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Case Report

Pathology Section

Haemangioma of the Base of the Tongue: A Case Report

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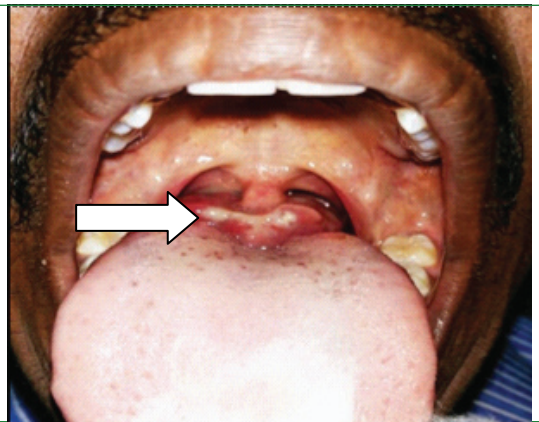
ABSTRACT

Haemangioma is a benign vascular hamartoma. In the head and neck region, it frequently affects the face, lips and oral mucosa. The tongue is relatively a rare site of involvement. We report a case of haemangioma of the base of the tongue which is a very rare site of occurrence. A 20-year-old male presented with swelling in the oropharynx with no history of fever or cough. On examination, a mass involving both the valecullae and lingual epiglottis was found, extending into the oropharynx and the oral cavity. Contrast Enhanced CT scan revealed a possibility of benign mixed tumour of minor salivary glands or cervical lymphadenopathy was considered. Fine Needle Aspiration Cytology (FNAC) was done and a benign tumour was considered. Direct laryngoscopy was done and a small biopsy taken from the mass revealed features of pyogenic granuloma. Excision biopsy was done and a histological diagnosis of haemangioma (mixed capillary and cavernous) with secondary changes was offered.

Keywords: Oropharynx, Pyogenic granuloma, Vascular hamartomas

CASE REPORT

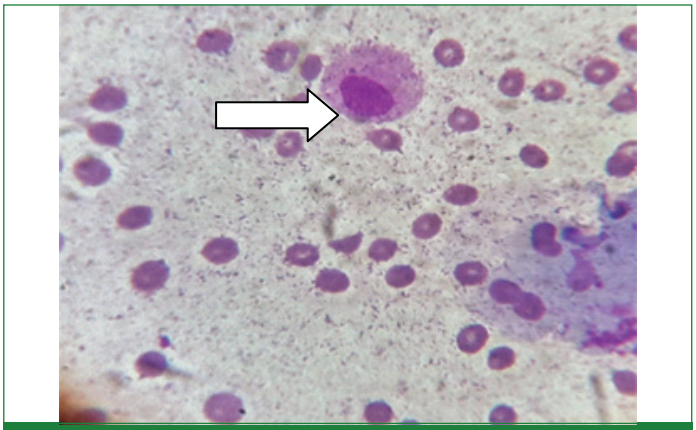
A 20-year-old male presented in the ENT OPD with swelling in the oropharynx since one month. It was a small swelling which progressed slowly to the present size. He gave history of difficulty in swallowing, talking and breathing. He gave no history of fever, pain, cough or respiratory distress. No past history of similar complaints or any chronic illness. No significant family history. No history of trauma or foreign body. No history of other co-morbidities was elicited. Systemic examination revealed no abnormalities. On external examination, no lymph nodes were palpable. On local examination, a mass was found on the base of the tongue involving both the valecullae and lingual epiglottis was found, extending into the oropharynx and the oral cavity measuring 3x2x1 cm. The lesion was red purple in colour and sessile. The surface of the lesion was eroded and showed focal small grey white ulcers. No tenderness was noted. Blanching test was positive. No cervical lymphadenopathy was noted. Complete haemogram, coagulation profile and serology were within normal limits [Table/Fig-1].



[Table/Fig-1]: Photograph showing polypoidal sessile mass (arrow) in the base of the tongue.

Contrast enhanced CT scan revealed an exophytic oropharyngeal airway mass with internal cystic component and multiple specks of calcifications. Provisional diagnosis of benign mixed tumour of minor salivary glands was considered. Radiological intervention was not carried out as the required facility was unavailable and the patient could not afford it in any other institution.

