the tumour was debulked almost 90% and had successfully opened up the airway (Figs. 3a and 3b). The bleeding was minimal. The patient was safely extubated and had consumed orally and breathes comfortably while waiting for the definitive histopathological result.

Fig. 1 The airway lumen is compromised at the oropharyngeal region; the uvula and tonsils were not visualized.

Fig. 2 Orthopantomography view showed complete dentition. There is well-defined multilobulated lytic lesion with sclerotic margin involving the left body and angle of mandible. Presence of root resorption was seen at the lower left third molar.

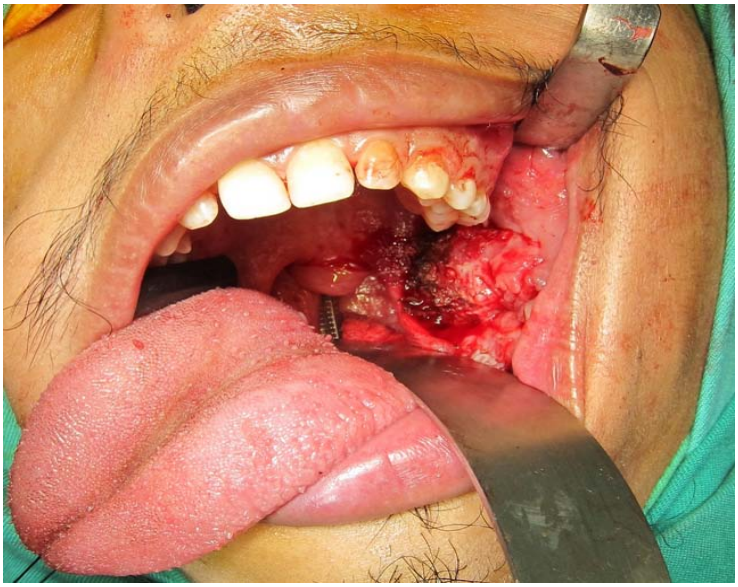

Fig. 3a Debulking of the tumour with minimal bleeding to open up the airway. The uvula and the endotracheal tube (nasal intubation) can be visualized.

Fig. 3b Specimen removed to open the airway; avoiding tracheostomy.

Discussion

Intraoral or oropharyngeal mass usually presented with devastating symptoms such as dysphagia, voice changes or breathing difficulty owing to its location in the upper part of the airway (Irfan and Puvan Arul, 2012). Sometimes the nature (i.e. fungating surface and increased vascularity) of the lesion itself makes it more prone to be ulcerated and cause bleeding or infection leading to odynophagia. These presenting conditions always need urgent intervention. The mass usually requires a punch biopsy for diagnostic purposes. Most of the cases can be dealt in an outpatient setting. However larger tissue sampling may cause bleeding. This is the reason why some of the diagnostic procedures need to be done under general anesthesia. The common lesions include squamous cell carcinoma and mucoepidermoid carcinoma of minor salivary glands. However lymphoma, leiomyoma and lingual thyroid cases has also been reported, as far as base of tongue is concerned (Nor Idayu *et al*., 2012; Chentilnathan *et al.*, 2012).

In the present case, the lesion was initially biopsied as ameloblastoma. However the clinical presentation of ameloblastoma is rarely presented with an intraoral fungating mass which may indicate more malignant type of lesion. Such type of presentation is more inclined to oral cavity squamous cell carcinoma, or originating from the tonsil (Othrub and Irfan, 2011). Malignant variant of ameloblastoma should also be taken into consideration as one of the differential diagnosis. Such mass tends to obstruct the airway and that is why the prophylactic tracheostomy was initially planned.

To our knowledge, the instrument is new in Malaysia, as far as oral cavity and head and neck surgeries are concerned. As such, the ultrasonic-assisted instrument is commonly and frequently used by the general surgeons for their laparoscopic and thyroid surgeries. In our center, the Otolaryngology-Head and Neck Surgery team have started to use this instrument since 2011; in most of the oral cavity particularly for tongue lesions. It was documented as to have reduced the blood loss, reduced post-operative pain and to some extent produced minimal damage to the edge of the resected specimen (Yaroko *et al*., 2012; Irfan *et al.*, 2011a; Irfan *et al*., 2011b). These outcomes are good for the surgeon and ultimately to the patient. The specimen will also have minimal collateral thermal tissue damage because no heat was applied during the resection.

In the present case, by doing the debulking biopsy with minimal blood loss; the patient could consume normal diet on the next operative day and did not require tracheostomy with its related complications, while waiting for the definitive pathology and treatment plan. Immediate complication includes hematoma, while infection at the stoma and fistula are considered as late sequelae (Chentilnathan *et al*., 2013; Irfan *et al*., 2013; Irfan and Mohd Yusri, 2009).

References

Chentilnathan P, Irfan M, Ireen R, Samarendra M (2012). Base of tongue as an unusual site for non Hodgkin lymphoma. *Bangladesh J Med Sci*, **11**(3): 248-249.

Chentilnathan P, Irfan M, Khairul Bariah J, Nik Fariza Husna NH (2013). Maggots form tracheostoma. *Arch Orofac Sci*, **8**(1): 41-43.

Irfan M, Chentilnathan P, Yahia D (2011a). Tongue pyogenic granuloma excision by using ultrasonic scissors. *Arch Orofac Sci*, **6**(2): 83-85.

Irfan M, Mohd Yusri M (2009). Excision of tracheocutaneous fistula under local anaesthesia. *Arch Orofac Sci*, **4**(1): 29-31.

Irfan M, Norasnieda MS, Noreen Norfarahin LA, Hazama M (2013). An iatrogenic heamatoma. *Brunei Int Med J*, **9**(5): 328, 359.

Irfan M, Puvan Arul A (2012). A man with hot potato voice and neck swelling. *Malays Fam Physician*, **7**(1): 41-42.

Irfan M, Yaroko AA, Baharudin A, Shahid H (2011b). Harmonic scalpel for a bloodless partial glossectomy: a case report. *Med J Malaysia*, **66**(2): 148-149.

Nor Idayu MY, Irfan M, Othman NH (2012). Recurrent glossal leiomyoma. *Med J Malaysia*, **67**(3): 261-262.

Othrub KA, Irfan M (2011). Intraoral lymphoma mimicking tonsillar carcinoma. *Int Med J*,**18**(3): 252-253.

Yaroko AA, Irfan M, Wan Azman WS, Baharudin A (2012). Utilization of harmonic scalpel for hemiglossectomy in carcinoma of the tongue. *Pak J Med Sci*, **28**(4): 748-751.