Indian Journal of Medical Case Reports ISSN: 2319–3832(Online)
An Open Access, Online International Journal Available at http://www.cibtech.org/jcr.htm
2020 Vol.9 (2) July-December, pp. 40-42/Jabeen and Manoharan
Case Report

GRANULAR CELL TUMOR OF TONGUE IN A CHILD – A RARITY

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ABSTRACT
Granular cell tumor (GCT), also referred to as Abrikossoff's tumor, is a relatively uncommon neoplasm that can occur in any part of the body, including the orofacial region. It presents as a benign, well-circumscribed nodule. The tumor commonly develops between the second and sixth decade of life and considered rare in children. Histologically, GCT shows numerous strands of polyhedral granular cells, separated by collagen bundles, with no evidence of encapsulation. Recurrences may occur following inadequate excision. In this case report we report a case of granular cell tumor in an 11-year-old girl highlighting the clinical features with a literature review.

Keywords: *Granular Cell, Tongue, Hyperplasia*

INTRODUCTION
Granular cell tumor (GCT) is an uncommon benign neoplasm, first described by Abrikossoff in 1926 (Abrikossoff *et al.*, 1926). Various theories on the origin of GCT has been proposed, including its origin from striated muscle/ histiocytes and a neural origin. Granular cell tumors can affect any organ or region of the body. Most GCTs occur in the head and neck region, especially in the tongue, cheek mucosa, and palate (Becelli *et al.*, 2001). We report here a case of GCT in a 11-year-old child located on the dorsum of the tongue.

CASE
A 11-year-old girl presented to the department of Oral Medicine & Radiology with a chief complaint of a lump in the tongue for the past 6 months. She first noticed the lump around six months ago after which it gradually increased to the present size, not associated with any pain or numbness. Upon clinical examination revealed a sessile growth approximately measuring 0.8cm in diameter on the dorsum of the tongue 1 cm medial to the left lateral surface and 2 cm anterior to the posterior bordrer of tongue, mucosa over the swelling appears pale with mild stretching and intact papilla (Fig 1a,b). Palpation revealed a firm to hard consistency and non-tender.

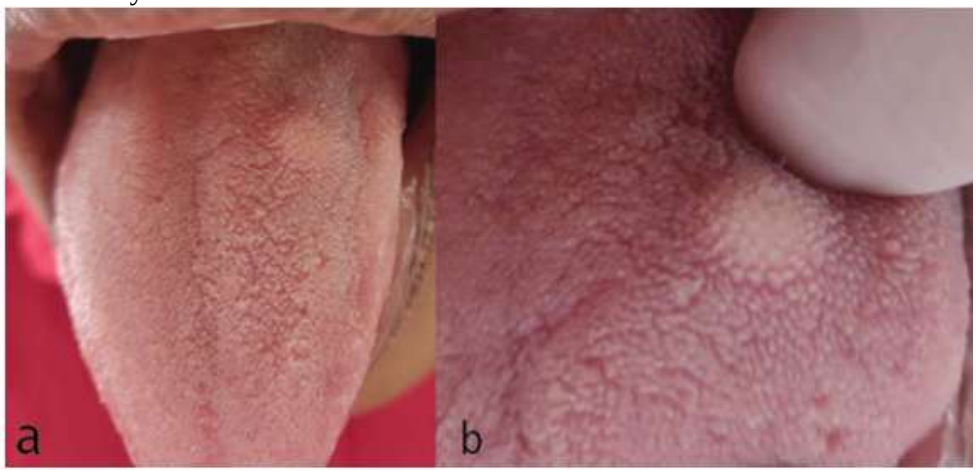

Figure 1: a) Dorsum of the tongue showing the sessile growth on the posterior region; b) Magnified picture showing the streching of the mucosa with intact papilla

A provisional diagnosis of fibroma of tongue was given. The growth was completely excised, and specimen was sent for histopathological examination (Fig. 2a). Microscopic analysis showed a neoplastic lesion with epithelium featuring pseudoepitheliomatous hyperplasia. The lesion mainly consisted of elongated cells with clear, granular cytoplasm and an oval or round nucleus with loose chromatin, lying within the bundles of striated muscle fibers (Fig : 2b). A confirmatory diagnosis of granular cell tumor of tongue was given.

