Large lobular capillary hemangioma of lower lip: A case report and review of literature

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Citation

ABSTRACT
Lobular capillary hemangiomas of the oral cavity are a common benign lesion. It has more predilections for the lips. The clinical diagnosis of these lesions is sometimes challenging as they mimic more dangerous lesions like malignancies. Lobular capillary hemangioma (LCH) is usually a result of exuberant neovascular reaction to infection, hormonal influence (e.g., pregnancy and consumption of oral contraceptive pills) or local irritation (e.g., trauma). In this article reported a case report of lobular capillary hemangioma of lower lip which was clinically difficult to diagnose.

Keywords: Lobular capillary hemangioma, Lower lip, Pyogenic granuloma

1. INTRODUCTION
Benign malformations of blood vessels are called as hemangiomas. They are classified on the basis of their histological presentation as capillary, mixed cavernous and sclerosing (Açikgöz et al., 2000). Lobular Capillary hemangioma (LCH) is a benign vascular tumor of the oral cavity which has resemblances to pyogenic granuloma (Kumar et al., 2004; Shafer et al., 1983; Srivastava et al., 2014). It is a benign overgrowth of capillaries having vascular phenotype (Thompson, 2017). On the basis of histology pyogenic granuloma also
is a form of lobular capillary hemangioma (LCH) but pyogenic granuloma shows a striking predilection for gingiva while LCH affect the lip, buccal mucosa or the tongue. The clinical diagnosis of such lesions can sometimes challenging as they can mimic more serious lesions of malignancies (Patil 2006).

LCH is generally solitary occurring on the mucous membrane or skin with unknown etiology. LCH was described by Poncet and Dor in 1897, initially as human botryomycosis (Kamath et al., 2014). In this case report described a case of lobular capillary hemangioma of lower lip but present outside the oral cavity.

2. CASE REPORT
A 30 year old female patient reported with large pedunculated reddish-pink lesion on lower lip and skin region with its base on the lip mucosa. The lesion was present since 15 to 20 days. It is approximately 1.5 X 1.5 X 1.5 cm in size (Figure 1 and 2). The lesion was non-tender, firm in consistency and there was no pulsation present. Surface ulceration was seen at some areas of the lesion. The patient does not have any history of pain, pus discharge or bleeding from the lesion.

Figure 1 Clinical picture showing large reddish-pink pedunculated lesion with base on the lower lip

Figure 2 Lateral view of the lesion

Figure 3 After removal of the lesion and suturing the lesion
An excisional biopsy was done under local anesthesia after doing investigations required. Suturing was done with black silk sutures (Figure 3). The excised specimen was transported in 10% formalin for the histopathological examination.

The histopathological examination revealed presence of number of small blood vessels arranged back to back and feeding into larger vessels. The vessels are lined by single layer of endothelial cells. No cellular atypia was seen. Focal areas of chronic inflammatory cell infiltration predominantly neutrophils are also present. The overall features suggested diagnosis of Lobular capillary hemangioma (Figure 4).

![Figure 4 Histopathological picture (H and E stain, X 40 magnification)](image)

After 7 days follow-up, sutures were removed and it showed normal healing. The Post-operative picture of lower lip after one month (Figure 5)

![Figure 5 Post-operative healing after one month](image)

3. DISCUSSION

Hullihen first reported presentation of similar case in 1844 (Hullihen, 1844). The term ‘granuloma pyogenicum’ or also called as ‘pyogenic granuloma’ was coined in 1904 by Hartzell (Mohan et al., 2012). The term, however, is a misnomer as it is neither an infection nor a tumor (Mohan et al., 2012; Havle et al., 2008). LCH is somewhat common in children and young adults. Females are affected twice as frequently as males, but reverse is true in pediatric patients. The most frequent location is the maxillary gingival in anterior region, while posterior mandibular may also be affected. When present in pregnant patient, the lips, tongue, and buccal mucosa are the most common sites. Patients often clinically presented with a purplish red, painless, lobulated or polypoid mass. Bleeding from the surface ulceration can be present (Thompson, 2017).

These lesions may be variable in size from a few millimeters to several centimeters. The clinical appearance is more firm and pinkish-blue (Maryam et al., 2008). These lesions have a quite higher incidence during pregnancy due to the elevation of progesterone and estrogen levels (Shafer et al., 1983). The differential diagnosis of Lobular Capillary hemangioma (LCH) includes peripheral giant cell granuloma, granulation tissue, angiosarcoma, peripheral ossifying fibroma, and Kaposi sarcoma (Thompson, 2017).

The present case diagnosed as LCH is a proliferative vascular lesion frequently confused clinically with hemangioma. It is difficult to make a histopathological differentiation between a true hemangioma of infancy and LCH. However, LCH exhibits immune
cytochemical and ultrastructural differences. It is mostly perithelial, rather than an endothelial tumour (Maryam et al., 2008). Usually LCH is a solitary lesion, but some cases can present with multiple lesions called as satellitosis. This appears as a complication of tumor removal or trauma. Development of multiple satellite lesions may produce difficulties in the diagnosis and treatment of this lesion (Mohan et al., 2012).

Histologically, LCH is an exuberant vascular proliferation similar to granulation tissue along with chronic inflammatory cellular infiltration (Mohan et al., 2012). Numerous small and large endothelium lined capillaries distended with red blood cells are seen due to endothelial proliferation and formation of numerous vascular spaces (Havle et al., 2008). The blood channels are regularly arranged in a lobular pattern and hence termed as “lobular capillary hemangioma” (Trivedi, 2016). Usually, the surface epithelium is atrophic in some lesions and hyperplastic in others (Mohan et al., 2012). The histological evaluation remains the majority accurate and satisfactory means of diagnosis. Radiographs are taken only to rule out any bony destruction suggestive of hemangioma of central variety, malignancy or to recognize a foreign body which needs elimination along with the lesion (Srivastava et al., 2014).

Various management modalities are suggested for LCH like surgical excision, laser surgery, sclerotherapy, electrodesiccation, curettage, ligation, or a combination of those. Excision of the lesion with linear closure has the lowest recurrence rate and permits the histopathological examination of an excised tissue as it is done in our case (Mohan et al., 2012; Havle et al., 2008). A recent published case report on capillary hemangioma on tongue (Dhole et al., 2020) where surgical excision of nodule over left dorsal surface of tongue was carried out.

4. CONCLUSION
LCH may easily be confused with a variety of other lesions commonly with chronic traumatic lesion such as fibroma and when with ulceration with other dangerous lesions. A proper diagnosis of the lesion is must before planning for a successful treatment modality. Histopathological diagnosis remains the most correct and accurate mode of investigation for such oral lesions.

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Conflict of Interest
The authors declare that there are no conflicts of interests.

Informed consent
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Data and materials availability
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