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Case Report

Atypical Ulcer-Secondary-Oral-Tuberculosis of Mandibular Mucosa: Diagnosis and Treatment

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Abstract

Introduction: The atypical ulcer secondary oral tuberculosis is chronic and irregular in appearance, with deep depression that can be located in the oral mucosa.

Case Report: A 42-year-old woman, who presented a granular ulcer without cicatrization, chronic for three years behind the report of irregular edges, with deep depression, two centimeters in diameter and located in the vestibular mucosa of the premolar area of the left mandibular arch.

Conclusion: The appropriate and timely diagnosis and surgical treatment of this pathology through a subepithelial connective autograft is reported in a chronic patient with four-fold antituberculous therapy.

Keywords: *Tuberculosis; Autograft; Treatment; Surgery; Diagnosis*

Introduction

Tuberculosis is a chronic infectious disease caused by *Mycobacterium tuberculosis*. Around eight million people are affected annually in the world and three million die a year due to complications of tuberculosis [1-4]. Tuberculosis is classified clinically as pulmonary and extra pulmonary. Pulmonary tuberculosis is the most common form of the disease while extra pulmonary tuberculosis ranges from 10% to 15% of infected people [3,5].

The lesions of oral tuberculosis are not common being between 0.05% and 5.00% of cases of extra pulmonary tuberculosis developing in most cases as chronic painless ulcers [2,6]. Primary oral tuberculosis is distinguished most often in young patients. The secondary oral tuberculosis is frequently in middle-aged and advanced adults. *M. tuberculosis* infecting: buccal mucosa, gingival mucosa, tongue, lingual frenum and lips. It is most frequently in men than women [6-8].

Aim of the Study

The aim of this paper is to report a case in a routine examination of an ulcer that does not heal, chronic, of irregular appearance, with deep depression, two centimeters in diameter and located in buccal mucosa of the area premolar the left mandibular arch of a 42-year-old woman whom underwent detailed clinical examination to emphasize the importance of timely and appropriate diagnosis and treatment in patients with secondary oral tuberculosis.

Case Presentation

A 42-year-old woman, who attended a stomatological consultation for her oral rehabilitation treatment. A detailed anamnesis was performed and the data record in the dental clinical history. The patient received four-fold antituberculous therapy (ATT) with isoniazid INH, rifampicin RMP, Ethambutol EMB and Pyrazinamide PZA, indicating improvement of her systemic condition but not of her oral clinical condition. At the intraoral clinical examination, the presence of an ulcer without cicatrization, chronic for three years behind the report of irregular edges, with deep depression, two centimeters in diameter and located in the vestibular mucosa of the premolar area of the left mandibular arch, was observed (Figure 1). The presence of a root remnant in 34 was also evident. The clinical and pathological diagnosis was confirmed: the irregular surface of the ulcer it covered with asymptomatic Trelat granules with local lymph nodes not increased or painful. The anatomopathological study of the sample showed multiple stratified squamous epithelium with minimal caseous necrosis and Langhans giant cells (Figure 2). The patient was subjected to the clinical and surgical stomatological treatment protocol. The oral hygiene and the elimination of traumatic factors they were provided and re-evaluated before and after surgical treatment.

Figure 1: *The unusual granular ulcer that does not heal, chronic, of irregular appearance, with deep depression and located in buccal mucosa of the area premolar the left mandibular arch.*

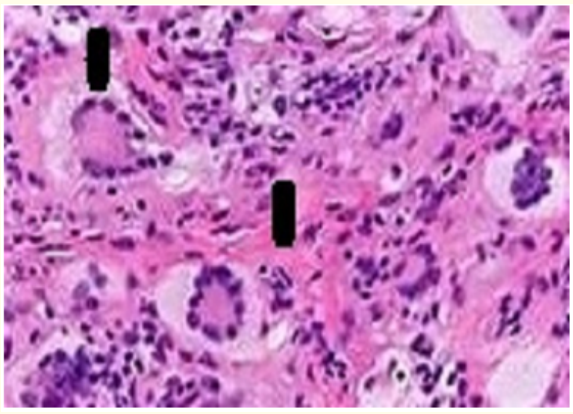

Figure 2: *The anatomopathological study of the sample showed multiple stratified squamous epithelium with minimal caseous necrosis and Langhans giant cells (black lines).*

The inferior dental nerve and the buccal nerve were anesthetized with 2% lidocaine with epinephrine 1: 80,000. After anesthesia a mucoperiosteal flap was performed with complete Newmann incision from 36 to 42, incising crestally in the edentulous and intrasulcular zone in the dentate area proceeding to the total excision of the granular ulcer secondary oral tuberculosis in all its extension projecting to 2 mm in healthy tissue adjacent to the area of the lesion. The root remnant 34 was removed performing bone regularization and curettage of the lesion area (Figure 3). Check that the edge of the flap is regular. The operative area was washed with sterile saline solution (Figure 4) and consequently, periodontal plastic surgery was performed in the area of the lesion positioning a sub epithelial connective autograft which was extracted from the palatal area (Figure 5 and 6). Erythromycin 500 mg/6h/10 d was prescribed + ibuprofen 400 mg/6h/3d, likewise, oral rinsing with 0.12% chlorhexidine twice a day. After 10 days the sutures were removed and the postoperative controls were performed at 15, 30 and 60 days, with the corrective treatment of the patient (Figure 7-9).

