

A chronic non-healing ulcer on the lower lip mimicking malignancy – A diagnostic dilemma.

Rajlaxmi Mitra¹, Akhilanand Chaurasia², and Ranjit Patil¹

¹KGMU

²King George Medical University

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CLINICAL PRESENTATION

A 14-year-old male patient reported to the Department of Oral Medicine and Radiology with a complaint of a chronic non-healing ulcer in the lower lip. The patient reported that the lesion appeared 1 month back and is slowly increasing in size since then. He was apparently healthy and well-nourished without any Medical/Dental history or parafunctional habits. The patient did not recall any physical or chemical trauma to the lip in the past before the appearance of this ulcer.

Clinical examination revealed a large, solitary ulcer on the right side of the lower lip resulting in eversion of the lip. The ulcer was about 3.5cm×2.5cm in greatest dimension. Clinically the non-healing ulcer had presented with a grayish-pink base covered by a white slough and indurated margins (Figure 1) however, submental lymph nodes were palpable. The ulceration was mostly asymptomatic, but the patient had noticed occasional bleeding that would occur either spontaneously or as a consequence of any minor agitation to the area.



Fig. 1. Clinical examination. A large solitary non-healing ulcer on the right side of the lower lip.

DIFFERENTIAL DIAGNOSIS

Based on history, clinical presentation and location of the lesion differential diagnoses of long-standing traumatic ulcer, malignancy, eosinophilic ulcer, tuberculous ulcer, syphilitic ulcer, herpes-associated erythema multiforme, and deep fungal infection has been considered.

Single mucosal ulcers may result from direct physical, chemical, thermal, or even vascular compromise, causing tissue damage and ulceration. Acute bite injuries are a common example of direct physical trauma and can be more severe if it occurs when the mucosa is numb after local anesthesia has been given for a dental procedure. Malocclusion, aggressive tooth brushing, and self-inflicted damage also cause traumatic injuries. Inadvertent chewing of electrical wiring may induce thermal injuries in children. Certain over-the-counter drugs for treating aphthous ulcers contain high concentrations of silver nitrate, phenol, or sulfuric acid and can cause solitary ulcerations. Vascular compromise results in oral ulcerations such as necrotizing sialometaplasia where there is local infarction of the salivary gland tissue leading to overwhelming ulceration, exfoliation of the necrotic tissue, and healing. The most common location for this condition is the hard palate mucosa although any location that contains minor salivary glands may be affected¹.

Oral ulcerations showing moderately rapid growth rate² and persisting for more than two weeks reflect early signs of malignancy. The most common malignancy of epithelial origin in the oral cavity is oral squamous cell carcinoma. Oral squamous cell carcinoma most commonly affects the floor of the mouth, ventral and lateral borders of the tongue, and lower lip. It can present as a white, red, mixed red-white, exophytic or ulcerative lesion. The typical clinical presentation of oral squamous cell carcinoma is a crater-like solitary ulcer with indurated rolled border and velvety base³.

Eosinophilic ulceration (Traumatic ulcerative granuloma with stromal eosinophilia) is a histopathologically distinct variety of chronic traumatic ulceration of the oral mucosa. It presents with deep pseudo-invasive inflammatory reactions causing very slow resolution. The lesion can occur at any age with notably higher occurrence in males⁴. Although the anteroventral surface of the tongue is the most common region for the lesion. It has also been reported on the gingiva, buccal mucosa, the floor of the mouth, palate, and lip. Duration of the lesion may vary from 1 week to 8 months⁵. The ulcerations are indistinguishable from simple traumatic ulcers; however, occasionally the underlying granulation tissue can proliferate and make a raised lesion matching the clinical presentation of lobulated capillary haemangioma⁶.

Oral tuberculous lesions are usually secondary to pulmonary tuberculosis (almost 3% of patients with long-term active tuberculosis) but rarely primary lesions may occur due to direct inoculation of the microbe into oral mucosa. Of all the sites involved within the oral cavity, labial involvement is extremely rare while the tongue is the most common region affected. An ulceration with undermined edges and a granulating floor is characteristic of such lesions⁷.

Primary syphilitic chancres typically present as painless, sometimes necrotic, ulcers with a rolled border and associated lymphadenopathy. Common sites of occurrence are the lips, tongue, palate, and nostrils. The lesions appear within 3 to 90 days of initial inoculation and may heal spontaneously even without treatment⁶.