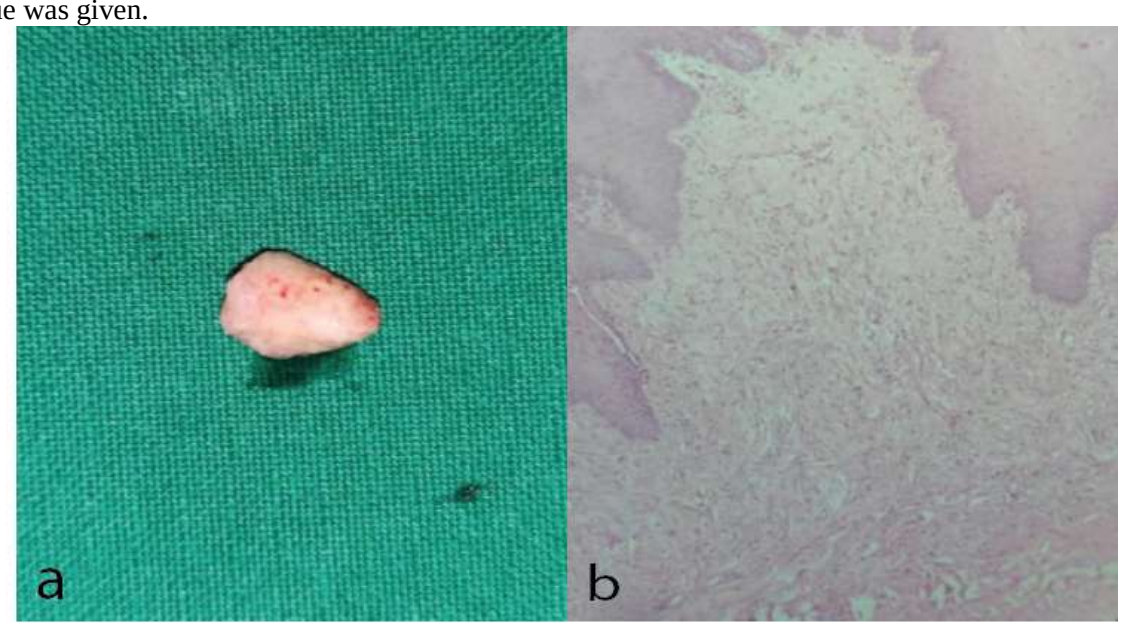

Figure 2: a) Gross image of the excised specimen; b) Histological image showing cells with cler, granular cytoplasm and an oval or round nucleus with loose chromatin, lying within the bundles of striated muscle fibres

DISCUSSION

GCT is an uncommon tumor that can affect various regions of the body, such as the skin, soft tissues, breast, and lungs. However, GCT is more frequently found in the head and neck region, which accounts for 45% to 65% of all sites affected by the tumor. Of these, 70% are in the oral cavity, especially the tongue, oral mucosa, and hard palate (Becelli *et al.,* 2001). Considering the wide variety of regions encountered by the tumor and its variable histological presentation, a correct clinical description is prime. The tumor commonly develops between the second and sixth decade of life (Collins *et al.,* 1995) and is rare in children (Nagaraj *et al.,* 2006).

Clinically, benign GCT manifests as a nodular lesion that is generally asymptomatic and solitary, although cases of multiple lesions have also been reported. The tumor presents as a pink or yellow, well demarcated lesion covered by intact mucosa, and usually involves subcutaneous or submucosal tissues. In our present report, the mucosa appeared pale from the adjacent tissue and appeared stretched.one of our patients reported pain, whereas the tumor was asymptomatic in our other patient. Clinically, any nodular lesion involving oral soft tissue can be included in the differential diagnosis. Features such as consistency, colour and the possible definition of lesion margins upon palpation may facilitate the establishment of diagnostic hypotheses.

Histologically, GCTs are characterized by the proliferation of large polygonal neoplastic cells with cytoplasmic granules, eosinophilic cytoplasm, a small and eccentrically located nucleus, and undefined cytoplasmic limits. In some cases, the epithelium that covers the tumor exhibits pseudoepitheliomatous hyperplasia (Collins *et al.,* 1995).

Although GCT is an uncommon benign neoplasm, cases of malignant GCT have been reported in the literature, including patients with more than one histological type of malignant GCT (Budino-Carbonero

S *et al.,* 2003, Chiang *et al.,* 2004, Fanburg-Smith *et al.,* 1998). The coexistence of benign GCT of the tongue and squamous cell carcinoma at the same site has also been reported recently (Caltabiano *et al.,* 2008) In view of this malignant potential, the tumor should be submitted to careful histopathological analysis. Data regarding tumor size, symptoms, rapid progression, invasion of adjacent structures, and the presence of regional and distant metastases are of fundamental importance for the histopathological diagnosis of benign or malignant GCT (Caltabiano *et al.,* 2008). Surgical excision with a safety margin is the treatment of choice for GCT with regular follow up at periodic intervals. Our case was followed-up for one year and no signs of recurrence was observed.

CONCLUSIONS

This case report presented an unusual case of GCT involving the tongue in a 11-year-old girl. Since granular cell tumors are rare in the first decade of life, this lesion should be considered in the differential diagnosis of tumors of the tongue in children. A prompt diagnosis with periodic evaluation and follow up is essential to decrease rate of recurrence and malignant transformation.

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