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Case Report

Pyogenic Granuloma of Tongue in a Middle-aged Patient – A Rare Case Report

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Abstract

Pyogenic granuloma (PG) is a benign vascular neoplasm of the oral cavity that usually presents as a small nodular lesion, the gingiva being the most common site. Occasionally, it occurs at uncommon sites with unusual sizes. Here, we report a case of a 57-year-old male patient with PG on the left lateral border of tongue. Its differential diagnosis, the importance of biopsy findings in establishing definitive diagnosis, and it's treatment are discussed.

Key words: Capillary hemangioma, Pyogenic granuloma, Tongue

INTRODUCTION

Pyogenic granuloma (PG), also known as lobular capillary hemangioma, is a benign vascular neoplasm.[1] The term PG is a misnomer as the cause is traumatic and not infectious. PG seen in the oral cavity arises in response to various stimuli such as local irritation, trauma, or hormonal factors. It usually occurs on gingiva but uncommonly it can occur on extragingival sites such as lips, tongue, and buccal mucosa.[2] The incidence of PG is 19.76–25%.[3] This pathology can be found at any age but is more common in the second and third decades of life.[4] Characteristically, PG of tongue is more common on the lateral side of the tongue which may be related to trauma from adjacent teeth or dentures.[5]

We present a case with lesion in the left lateral border of tongue to enlighten the readers to keep PG as a differential diagnosis while suspecting tumors of oral cavity, especially in older patients.

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CASE REPORT

A 57-year-old male patient came to ENT outpatient department with complaints of mass on the left side of tongue for 5 months. Initially, the mass was of the size of a small pea which gradually progressed to the present size. There was no history of pain during chewing, difficulty in swallowing, occasional mild bleeding was present in the mass. There were no constitutional symptoms such as loss of appetite or weight loss.

The patient was a known case of hypertension on regular treatment. Not a known case of diabetes mellitus, asthma, epilepsy, tuberculosis. The patient was a pan chewer for 30 years, stopped for 6 months.

On intraoral examination, poor oral hygiene was present. A grayish-white pedunculated mass of about 1 cm × 1 cm with an irregular margin and smooth surface was seen on the left lateral border of tongue [Figure 1]. It was firm, mobile, mildly tender and bleeds mildly on touch. Other oral cavity examination revealed submucosal fibrous patches present on both sides of buccal mucosa and soft palate.

A differential diagnosis of PG or inflammatory fibroma was made. Excisional biopsy was performed under local anesthesia with 3 mm margin. The histopathological examination (HPE) revealed multiple lobules of capillaries of varying caliber lined by endothelial cells, with an overlying stratified squamous epithelium showing focal ulceration

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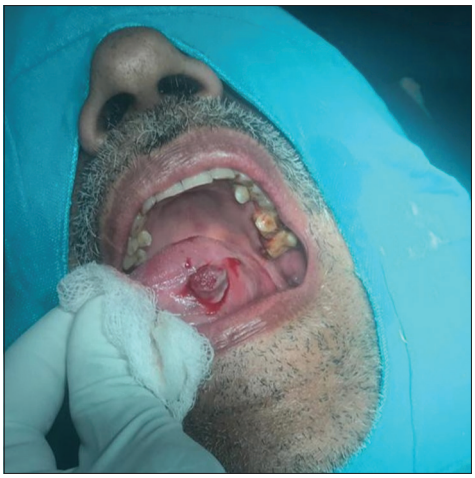

Figure 1: Gross appearance of the lesion arising from lateral border of tongue

[Figure 2]. This was consistent with the diagnosis of PG. Poor oral hygiene may be the precipitating factor in this case.

