Leiomyoma on gingiva with osseous involvement: An unusual presentation

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Abstract:
Leiomyoma is a smooth muscle tumor which rarely turns into malignancy. This is an unusual case report which presents leiomyoma on gingiva with osseous involvement. This case highlights the importance of histopathological examination for the proper diagnosis of any gingival growth. A 28-year-old female patient reported with localized gingival enlargement. The surgical excision was conducted and excised tissue was sent for histopathological examination. On the basis of clinical and histopathological examination, the diagnosis of leiomyoma was made. Leiomyoma reported low recurrence rate in previous literature. However, this lesion recurred within 15 days. After recurrence, the patient was referred to the oncology center for further evaluation and treatment.

Key words:
Gingiva, leiomyoma, osseous

INTRODUCTION

Leiomyoma is a benign tumor derived from a smooth muscle cell. It is found in a variety of anatomic sites of the human body. They are uncommon in oral cavity because of the usual absence of smooth muscle except in blood vessel walls and circumvallate papillae of the tongue.

The oral leiomyoma is slow-growing painless lesion which is superficial and often pedunculated. The tumor does not ulcerate and resembles the normal mucosa in color and texture. A central leiomyoma of the jaw is also known which is exceedingly rare to occur.[1]

This case represents the extremely rare occurrence of a soft-tissue growth on interdental gingiva with intraosseous involvement between the mandibular teeth.

Leiomyoma is treated conservatively by surgical excision due to its lower chance of recurrence. However, in this case, the growth was faster and recurrence presented within a short period. This case was referred to the oncology center for further evaluation and treatment.

CASE REPORT

A 28-year-old female patient reported to the department of periodontology with a history of painless growth. The patient was apparently alright 15 days back when she noticed growth in the mandibular arch. On examination, the growth was attached to the interdental gingiva of 45 and 46. The growth was sessile at the base and extended on the lingual side toward the floor of the mouth [Figure 1].

One week later, after clinical investigation, the patient was scheduled for surgical excision. On the day of excision, the growth appeared red and ulcerated on the external surface due to trauma from the maxillary arch. The intraoral periapical radiograph showed interdental bone loss between 45 and 46. Computed beam tomography was conducted to investigate in detail any osseous pathology [Figure 2]. The growth excised was 3.5 cm into 2.5 cm in size and sent for histopathological examination [Figure 3]. The interdental osseous defect between 45 and 46 was thoroughly curetted and debrided. The sutures were given and the patient was recalled after 7 days. After 15 days, the growth recurred, more close to the floor of the mouth, while the interdental gingival tissue appeared to be healed [Figure 4].

The histopathological sections revealed partly ulcerated squamous mucosa overlying a
submucosal tumor. It was composed of fascicles of spindle smooth muscle cells possessing acidophilic cytoplasm and elongated plump uniform vesicular nuclei. No sarcomatous features were detected [Figure 5]. Thus, the final diagnosis of submucosal smooth muscle tumor (Leiomyoma) was made.

The growth showed faster increase in size and recurred within 15 days after complete excision. The recurred lesion was seen extending toward the floor of the mouth with less involvement of the interdental gingiva.

DISCUSSION

Leiomyoma is a smooth muscle cell tumor. It is a benign tumor which rarely turns into the malignant lesion. The most common site of occurrence is the uterus. Other locations are gall bladder, skin, small intestine, or metastasis to other parts of the body.

The presence of leiomyoma in the head-and-neck region was reported on ear, pinna, and palate. Oral leiomyoma is rare and account for 0.42% of all benign tumors of the oral cavity. Its rare occurrence is due to the absence of smooth muscle cell in the oral cavity.

Baden et al. found 142 cases of oral leiomyoma in the literature reviewed from 1884 to 1992. The review of the literature stated that the mean age was 41 with male sex prevalence. The lips were the most common site with (27.46%) followed by the tongue (18.30%), cheeks and palate (15.49%), gingiva (8.45%), and mandible (5.63%).
Leiomyoma in the oral cavity was reported on lip, floor of the mouth, and mandible. Its occurrence is extremely rare on the gingiva with only few cases reported in the literature.

Leiomyoma is mainly associated with soft-tissue while intraosseous involvement is very rare. This case reported a soft-tissue lesion associated with the intraosseous defect with interdental gingiva of 45 and 46.

This case represents an asymptomatic growth in respect to interdental gingiva and resembles commonly occurring pyogenic granuloma. However, the patient gave no history of trauma or any causative factor. The initial diagnosis of fibromatosis was made as the numerous fibrous bundles were found on histopathological examination. As the mitotic cells were less in number, the presence of sarcoma was ruled out. The differential staining with Masson’s trichrome stains made the confirmative diagnosis of leiomyoma.

Management of such rare cases requires thorough investigation as its systemic manifestation are not well known. The method of surgical excision may be inadequate in certain cases. The aggressive lesion may require chemotherapy or radiotherapy. Referrals of the patient to oncology centers are required for comprehensive management of growth. Follow-ups and recall of the patient is required to prevent further recurrence of growth.

CONCLUSION

This case represents an unusual representation of leiomyoma on the gingiva. The aggressive nature of the lesion warranted its extensive treatment. The various treatment modalities should be evaluated for treating such cases.

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Conflicts of interest
There are no conflicts of interest.

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