Figure 3: *Mucoperiosteal flap was performed with complete Newmann incision from 36 to 42, for the total excision of the granular ulcer secondary oral tuberculosis in all its extension projecting to 2 mm in healthy tissue adjacent to the area of the lesion. The root remnant 34 was removed performing bone regularization.*

Figure 4: *Check the edge of the flap is regular. The operative area was washed with sterile saline solution.*

Figure 5: *A sub epithelial connective autograft which was extracted from the palatal area and positionating in the area of the lesion.*

Figure 6: *Periodontal plastic surgery was performed in the area of the lesion.*

Figure 7: *Postoperative control at 30 days.*

Figure 8: *Postoperative control at 60 days (subepithelial connective tissue donor zone).*

Figure 9: *Postoperative control at 60 days.*

Discussion

Oral tuberculosis lesions is found only between 0.05% and 5.00% of cases, developing in most of them as chronic painless ulcers [2-6]. The pathological recognition of this entity is important and its early diagnosis is necessary [9-11]. Tuberculosis can infect all parts of the mouth such as soft and hard palate, uvula, buccal mucosa, gingiva, lips, tongue, maxilla and jaw [6-11].

According to published research by various authors who they refer two types of oral tuberculosis are recognized: primary oral tuberculosis which is more common in young patients and causes enlarged lymph nodes and secondary oral tuberculosis which is registered in adults of middle and advanced age infecting *M. tuberculosis*: buccal mucosa, gingival mucosa, tongue, lingual frenulum and lips [12-14].

We report in a routine examination in the oral cavity of a 42-year-old woman, in whom the presence of a ulcer that does not heal was observed, chronic, of irregular appearance, with a deep depression, two centimeters in diameter, located in vestibular mucosa of the premolar area of the left mandibular arch. This finding of secondary tuberculosis according to the clinical manifestation did not present enlarged or painful local lymph nodes identifying an irregular surface ulcer covered with Trelat granules.

The anatomopathological study of the sample showed multiple stratified squamous epithelium with minimal caseous necrosis and Langhans giant cells. Additionally, the clinical characteristics of the lesion make it possible to differentiate it from other pathologies in the oral mucosa such as syphilis, histoplasmosis, planoepithelial cancer or recurrent or aphthous stomatitis [9-11]. Our finding related to that reported by Krawiecka and Szponar [14] and Erbaycu., *et al*. [15] who considered that due to the clinical characteristics of the lesion for the differentiation from other pathologies in buccal mucosa.

According to Kakisi., *et al.* the secondary form is observed more often than the primary one [6]. The oral focus of infection *M. tuberculosis* may appear as a result of autoinfection from the sputum with a route of hematogenous or lymphatic transmission. It is possible that in the majority of patients with tuberculosis the constant flow of saliva and its antibacterial properties could protect the oral tissues from the invasion of the bacillus. However, it is also possible that local traumatisms in the oral cavity may promote infection, as referred by some researchers [6,14,15]. We could also conclude, according to our study that secondary oral tuberculosis in response to the invasion of the *M. tuberculosis* bacillus into the oral tissues is predisposed by local factors such as poor oral hygiene, prosthetic devices and inadequate dental treatments.

We consider that the most important aspect of tuberculosis treatment is ant tuberculous therapy (ATT) as a universal standardized drug therapy. In addition to this, we consider that after the opportune and differentiated diagnosis of the oral cavity in our case, we evidenced the necessity of the appropriate stomatological clinical and surgical treatment performing the total excision of the granular ulcer secondary oral tuberculosis and the periodontal plastic surgery. The ATT regimen consists of two phases: the first line of treatment requires usually INH, RMP, EMB and PZA, which were administered for two months initially to continue in second phase for four consecutive months with INH and RMP. Inadequate management of tuberculosis or failure to apply the antibiotic regimen would produce resistance of the bacillus. A good follow-up of the regimen of adequate antituberculous treatment could prevent the oral tuberculosis. In this regard, we agree with what was reported by Pavlinac., *et al*. [1], Araj., *et al*. [2], Taute., *et al*. [3], Trin., *et al*. [4], Ernst., *et al*. [5] and Aoun., *et al* [12].

However, when the lesion is established it is necessary to consider the diagnosis of oral tuberculosis to determine the appropriate treatment for each patient. In relation to the surgical treatment of granular ulcer secondary oral tuberculosis the bibliographic evidence is scarce. However, local topical therapy with anti-inflammatory ointments and oral mucosa protective agents are reported in investigations [6,14].

In our case, in an intraoral clinical routine examination of the patient who underwent the detailed anamnesis and the clinical examination it was possible to demonstrate the need to perform the corrective treatment. The total excision of the tuberculous ulcer was performed and immediately to periodontal surgery in the area of the lesion positioning an autograft of sub epithelial connective tissue. We agree with authors such as Cchina [16], Reino., *et al*. [17] and Zuhr., *et al*. [18], on the use of the sub epithelial connective graft for the treatment of plasty of large mucogingival defects.

We must mention that it is necessary to indicate to the patient her improvement of oral hygiene and the elimination of traumatic factors such as prosthetic devices and inadequate dental treatments.

The aim of this presentation was to report a case in a routine examination, of a granular ulcer that does not heal, of irregular appearance with a deep depression, two centimeters in diameter located in the vestibular mucosa of the premolar area of the arch, left mandible, from

a 42-year-old patient. Surgical excision of the tuberculous granuloma was carried out in its entirety with a projection of 2 mm to adjacent healthy tissue and consequently, periodontal plastic surgery in the area of the lesion positioning an autograft of sub epithelial connective tissue extracted from the palatal area and the respective postoperative controls.

Conclusion

We consider it important to perform the detailed clinical examination of the patient with ulcer secondary oral tuberculosis. The timely clinical and surgical stomatological treatment such as the surgical excision of the lesion and consequently, the periodontal plastic surgery with autograft of sub epithelial connective tissue extracted from the palatal area. It was reported optimal results in the improvement of oral health, function and comfort of the patient treated at 15, 30 and 60 days respectively. In all the time of study, we have not found recurrence of the pathology.

Conflict of Interest

No conflict of interest.

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