IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 22, Issue 11 Ser.4 (November. 2023), PP 12-14
www.iosrjournals.org

Capillary Hemangioma- A Case Report

Dr Devika G [1], Dr Pooja R [2], Dr Subbulakshmi Parthasarathi[3]
[1](Department of Periodontics, Asan Memorial Dental College and Hospital, India)
[2](Department of Periodontics, Asan Memorial Dental College and Hospital, India)
[3](Department of Periodontics, Asan Memorial Dental College and Hospital, India)

Abstract:
Hemangioma, benign proliferation of blood vessels commonly appears throughout childhood. Hemangiomas can be classified as either capillary or cavernous. Capillary hemangiomas are developmental hamartomatous lesions of the vascular tissue. After a particular amount of time, some of the hemangiomas cease growing and may involute. This case report presents a 47-year-old female a swelling in the inner aspect of lip. Surgical excision of the lesion with a diode laser followed by histopathologic confirmation with emphasis on the clinical aspect.

Key Word*: Capillary Hemangioma*

Date of Submission: 06-11-2023 Date of Acceptance: 16-11-2023

I. Introduction

Hemangioma is a term that comprehends a heterogeneous group of clinical benign vascular lesions that have similar histologic features[1]. It is a proliferating mass of blood vessels and do not undergo malignant transformation, hence considered benign. Hemangioma's are congenital some times when they are present at birth and most hemangiomas develop in childhood with a greater prevalence for females compared to males. Occasionally, older individuals are affected. Even though hemangioma is one of the common soft tissue tumor of head and neck, it is relatively rare seen in oral cavity. In oral cavity lips, mucosal lining of the oral cavity are the common sites.[2]

Based on their histological appearance, they are classified as capillary and cavernous hemangioma. Capillary and cavernous hemangiomas are defined according to the size of vascular spaces. Capillary hemangioma is a hamartoma, an abnormal localized proliferation of endothelial cells. Histopathologically they are composed of small thin walled vessels of capillary size that are lined by a single layer of flattened or plump endothelial cells and surrounded by a discontinuous layer of pericytes and reticular fibers.[3]

Cavernous hemangiomas consist of deep, irregular, dermal blood-filled channels. They are composed of tangles of thin-walled cavernous vessels or sinusoids that are separated by a scanty connective tissue stroma. Mixed hemangiomas contain both components and may be more common than the pure cavernous lesions.

Clinically hemangiomas are characterized as a soft mass, smooth or lobulated, sessile or pedunculated and may be seen in any size from a few millimeters to several centimeters. It is presented as cutaneous, sub cutaneous lesion and the color of the lesion ranges from pink to red purple and tumor blanches on the application of pressure, and hemorrhage may occur either spontaneously or after minor trauma. They are generally painless. These tumors are mostly seen on the face, fingers and occasionally seen on oral mucosa. Oral hemangiomas are usually seen on the gingiva and less frequently at other sites where it occurs as a capillary or cavernous type, more commonly the former.[3] Periodontally, these lesions often appear to arise from the interdental gingival papilla and to spread laterally to involve adjacent teeth.[4]

Several factors like age, size and extent of the lesion and their clinical characteristics has to be considered for the management of hemangiomas. Various treatment modalities have been proposed in the management of hemangiomas, including oral corticosteroids, intralesional injection of fibrosing agents, interferon a-2b, radiation, electrocoagulation, cryosurgery, laser therapy, embolization and surgical excision.[5,6] The purpose of the study was to report the case of a capillary hemangioma in a patient and to describe the successful treatment of this case.

II. CASE PRESENTATION

A 47-year-old female patient visited the Department of Periodontics, complaining of a swelling in the inner aspect of lip since 15 days. Patient gave history of diabetics and was under medication since 5 years. Blood investigation of the patient was done. Random blood sugar was 302mg/dl and the patient was asked to produce physician consent. In the clinical examination, firm and resilient swelling with reddish discoloration

was seen. It was tender on percussion. The surface of the lesion was intact without any ulcer present. The extraoral examination showed nothing significant. No other abnormality was found. Supragingival scaling has been done and oral hygiene status of the patient was satisfactory.

After being referred to physician, the patient came back to the department after 10 days, with a rapid increase in the size of the lesion measuring about 14 × 7 cm and the surface of the lesion ulcerated and bleeding on touch. [Figure 1] The Random blood sugar has come down to 130mg/dl.

Fig 1. Pre operative

Written consent has been taken from the patient and all the procedures were informed.

The surgical procedures consisted of surgical excision of the lesion with a diode laser at a wavelength of 910 nm, carried out under local anesthesia. [Figure 2] There was profuse intraoperative bleeding that was controlled with the help of pressure packs. The wound was irrigated with saline and has sutured with silk 0-4. [Figure 3] An excisional biopsy was taken from the tumor area, and the excised tissue was rinsed in formalin (10%), and sent for histopathologic examination with differential diagnosis of pyogenic granuloma and irritational fibroma.

Fig 2. Excised tissue

Fig 3. Suture placed

Histologic examination revealed stratified squamous epithelium showing broad rete ridges. Underlying connective tissue is composed of numerous endothelial lined dilated blood vessels showing endothelial cell proliferation interspersed with loosely arranged collagen fiber bundles. Areas of extravasation of RBC and mild chronic inflammatory cell infiltrate was noted suggestive of Non-lobulated capillary hemangioma. The patient was prescribed analgesics and chlorhexidine rinse (0.12%) twice daily for 2 weeks postoperatively .

