

Hemangioma of Tongue with Abrupt Growth Onset: A Rare Case Report

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Case Study

ABSTRACT

Hemangiomas of the oral cavity are uncommon but have a predilection for the tongue. Although the majority of lingual hemangomas are superficial, certain lesions can affect the deep tongue or even the entire tongue. They're called hamartomas rather than genuine neoplasms. Author presents a case of haemangioma of the anterior 2/3rd of the tongue involving both ventral and dorsal aspects, and ascertaining the diagnostic evaluation and emphasizing the role of color doppler ultrasonography and contrast enhanced magnetic resonance imaging in unrevealing the diagnostic dilemma of the lesion, and further helping in deciding the level of the management. This Study presents a relatively rare and unusual case of haemangioma of tongue with abrupt onset of growth.

Keywords: CEMRI Contrast enhanced magnetic resonance imaging; AVM Arterio- venous malformation; CD color doppler.

1. INTRODUCTION

“Hemangioma is a common benign vascular neoplasm that closely resembles normal vessels. Oral cavity hemangiomas are relatively rare. Vascular lesions are classified as

capillary,cavernous,venous and arteriovenous malformations depending on the predominant anomalous vascular channels” [1,2]. “Alternatively malformations can be categorized as either high flow (arteriovenous) or low flow (capillary, cavernous, venous) vascular lesions”

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[3]. "However low flow lesions can have mixed pathological features and manifest with similar patterns at magnetic resonance imaging, making differentiation impossible" [4]. Magnetic resonance imaging is useful for characterizing and determining the extent of vascular lesions. "A combination of conventional MR imaging and Dynamic contrast enhanced MR angiography is especially useful in distinguishing between high- and low-flow lesions" [5].

2. CASE REPORT

A 62yrs old male presented with swelling in the anterior two-third of the tongue, with stuttering of speech and swallowing difficulty for 25 days. The swelling was incidental in - onset, with rapid progression of growth and was associated with bluish discoloration. The patient had no fever and no pain. There was no personal history of previous diseases. The physical examinations showed no alterations, with all the vitals within the normal limits.

The Local intra-oral examination revealed the diffuse swelling noted involving the anterior 2/3rd aspect of the tongue, the surface appears granular with bluish discoloration and white patchy gelatinous geographical areas noted predominantly in ventral aspect of the tongue. The posterior 1/3rd of the tongue seemed to be healthy with normal morphology. On palpation the swelling was soft in consistency, non-tender, afebrile with no palpable thrills. There was no restriction in the range of movements.

Based on the basis of clinical features and physical examination the clinical diagnosis of hemangioma with differential diagnosis of

vascular malformation, angiomyolipoma, angiosarcoma and Kaposi sarcoma were made (Fig. 1).



Fig. 1. Image depicting the diffusely swollen tongue involving predominantly anterior 2/3rd, with bluish discoloration and gelatinous plaques noted along the ventral aspect

The baseline routine investigations were normal. color doppler ultrasound revealed heterogeneously hypoechoic lesion involving anterior 2/3rd and extending across full thickness, with markedly increased vascularity showing arterial flow. The diagnosis of haemangioma with differential diagnosis of vascular malformation were taken into account and further contrast enhanced magnetic resonance imaging of neck upto skull base is advised to know the exact extension and involvement of the lesion to decide the level of management (Fig. 2).

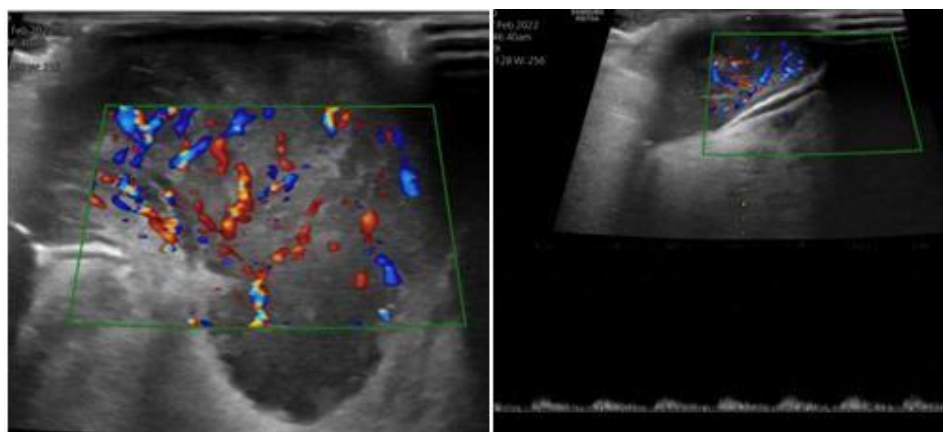


Fig. 2. Color Doppler ultrasonographic image of tongue depicting the heterogeneously hypoechoic intramuscular lesion involving diffusely, with marked increased vascularity and showing arterial biphasic flow

CEMRI revealed well defined lesion involving anterior 2/3rd of the tongue. The lesion involves intrinsic muscles of the tongue and appears hypointense on T1WI, isointense on T2WI, and shows internal flow voids with avid homogenous post contrast enhancement with maintained fat

planes with the surrounding structures. Thus the diagnosis of Haemangioma is made on the basis of imaging features and further fine needle aspiration cytology confirmed the diagnosis (Fig. 3).

