

## Tuberculosis: A Rare Cause of Linear Labial Ulceration

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### Abbreviations:

TB: tuberculosis; PCR: polymerase chain reaction

### Keywords:

Tuberculosis; Oral tuberculosis; Mucous membrane; Lip; Lymph node tuberculosis

## 1. Abstract

### Introduction

Oral location of tuberculosis is rare. It admits a clinical polymorphism and poses above all a problem of diagnosis. We report a case of labial tuberculosis in a 16-year-old patient with underlying lymph node localization.

### Case report

A 16-year-old teenager with no notable history had a painless ulceration in the lower lip which gradually progressed in size. It was associated with mandibular tumefaction, elevated temperature, weakness, and significant weight loss. The physical examination revealed a linear ulceration of 3 cm, with a budding border and sitting on indurated base. Gingivitis was associated. Other mucous membranes were normal. Examination of the lymph nodes revealed bilateral mandibular lymphadenopathy and left jugulocarotid adenopathy. The biopsy of the ulceration revealed a tuberculoid granuloma without caseous necrosis. The hemogram and chest x-ray were normal. The tuberculin intra-dermoreaction was positive at 17 mm. An adenectomy with histological study was performed objectifying epithelioid-giganto-cellular granulomas with central caseous necrosis. The diagnosis of tuberculous chancre was retained associated with secondary lymph node location. The patient underwent anti-bacillary treatment (2RHZ/7RH) with good progress and healing of ulceration.

### Discussion

The originality of our work lies in the rarity of labial localization during tuberculosis and its association with an underlying lymph node location. The oral mucosal localization is rare, representing only 0.1 to 5%. The diagnosis is confirmed on clinical, biological and histological arguments. The treatment is based on anti-bacillary

drugs according to the 2RHZ / 4RH protocol when it is isolated and 2RHZ / 7RH when it is associated with other locations.

## 2. Introduction

Tuberculosis is a chronic infectious disease that can affect any part of the body. The oral location is rare. It admits a clinical polymorphism and poses above all a problem of diagnosis. We report a case of labial tuberculosis in a 16-year-old patient with underlying lymph node localization.

## 3. Case Report

A 16-year-old teenager with no notable history had a painless ulceration on her lower lip gradually increasing in size. It was associated with elevated temperature, weakness, and significant weight loss. There were no pulmonary or gastrointestinal symptoms. Dermatological examination revealed a linear ulceration, of approximately 3 cm, with a budding border and sitting on indurated base. Gingivitis was associated. The remaining mucous membranes were normal. Examination of the lymph nodes revealed bilateral mandibular lymphadenopathy and left jugulocarotid adenopathy. Histopathological examination of the lip lesion revealed a tuberculoid granuloma without caseous necrosis. The hemogram and chest x-ray were normal. A tuberculin skin test was positive at 17 mm induration (evaluated after 72h). Test for human immunodeficiency virus was negative. An adenectomy with histological study was performed objectifying epithelioid-giganto-cellular granulomas with central caseous necrosis. From the clinical, histopathologic, and laboratory findings, the patient was diagnosed with labial tuberculosis revealing lymph node location. She underwent anti-tuberculosis treatment (2 months of rifampicin/isoniazid/pyrazinamide and 7 months of rifampicin/isoniazid) with good progress and fibrous scarring of the ulceration.



**Figure 1:** Linear labial ulceration of the lower lip

#### 4. Discussion

The originality of our work lies in the rarity of primary labial tuberculosis rarely seen and mostly recognized through case reports [1]. It is estimated that only 0.05% to 5% of total TB cases may present with oral manifestations [2]. It remains rare even in a country where the disease is widespread, such as Morocco where the prevalence is reported to 30897 cases in 2017 [3]. Oral TB lesions may be either primary or secondary in occurrence [4]. Primary lesions are uncommon, seen in younger patients, and present as single painless ulcer with regional lymph node enlargement. The secondary lesions are common, often associated with pulmonary disease, usually present as single, indurated, irregular, painful ulcer covered by inflammatory exudates in patients of any age group but relatively more common in middle-aged and elderly patients [5]. It is believed that the intact oral mucosa, constant flow of saliva and its antibacterial properties protect from tubercle bacilli invasion to the oral tissues [6]. However, any local trauma can promote infection. Other local predisposing factors include poor oral hygiene, hyperkeratosis disorders such as leukoplakia, oral mucosa inflammation or even tooth extraction [7-9]. In our case, poor oral hygiene is incriminated.

Histopathological assessment may reveal the presence of granulomatous inflammatory infiltration with Langhans giant cells and lymphocytes. Foci of caseous necrosis of the tissue can be observed. Mycobacteria can be demonstrated in the collected specimen [7,8,10-12]. Microbiological culture of sputum and of the material taken from the surface of the oral lesion should be done, but the results are obtained after 10 weeks. According to various studies only a small percentage (7.8%) of histopathology specimens stain positive for acid fast bacilli [13]. Therefore, a nega-

tive result does not rule out completely the possibility of TB. In doubtful cases, molecular tests (PCR) may be helpful. In our case, histopathological examination of the lymph node biopsy was an important aid in the diagnosis of the disease because the finding of caseous necrosis was highly suggestive of tuberculosis.

In our country, the treatment requires a combination of 3 drugs (rifampicin, isoniazid and pyrazinamide) administered daily for the first 2 months, followed by an additional 4 months with 2 drugs (rifampicin, isoniazid). In our case, the patient underwent 9 months of treatment because she had associated lymph node location.

The purpose of this case report is to highlight the rare clinical presentation of tuberculosis and bring to the attention a differential diagnosis of tuberculosis while dealing with chronic oral ulcers. It is particularly relevant in a country like Morocco with one of the highest tuberculosis burdens.

#### 5. Acknowledgment

None.

#### 6. Conflict of Interest

None.

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