Recurrent Aphthous Major (Sutton's disease) appears as ulcerations that are larger than 1 cm in diameter and last for several weeks. The extremely agonizing condition occurs when major portions of oral mucosa get covered with extensive ulcerations that coalesce and result in deeper and bigger lesions. Such conditions interfere with daily activities like speaking and consuming food. The lesions may sometimes be wrongly diagnosed as oral squamous cell carcinoma, granulomatous disease, or a blistering disease such as pemphigus. Slow healing with scarring causes reduced mobility of the uvula and tongue⁶.

Herpes-associated erythema multiforme is an acute disease caused by herpes simplex virus. It results in exudative dermatic and mucosal lesions. Oral lesions present as erythematous macules on the lips and buccal mucosa that undergo epithelial necrosis, bullae formation, and ulcerations with an irregular margin and strong inflammatory halo. Bloody encrustations are visible on lips. The lip is the most common site of preceding herpes simplex virus infection in cases of herpes-associated erythema multiforme⁸.

Deep fungal infections (histoplasmosis) are relatively rare in the oral cavity and most commonly affect immunocompromised patients. Such lesions typically manifest as chronic mucosal ulcerations or granular soft tissue overgrowths that arise from either local inoculation or dissemination by the hematogenous or lymphatic spread. These lesions are non-specific and can mimic malignancy hence, it is crucial to obtain a thorough clinical history and an adequate biopsy to confirm the diagnosis.

Given the potential diagnoses mentioned earlier, it is important to highlight that lesions of different aetiologies can have the same clinical features and that histopathologic analysis is crucial for the final diagnosis, treatment, and management of patients.

DIAGNOSIS AND MANAGEMENT.

Considering the rapid growth of the ulceration and its indurated margins which provided high suspicion of malignancy we planned to have an incisional biopsy. However, we decided to seek a second opinion from the Department of Dermatology where he has been advised the same line of treatment along with HSV serology and Mantoux test to rule out hypertrophic herpes simplex and lupus vulgaris respectively.

The patient re-visited us with negative reports for HSV-serology and Mantoux test. Routine blood investigations were within normal range. An incisional biopsy was performed with informed consent. The post-operative healing was uneventful.

The histopathological report illustrated hypertrophied and hyperkeratinized stratified squamous epithelium with underlying fibrocollagenous stroma infiltrated by dense mixed inflammatory infiltrate comprising of

predominantly lymphocyte, plasma cells, neutrophils, and occasional histiocytes admixed with proliferating blood vessels. There is no evidence of atypia or malignancy (Figure 2).

