Hemangioma Associated with an Erupting Permanent Molar

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Abstract

Hemangiomas are the common benign tumors of the oral and maxillofacial region in children. Most Hemangiomas develop in children less than 6 years of age and commonly are seen on lips, tongue, palate and buccal mucosa. This paper reports the conservative management of a homangioma associated with unerupted permanent maxillary first molar in a five and half year old girl using Cryotherapy.

Key Words: Hemangioma; Erupting teeth; cryotherapy

Introduction

Hemangiomas are most common tumor found in childhood with predilection to head and neck region up to 60%.1-4 The most common sites being lip, vermilion border, tongue, salivary glands.5 Hemangioma can be present at birth or develop in later years especially within first year of life.5 They are considered hamartomatous and are known to regress with age. But some Hemangioma requires treatment because of their behavior like bleeding and morbidity which call for their management. The management of Hemangioma in children poses significant challenge to the dentist. This paper reports a case of Hemangioma in a young child treated conservatively.

Case Report

A five and half year old girl presented with chief complaint of bleeding from the gums in the upper left back region especially in the night since two months. There were no other associated symptoms like pain. Her mother reported that bleeding was extensive enough to stain the pillow but no history of injury or trauma. On examination a firm swelling measuring 10 X 12 mm of pale pink to slightly red with some area of necrosis was seen on the alveolar ridge posterior to the primary second molar extending on the buccal side (Figure 1). Intra oral examination revealed that the upper right, lower right and lower molar erupted after three months of the cryotherapy. Histologic examination revealed that the upper right, lower right and lower left permanent first molars had already erupted.

Clinical observation suggested differential diagnosis of Hemangioma or Pyogenic granuloma6 9 or Peripheral giant cell granuloma.2-10 An incisional biopsy was taken which reveals a fibrocellular connective tissue stroma comprising numerous endothelium lined capillaries, some of which appear to be arranged in a lobulated pattern. Prominent capillary budding is observed in few areas. Areas of hemorrhage are also evident in fibrous stroma, which exhibits focal inflammatory infiltrate in form of lymphocytes (Figure 2). The histopathologic results confirm hemangioma. The lesion was treated with simple cryotherapy on an outpatient basis. Topical anesthetic was applied to minimize discomfort and to prevent cotton swab from sticking to the mucosa. The cotton swab was dipped in liquid nitrogen for 1-2 seconds and applied on the lesion with some pressure. After the ice ball was formed, freezing was continued for 50 seconds. In this kind of topical application of cryotherapy thawing takes place spontaneously for 30 seconds. Two freeze thaw cycles were used. High speed suction was used to control visual obstruction due to the formation of vapour fog. The patient was kept under soft diet for twenty four hours to prevent any trauma to the treated area and post operative oral hygiene instructions were given. The patient had no discomfort during the immediate post operative period.

The patient follow up was done for 2nd postoperative day, one week, four weeks and three months. Healing was uneventful. Superficial necrotic tissue covered the lesion at 1st week and necrotic slough was separated after 2nd week leaving a fully epithelialized surface at the end of fifth week. There was no scarring and no recurrence was noted till the upper left first molar erupted after three months of the cryotherapy.

Discussion

Although histopathologic appearance also resembled Pyogenic granuloma, the diagnosis of Hemangioma was made based on the history and behaviour of the lesion at the time of incisional biopsy. Hemangiomas are reported with alveolar ridge of unerupted /developing teeth although there are only a few reports,11 they have a female predilection12 these factors also supported our diagnosis. Pyogenic granuloma’s are commonly seen on the alveolar ridge6 but should be associated with history of injury which was not associated with our case. Peripheral giant cell granuloma also was included in the differential diagnosis due to the site of appearance of this lesion, but the histopathology did not reveal the presence of giant cells, hence it was ruled out.7,10,11 Hemangiomas are known to regress with age5 but because of the behavior of lesion that
is the bleeding associated with the lesion dictated the treatment in our case.

Cryotherapy was chosen since it does not require sophisticated armamentarium and has very good patient compliance. The procedure was performed on an outpatient basis. The distinct advantage of cryotherapy in removal this Hemangioma was the small size of lesion, the cold temperature was also yielding in hemostasis. Its location was rather an inaccessible site for use of other treatment modalities.

Cryotherapy has been successfully used in treatment of oral Hemangioma with considerable amount success rate. The topical application of liquid nitrogen with cotton swab works on the principle of destruction of the lesion by rapid freezing in situ, the resultant necrotic tissue is then allowed to slough spontaneously. The advantage of such application of cryotherapy was that the patient need no hospitalization and had minimal discomfort during and after the treatment and healing was uneventful without scarring or recurrence. It has been reported that Hemangiomas associated with developing alveolar ridge or tooth have marked tendency for localized hypertrophy. It has been cited in the literature that Hemangiomas associated with developing tooth result in odontogenic dysplasia due to ischemia to developing teeth. But no such changes were observed with the upper first left molar except that it had erupted later than the first permanent molars in other quadrants.

Conclusion
In conclusion simple cryotherapy can be successfully used to manage oral lesion with good patient compliance especially in young children. As this does not require hospitalization, it’s painless and healing of oral tissues is favorable after cryotherapy. Hence we recommend that it is a good method of conservative management of minor oral lesions in children.

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