FNAC was performed using a 22 G needle and syringe from the lesion at the base of the tongue per oral. A 1 mL blood mixed material was aspirated and the smears studied from the mass showed adequate cellularity consisting of round to polygonal cells having vesicular nucleus, bland chromatin with micronucleoli and moderate amount of pale eosinophilic cytoplasm along with neutrophils, lymphocytes and erythrocytes. Possibility of benign inflammatory lesion was considered [Table/Fig-2].



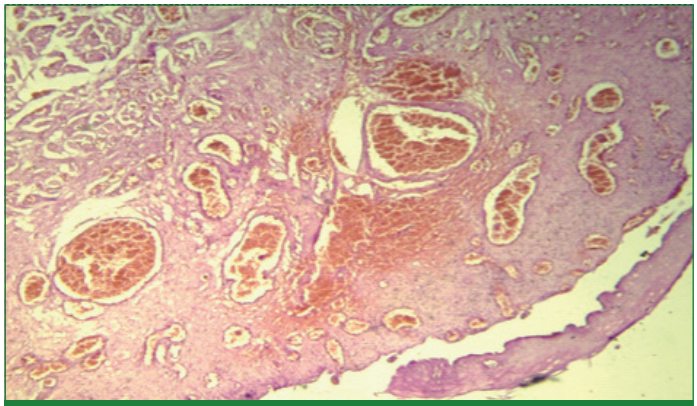
[Table/Fig-2]: Microphotograph of FNAC shows histiocyte (arrow) as round cells with vesicular nucleus mistaken to be epithelial cells. (H&E, X400).

Direct laryngoscopy was done and a small biopsy taken from the mass on the base of the tongue showed tissue lined by stratified squamous epithelium. Subepithelium showed multiple small blood vessels, inflammatory cells predominantly neutrophils with few lymphocytes, histiocytes and edematous stroma. A diagnosis of pyogenic granuloma was offered [Table/Fig-3].

A simple surgical excision was done due to lack of facility for laser and cryosurgery. Grossly, specimen consisted of mucosa covered lobular polypoidal soft tissue mass measuring 3x2.5x1.5 cm. External surface was lobular with grey white to grey brown areas and focal ulceration. The lesion was gritty to cut. Cut surface was grey white to grey brown areas. No areas of necrosis were noted [Table/Fig-4].

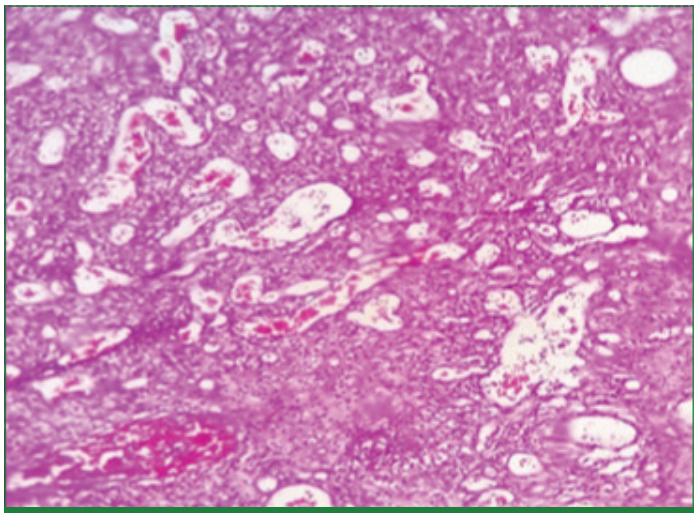
Microscopy showed lesion lined by stratified squamous epithelium with focal ulceration. Lesional tissue was composed of thin walled vascular channels (capillary and cavernous type) some of which

showed intercommunications. Also, seen were areas of hyalinization and calcification. No nuclear atypia was seen. Final histopathological diagnosis of haemangioma (mixed capillary and cavernous) with secondary changes such as calcification and hyalinisation was offered [Tables/Fig-5,6].



[Table/Fig-3]: Microphotograph of biopsy shows numerous small vascular channels and neutrophilic inflammatory infiltration suggestive of pyogenic granuloma. (H&E, X400).

[Table/Fig-4]: Gross appearance of excised mass from the base of the tongue showing polypoidal grey brown soft tissue mass.