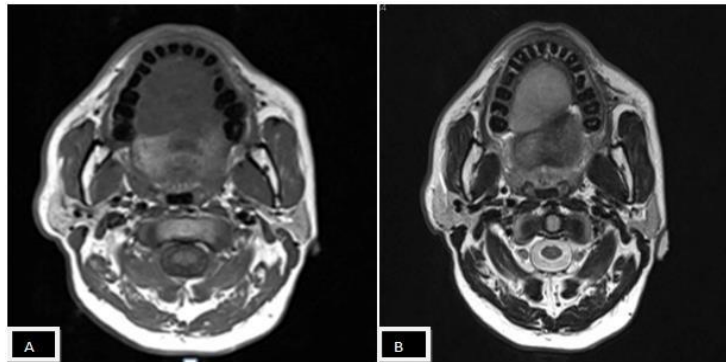


Fig. 3a. Image depicting well defined lesion noted involving anterior 2/3rd of the tongue which is hypointense on T₁WI and iso-hyperintense on T₂WI

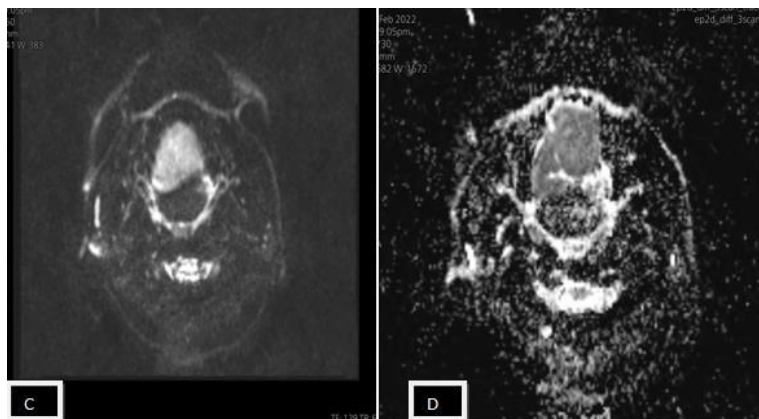


Fig. 3b. The image depicting the presence of diffusion restriction in the lesion noted on DWI and ADC images

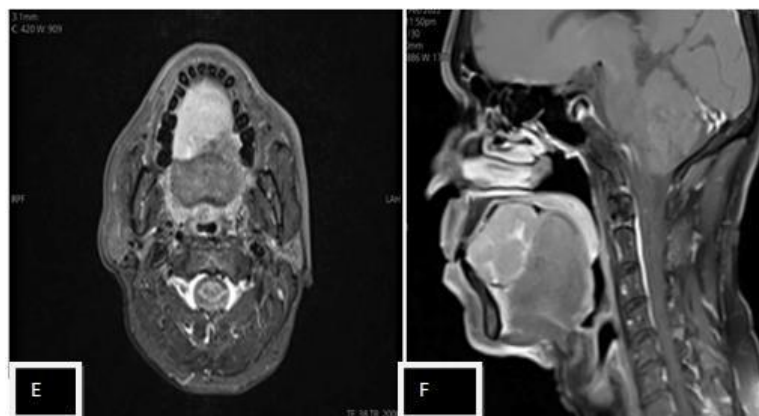


Fig. 3c. Axial and saggital postcontrast images shows the homogenously avid post contrast enhancement of the lesion involving the anterior 2/3rd of the tongue

3. DISCUSSION

"Hemangiomas are developmental vascular abnormalities characterized by proliferative growth phase and by very slow inevitable regression (involution phase), and about 60% to 70% of the lesions are found in head and neck region" [6]. "The head and neck region is commonly affected especially the face, oral mucosa, lips, tongue and trunk" [7]. Hemangioma is one of the most frequent tumors of the head and neck, however it is very uncommon in the oral cavity and is rarely treated by doctors. The tongue haemangiomas can produce cosmetic deformity, bleeding, functional difficulties during mastication, deglutition as well as speaking. The main complication of tongue haemangiomas is recurrent haemorrhage [8]. "Imaging resources can be useful in both diagnostic differentiation and analysis of lesion features with regard to its size, extension and location, as well as for follow up of lesions treated under a systemic therapy. The differential diagnosis include lymphangioma, neurofibroma, pyogenic granuloma, chronic gingival hyperplasia, telangiectasia, angiosarcoma, squamous cell carcinoma, and other vascular appearing lesions" [9]. "Generally, a biopsy is avoided due to high risk of bleeding. However a biopsy would be recommended if a malignant process is suspected". [10]. The treatment of a hemangioma is dependent on a number of circumstances, and most real hemangiomas do not require treatment. However, because of their size, precise location, or stages of growth or regeneration, 10-20% of them require therapy. "There are many treatment modalities involving wait and watch policy for spontaneous involution, intralesional and systemic corticosteroids treatment, embolization, excision, electrolysis and thermocautery, immunomodulatory therapy with interferon alfa-2a and laser photocoagulation. Currently, sclerotherapy is employed largely because of its efficiency and ability to conserve the surrounding tissues. But the risk of thrombosis with embolization does remain" [11].

Oral haemangiomas has over all favourable prognosis, as these lesions are benign, and only minority (10-20%) will require treatment.

4. CONCLUSION

Tongue hemangiomas are rare vascular benign neoplasm characterized frequently by slow and painless growth. The correct diagnosis is of

utmost importance for treatment planning. Thus multimodality imaging including Color Doppler ultrasonography, Conventional MR imaging and Dynamic contrast MR angiography plays a pivotal role in unrevealing the diagnosis.

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

CONSENT

As per international standard or university standard, patients' written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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