DISCUSSION

PG is one of the causes of soft-tissue swelling of the oral cavity that probably results from excessive hyperplasia of the tissue in response to trauma. Low-grade trauma such as chronic irritation due to a sharp tooth or a bad technique of tooth brushing may result in excessive tissue repair response, of which the patient may be unaware. This benign vascular neoplasm usually is a few millimeters in size, presenting as a papule or nodule, although cases with sizes up to a few centimeters have also been reported.[6] The most common sites in the oral cavity for PG are gingiva (61%), lip (14%), tongue (9%), and buccal mucosa (7%).[7] Although PG may occur in all ages, it is predominant in the second decade of life in young adult females, possibly because of the vascular effects of female hormones.[2]

The exact etiology of PG is not known. It was thought to be a botryomycotic infection in the past. At present, the etiopathogenesis of this condition is thought to be related to chronic trauma, which provides a pathway for invasion of the tissue by the non-specific microorganisms that, in turn, provide stimulus for the excessive proliferation of the vascular type of connective tissue. Granulation tissue thus formed may be covered with fibrin over the surface that mimics pus.[8]

Differential diagnosis of PG includes peripheral giant cell granuloma, peripheral ossifying fibroma, hemangioma, peripheral fibroma, leiomyoma, hemangioendothelioma, hemangiopericytoma, bacillary angiomatosis, Kaposi's sarcoma, angiosarcoma, non-Hodgkin's lymphoma, metastatic tumor, post-extraction granuloma, and pregnancy tumor.[9]

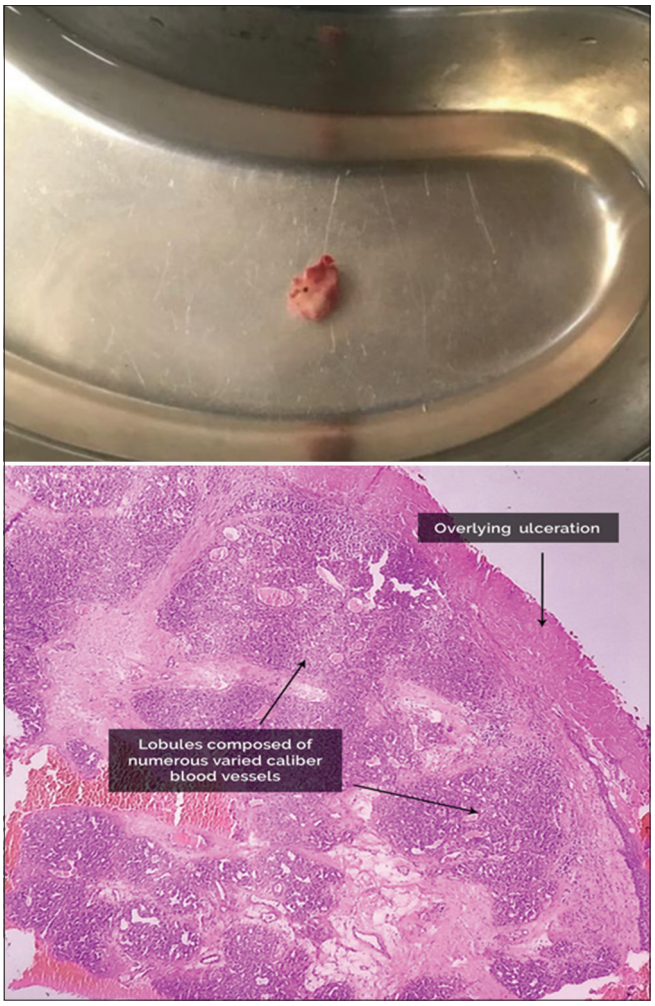

Figure 2: Histopathological examination showing lobules composed of numerous varied caliber blood vessels with an overlying ulceration

The treatment of choice for these lesions is wide surgical resection with margins of 2 mm from its periphery.[4] While treating such lesions, emphasis on maintenance of oral hygiene should be advised; therefore, dental consultation should be obtained when indicated. This benign vascular neoplasm does not undergo malignant transformation, but it can recur occasionally after surgical excision, commonly in gingival sites. Incomplete excision, failure elimination of etiological factors, recurrent trauma, or excessive production of angiogenic factors play a significant role in its recurrence.[10]

CONCLUSION

PG is a benign vascular neoplasm resulting from a hyperactive tissue repair response. It may have an unusual presentation, posing a diagnostic dilemma to the treating surgeon. Proper management including diagnosis, treatment, and further prevention is very important. HPE confirms the diagnosis and rules out various soft-tissue lesions with

similar appearance. Surgical excision is the treatment of choice. Recurrence is not uncommon in some cases and reexcision is necessary. PG as a benign tumor should be kept as a differential diagnosis of the masses on the lateral border of tongue in middle- and old-aged patients.

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