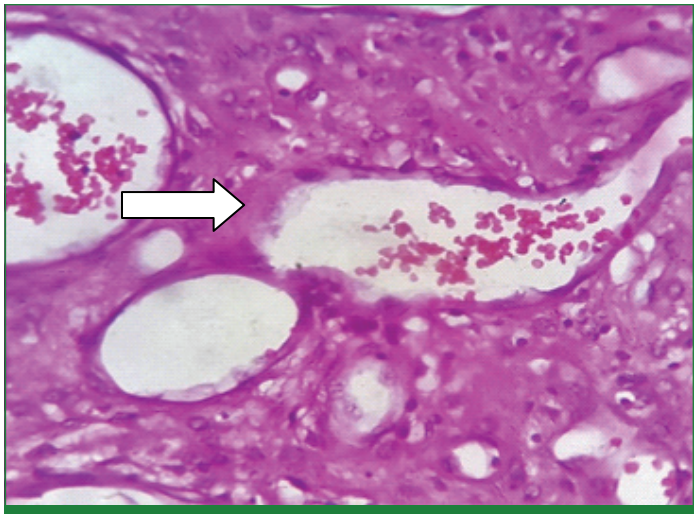


[Table/Fig-5]: Microphotograph of excised mass from the base of the tongue showing numerous thin walled vascular channels (capillary and cavernous type) consistent with features of haemangioma, mixed type. (H&E, X100).

The patient was followed up for four months after the surgery which was uneventful. Later patient was lost for follow-up.

DISCUSSION

Haemangiomas are common developmental vascular anomalies and occupy a grey area between a true neoplasm and hamartoma. Liston first described a case of haemangioma in 1843. Most often they are congenital or develop during the neonatal period. Haemangiomas have a notorious predilection towards females with



[Table/Fig-6]: Microphotograph showing thin walled vascular channels (arrow) filled with erythrocytes. (H&E, X400).

a female to male ratio of 3:1 [1-6]. In the present case, the patient was a male of 20 years of age with mass in base of the tongue for one month.

About 60% to 70% of cases of haemangioma occur in the head and neck region. They occur in the trunk and the extremities also. Common sites in the head and neck region excluding the oral cavity are the eyelids, lips and the cheek. In the oral cavity, the most common site is the gingivobuccal sulcus. Other rare sites in the oral cavity include the salivary glands, dorsal surface of the tongue as well as the hard palate. Tongue is a relatively rare site for occurrence and a haemangioma of the base of the tongue is an even rarer entity [Table/Fig-7]. As far as our knowledge goes only few cases of haemangioma of the base of the tongue have been reported in the English literature [1-7]. In the present case, haemangioma was arising from the base of tongue extending upto the valecullae and lingual epiglottis.

Sr. No.	Author	Site	Diagnosis	Treatment	Prognosis
1	Qureshi SS et al., [1]	Base of the tongue	Capillary haemangioma	extended supraglottic laryngectomy with excision of the lesion	No recurrence
2	Parajuli R et al., [2]	Dorsum of the tongue	Capillary haemangioma	Simple excision	-
3	Lechien JR et al., [3]	Base of the tongue	Mixed haemangioma	Endoscopic resection	No recurrence
4	Nunes AB et al., [4]	Base of the tongue	Capillary haemangioma	-	-
5	Ashok L et al., [5]	Dorsum of the tongue	Cavernous haemangioma	Simple excision	No recurrence
6	Pranitha V et al., [6]	Lateral surface of tongue	Cavernous haemangioma	Simple excision	-
7	Khanduri S et al., [7]	Posterior third of the tongue	Capillary haemangioma	Simple excision	-
8	Present study	Base of the tongue	Mixed haemangioma	Simple excision	-

[Table/Fig-7]: The different sites of haemangioma in the oropharynx in various studies.

Clinically, haemangioma presents as an occasionally painful swelling which blanches on pressure with occasional bleeds. Although clearly benign in behaviour, they can become very large and unsightly and can even be fatal if they affect vital structures. Haemangioma of the tongue needs special care due to the susceptibility of the tumour to trauma, bleeding and ulceration. It may also cause difficulty in breathing and dysphagia. Most lingual tumours present with mucosal changes. Haemangioma of dorsum of the tongue being superficially located and easily accessible, can be diagnosed without imaging analysis unlike haemangioma of base

of tongue [1,3-9]. In the present case, the tumour showed mucosal ulceration and the patient presented with difficulty in swallowing. The differential diagnosis of haemangioma includes lymphangioma, pyogenic granuloma, granulation tissue, squamous papilloma and angiosarcoma [2].