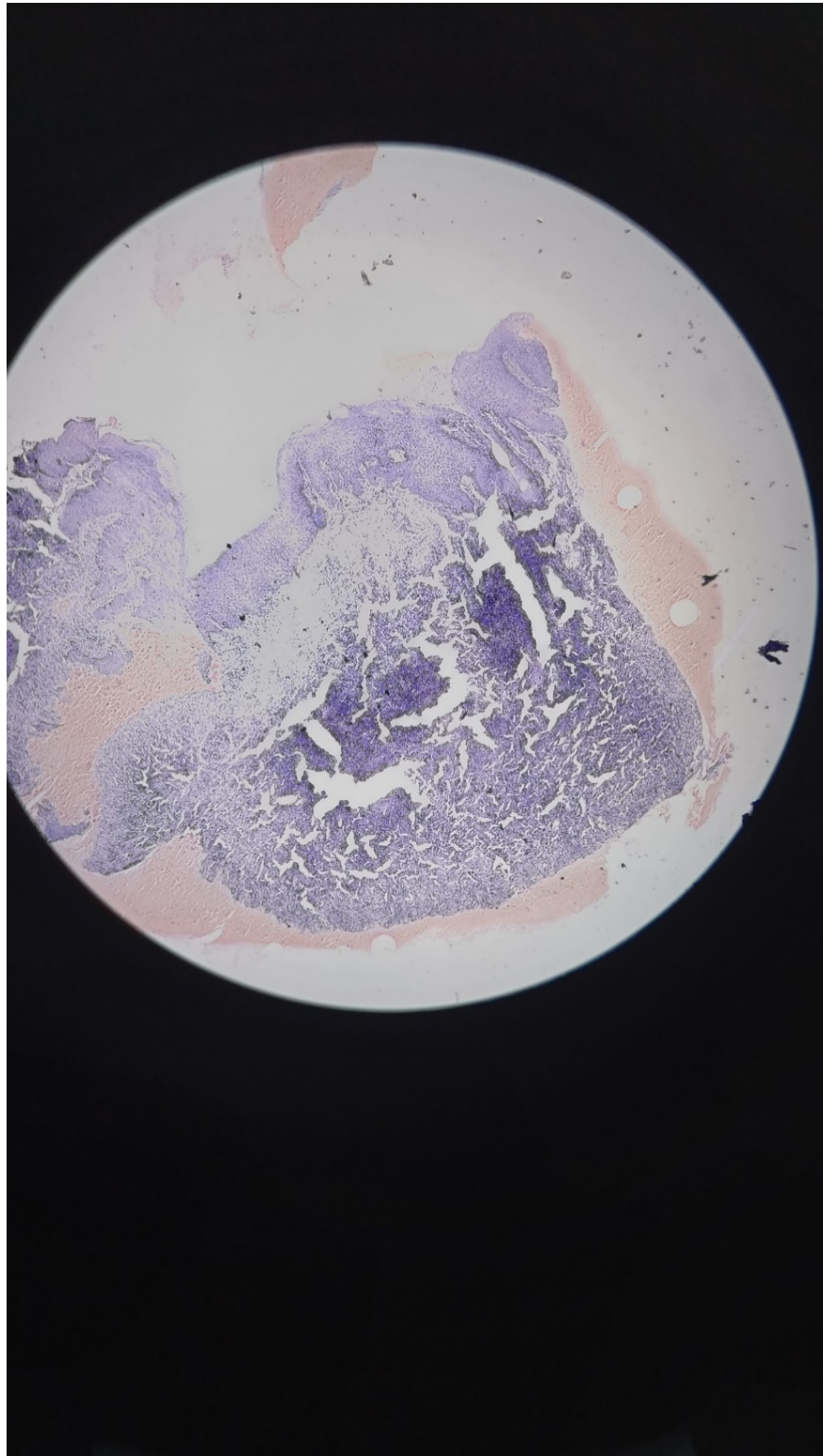


Fig. 2. (4×Magnification) Hematoxylin-eosin staining showing features suggestive of lobular capillary hemangioma.

The patient was then referred to the Department of Oral Surgery for further management where the whole lesion was excised and sent for biopsy. The second biopsy report was also suggestive of lobulated capillary hemangioma.

DISCUSSION

Haemangiomas constitute about 7% of all benign tumors in infancy and childhood⁹. An increase in the number of normal or abnormal vessels engorged with blood is characteristic of these entities. These lesions are broadly identified as (a) cavernous and (b) capillary haemangioma. Cavernous haemangiomas are composed of large dilated vascular channels that can infiltrate and involve deeper structures making spontaneous regression a rare possibility. Capillary haemangiomas are more common in comparison to cavernous type. These occur in the skin, subcutaneous tissues, and mucous membranes of the oral cavity, lips as well as in the liver, spleen, and kidneys⁹.

Lobular capillary haemangiomas are a benign proliferation of capillaries that usually arise on the face, lips, or hands after episodes of minor trauma¹⁰.

They do not show age preponderance but are more common in children and young adults, especially in men. It displays various clinical features suggestive of reactive neovascularisation. It has a limited capacity to grow, with a propensity for multiple eruptions that may be localized or disseminated.

Lobular capillary haemangioma remains an etiopathological enigma. Trauma, inflammatory and infectious agents are the suspected causative factors. It is a relatively common benign mucocutaneous lesion occurring intraorally or extra orally. It is a common lesion that presents with varying clinical features that may sometimes mimic more serious lesions such as malignancies.

Lobulated capillary haemangioma may resemble a squamous cell carcinoma because it usually has an ulcerated patch on its surface. It is softer on palpation and bleeds easily, and usually, its instigating irritant can be found¹¹.

In a review of 639 vascular lesions of the oral cavity and upper respiratory tract 73 cases presented with characteristic features of Lobulated capillary haemangioma. Among the various sites, the lip was the most common site involved (38%). LCH presents as a spontaneous, painless, bleeding mass. There is a predilection for males less than 18 years old, females in the reproductive years, and an equal sex distribution beyond 40 years of age¹².

As an adage says, ‘Eyes cannot see what the mind does not know’, a clinician, not cognisant of the possibility of this lesion in its unusual site mistakes it for the more serious ones and might jump to conclusions which often leads to misleading results, uncertainty, and mistrust. This is easily overcome by histopathology which confirms its innocuous nature.

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1. Rajlaxmi Mitra

Writing-Original draft

2. Akhilanand Chaurasia

Writing-Review and Editing

3. Ranjit Kumar Patil

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