Tooth brushing activities in the operated sites were discontinued during this time and was asked to avoid touch, trauma or pressure at the surgical site. The sutures were removed 7 days after surgery, home care instructions were given. Professional prophylaxis was done after one week and after 2 months. On re-evaluation after 2 months following surgery, the surgical site had satisfactorily healed, and there were no complications and recurrence for 9 weeks.

III. Discussion

The hemangioma is a benign tumor of blood vessel origin in which the blood vessels closely resemble normal blood vessels. Oral hemangiomas are seen primarily in areas subject to trauma such as the tongue, lips and buccal mucosa, although any site may be affected.

Gingival hemangiomas are not as common, but the gingiva is frequently involved in patients with Sturge-Weber angiomatosis, a congenital vascular malformation syndrome. Patients with Sturge-Weber angiomatosis have dermal capillary hemangiomas of the head and neck (port wine stain) that are typically unilateral and leptomeningeal angiomas overlying the ipsilateral cerebral cortex. These patients frequently exhibit seizures or convulsive disorders, mental retardation and contralateral hemiplegia. Gingival lesions in Sturge-Weber angiomatosis may be hyperplastic as a result of vascular proliferation secondary to anti-seizure medications[7].The pathogenesis of the common capillary hemangioma involves three stages of development similar to development of any other vasoformative tumors. The first stage is that of undifferentiated capillary network stage. It represents an arrest in the development of mesenchymal primordia which is being nourished by an interlacing system of blood spaces without distinguishable arterial and venous channels. As the development progresses to the second stage i.e., the retiform developmental stage, the primitive vessels penetrate deeper into the subcutaneous layers (to muscle or bone) and gives rise to capillary hemangiomas. As this stage ends, an arterial, venous, and capillary system is established. Finally, in the third stage, i.e., the final developmental stage there is gradual replacement of the immature plexiform network of vessels by the mature vascular channels[8].

Hemangiomas may mimic other lesions clinically, radiographically and Histopathologically. The differential diagnosis of hemangiomas includes pyogenic granuloma, chronic inflammatory gingival hyperplasia (epulis), epulis granulomatosa, varicocell, telangiectasia, and even with squamous cell carcinoma.

The most common vascular proliferation of the oral mucosa is the pyogenic granuloma. This is a reactive lesion that develops rapidly, bleeds easily and is usually associated with inflammation and ulceration. Clinically, it is often lobulated, pedunculated and red to purple and it may be hormone sensitive[3]. There are two histological types of pyogenic granuloma of the oral cavity: the LCH and non-LCH type. LCH is characterized by proliferating blood vessels that are organized in lobular aggregates although superficially the lesion frequently undergoes no specific change, including edema, capillaries dilation or inflammatory granulation tissue reaction, whereas the second type consists of highly vascular proliferation that resembles granulation tissue[3,9]. Histopathologically, the capillary hemangioma exhibits a progression from a densely cellular proliferation of endothelial cells in the early stages to a lobular mass of well-formed capillaries in the mature phase, often resembling the pyogenic granuloma without the inflammatory features. The present case has clinical features of a pyogenic granuloma, but has not microscopic features of pyogenic granuloma. Therefore, biopsy of tissue specimens is often necessary for definitive diagnosis of hemangiomas.

Capillary hemangiomas are not common in this age group people as discussed in this case report and they are common in infancy and childhood. Clinical findings along with the histopathologic findings supported the diagnosis of capillary hemangioma. The surgical excision of the lesion was the treatment of choice. Spontaneous and profuse bleeding as well as possibility of post-operative recurrence, regular clinical observation of the affected site should be mandatory for certain time and for this patient follow-up for clinical evaluation of site was done for 6 months with satisfaction.

IV. Conclusion

Capillary hemangiomas may cause problems in esthetics, mastication, phonetics and self-confidence in the human. Surgical excision and correlation with histological findings is key in treatment planning.

References

[1]. Enzinger FM, Weiss SW. Soft Tissue Tumors. 3rd Edition. St Louis: Mosby; 1995:581-586.
[2]. Açikgöz A, Sakallioglu U, Ozdamar S, Uysal A: Rare Benign Tumours Of Oral Cavity–Capillary Haemangioma Of Palatal Mucosa: A Case Report. Int J Paediatr Dent 2000, 10:161-165.
[3]. Neville BW, Damm DD, Allen CM, Bouquot JE. Oral And Maxillofacial Pathology. 2nd Edition. Philadelphia: WB Saunders; 2002:447-449.
[4]. Carranza FA. Glickman's Clinical Periodontology. 1st Edition. Philadelphia: WB Saunders Co; 1990:335-351.
[5]. Onesti GM, Mazzocchi M, Mezzana P, Scuderi N: Different Types Of Embolization Before Surgical Excision Of Haemangiomas Of The Face. Acta Chir Plast 2003, 45:55-60.
[6]. Burstein FD, Simms C, Cohen SR, Williams JK, Paschal M: Intralesional Laser Therapy Of Extensive Hemangiomas In 100 Consecutive Pediatric Patients. Ann Plast Surg 2000, 44:188-194.
[7]. Enjolras 0, Riche MC, Merland JJ. Facial Port-Wine Stains And Sturge-Weber Syndrome. Pediatrics 1985: 76: 48-51
[8]. Rajendran R, Shivpadsundaram B. Shafer's Text Book Of Oral Pathology. 6th Edition. India: Elsevier Publication; 2009. P. 140-3.
[9]. Mills SE, Cooper PH, Fechner RE: Lobular Capillary Hemangioma: The Underlying Lesion Of Pyogenic Granuloma. A Study Of 73 Cases From The Oral And Nasal Mucous Membranes. Am J Surg Pathol 1980, 4:470-479.