The characteristics of the lesion and its extent in the deep portion of tongue can be best appreciated on MRI or cross-sectional CT scan. Haemangiomas usually appear as a well-demarcated enhancing mass often containing a phlebolith on CT scan. MRI shows the lesion as a solid mass with isointense or slightly high signal intensity to muscle on T1-weighted images and heterogeneous signal intensity on T2-weighted images. Post contrast T1-weighted imaging commonly demonstrates prominent enhancement [1,7,8]. In the present case, the mass on CT showed cystic component and multiple specks of calcifications.

Fine needle aspiration from suspected case of haemangioma has to be done with caution. Many times, the aspirate is haemorrhagic and microscopically shows only blood and blood elements. The smear is usually acellular and contain scant groups of bland spindle cells against a haemorrhagic background [6,7,9]. In the present case FNAC showed round to polygonal cells (histiocytes mistaken for epithelial cells) along with neutrophils, lymphocytes and erythrocytes.

Microscopically, haemangiomas have been classified according to the calibre of vessel involved into capillary and cavernous. Other variants are spindle cell haemangioma, hobnail haemangioma, large vessel haemangioma, Kaposi-like or kaposiform haemangioendothelioma. Capillary haemangiomas are made up of small vessels of capillary calibre and can occur in any organ. Cavernous haemangiomas are composed of larger vessels with cystically dilated lumen and thin walls. This is more common in viscera. Large-vessel haemangiomas may be composed of vessels with the structure of veins (venous haemangiomas) or a combination of veins and arteries [5,8]. In the present case the haemangioma was mixed type, capillary and cavernous. Prognosticaly mixed haemangioma is not different from capillary or cavernous type of haemangioma.

Treatment options for haemangiomas includes surgical intervention in majority of the cases, but other options can be cryosurgery, curettage and embolization. Conservative management has a higher rate of recurrence as compared to surgical management [9].

CONCLUSION

Although the tongue is a common site for occurrence of haemangioma, the base of the tongue is a relatively rare site. In the present case it is seen in a 20-year-old male who was managed surgically and responded well.

REFERENCES

[1] Qureshi SS, Chaukar DA, Pathak KA, Sanghvi VD, Sheth T, Merchant NH, et al. Haemangioma of base of tongue. Indian J Can. 2004;41:181-83.
[2] Parajuli R, Maharjan S. Unusual presentation of oral pyogenic granulomas: a review of two cases. Clin Case Rep. 2018;6:690-93.
[3] Lechien JR, De Marrez LG, Theate I, Khalife M, Saussez S. Unusual presentation of an adult pedunculated haemangioma of the oropharynx. Clin Case Rep. 2017;5:491-96.
[4] Nunes AB, de Britto Medeiros LH, Tedeschi EA, Cazarotto VT, Mozzini AR. Haemangioma of oropharynx and larynx. Int Arch Otorhinolaryngol. 2012;16:01.
[5] Ashok L, Kamala KA, Sujatha GP. Cavernous haemangioma of the tongue: A rare case report. Contemporary Clin Dentistry. 2014;5:95-98.
[6] Pranitha V, Puppala N, Deshmukh SN, Jagadesh B, Anuradha S. Cavernous Haemangioma of Tongue: A Management of Two Cases. J Clin Diag Res. 2014;8:15-17.
[7] Khanduri S, Agrawal D, Varshney G, Singh N. Haemangioma of tongue: a rare case report. J Oral Maxillofac Radiol. 2015;3:25-27.
[8] Jha A, Alok A, Kumar M, Hasan K. Capillary haemangioma mimicking pyogenic granuloma: A rare case report in male. IJSS Case Rep Rev. 2016;3:07-10.
[9] Rosai J. Soft tissue. In, Houston M (ed). Rosai and Ackerman's Surgical Pathology, 10th edition. China, Elsevier. 2011;2150-53.

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