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Capillary Hemangioma of Posterior Palatal Mucosa

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Abstract Hemangiomas are tumors that are characterized chiefly by the massive proliferation of blood vessels predominantly blood capillaries. Although they are seen in head and neck they are rarely reported in the oral cavity, especially those associated to the posterior part of the palate. Having developmental origin that is benign in nature and behavior, they may become more apparent in later life which is why every dental practitioner should be able to identify and manage such lesions. This article in the form of a case report describes a rare case of hemangioma located in the posterior region of the hard palate. An excisional biopsy was undertaken for histological diagnosis and necessary treatment.

Keywords: *mucous membrane, capillary hemangioma, vascular malformations*

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1. Introduction

Among various tumors and malformations of human tissue, vascular anomalies comprise a wide and a heterogeneous group. Hemangiomas are considered to be benign tumors of infancy that are characterized by a rapid growth phase with endothelial cell proliferation followed by gradual involution. [1] Although common in head and neck region, they are seldom considered in the oral cavity, particularly in the posterior palatal region in the molar area. [2,3,4] There is a higher incidence in females (65%) than males (35%). [5] Hemangiomas may be cutaneous, involving skin, lips, and deeper structures; mucosal, involving the lining of the oral cavity; intramuscular involving the masticatory and peripheral muscles; or intra-osseous involving mandible and/or maxillary [6].

It has erroneously been also called pyogenic granuloma although it is neither associated with pus, nor does it represent a granuloma histologically. [7] On the basis of histology it is invariably called lobular capillary hemangioma and is composed of blood vessels and is classified as capillary, mixed, cavernous, or a sclerosing variety that tends to undergo fibrosis. Clinically they often present as soft, sessile or pedunculated, painless lumps that may be smooth or irregular with color ranges between crimson red to purple. Peculiar feature being that the tumor blanches on pressure. [8,9] This article reports a singular instance of oral hemangioma involving the palatal mucosa that arises from the Interdental gingival papilla between first and second maxillary right molar.

2. Case Report

A young, female patient, aged 23 years reported to the department of Prosthodontics for fabrication of a single crown in relation to endodontically treated mandibular left side first molar. The patient also complained of a swelling in her posterior right side maxillary palatal mucosa since 6 months that was commonly associated with bleeding especially on brushing. With no pain associated with the lesion, the patient complained of halitosis and altered taste especially after episodes of bleeding. Medical, social, drug and dental history was noncontributory. Past dental history, however, revealed that she had a swelling about 6 months back, which was small in size and increased gradually till it attained the present size. The patient had also undergone an endodontic treatment of mandibular left sided first molar, 3 months back and sought a single crown for the same.

Extra oral examination revealed a bilaterally symmetrical face with no evidence of lymphadenopathy or joint dysfunction. On an intra-oral examination, a localized gingival growth between maxillary first and second right molar on the palatal aspect was present (Figure 1 A). The lesion was bright red, erythematous with multiple lobules having well differentiated margins (Figure 1 B). The swelling measured about 1.5 cm in width and 2 cms in length. The surrounding palatal mucosa was normal. On palpation the growth was firm and rubbery in consistency with no tenderness, bleeding or pus discharge. Labial gingiva was normal and there was evidence of pocket formation in the area. Oral hygiene of the patient was fairly good. A complete hemogram, urine analysis and intra oral periapical radiograph was advised. Normal limits of blood and urine were found. No evidence of crestal bone loss or discontinuity of lamina dura was observed. After thorough scaling and root planning was carried, a surgical excision of the lesion under local anesthesia was performed as part of excisional biopsy. Blood circulation to the lesion was reduced by physical and chemical means and the growth was completely

excised along with the stalk after which thorough curettage of the area was performed. Periodontal dressing was placed on the area and the patient was given post-operative instructions after one week the dressing was removed. The lesion was completely healed after one month follow up. A porcelain fused to metal crown was fabricated after histological report was received from the pathology laboratory and consultation with oral physician.

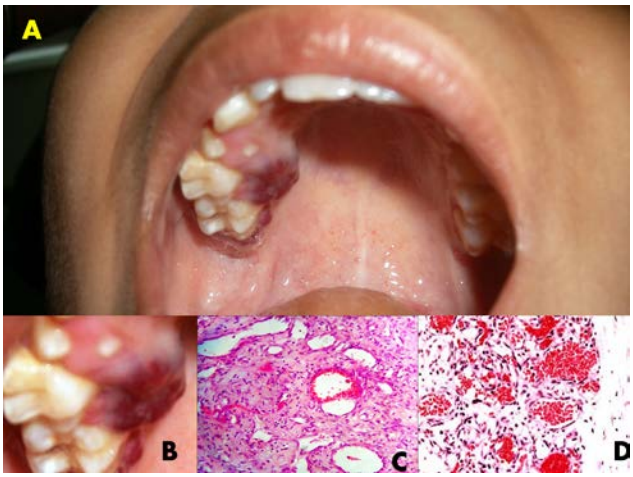

Figure 1. (A) Intra oral lesion showing extension in relation to the teeth (B) Surface of the lesion (C) Capillary with single layer of endothelial cell (D) Lymphocytes and plasma cells distributed throughout stroma containing multiple blood capillaries

Histopathological report revealed stratified squamous epithelium showing hypertrophy, hyperplasia with keratosis below which thin walled capillary channels of different sizes were present. The capillaries were lined with a single layer of endothelial cells supported by connective tissue stroma of varying density. Lymphocytes and plasma cells were also present throughout the stroma (Figure 1 C and D).

3. Discussion

Hemangiomas are common soft tissue tumors that are often congenital or develop in the neonatal period but grow rapidly. Common sites of occurrence in other parts of the body include cheek, caudal equine and eyelid besides intraoral sites like lips, jawbone and salivary glands. Their occurrence on palatal mucosa though, is very rare. Following a benign course, their cause is unknown, and it is believed that it is not a true lesion but rather a developmental anomaly. [10] It has also been hypothesized that angiogenesis likely play a role in the vascular excess present in such case. Cytokines, such as basic fibroblast growth factor (bFGF) and vascular endothelial growth factor (VEGF) are known to stimulate angiogenesis. Excesses of these angiogenic factors or decreases of angiogenesis inhibitors (eg, gamma-interferon, tumor necrosis factor-beta, transforming growth factor-beta) have been implicated in the development of haemangiomas. [11] The differential diagnosis of haemangiomas includes peripheral giant cell granuloma, peripheral ossifying fibroma, chronic inflammatory gingival hyperplasia (epulis), epulis granulomatosa, varicocele, telangiectasia and squamous cell carcinoma. [12] Management varies according to the age of the patient, the size of the lesion, site of involvement and clinical nature of the hemangioma. In the present case because the lesion was small and non-life threatening without any bone involvement hence surgical excision under necessary precaution was considered a safe procedure.

4. Conclusion

Dental surgeons should be aware of the risks while managing these lesions and all treatments except emergency treatments should be deferred, like in this case, the fabrication of crown was deferred till the lesion was successfully managed by surgical excision. An Early diagnosis and biopsy is essential to determine the clinical behavior of the tumor and potential dental alveolar complications.

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