INTRODUCTION

TUGSE is a reactive benign lesion of oral mucosa with an obscure clinical behaviour generally affecting the tongue. Its ulcerative aspect can mimics malignancies or infectious processes although in some cases trauma is considered to have a central role in the pathogenesis. A bioptic exam of the lesion is crucial to define a TUGSE diagnosis . Histopathological findings are typical and consist of eosinophil-rich mixed infiltrate with small lymphocytes T and B. In many cases rapid healing is generally achieved spontaneously or after a biopsy and not require any treatment. For clinicians knowledge of this condition is important to guide appropriate patient care and counseling.

CASE REPORT

An 11-year-old female presented herself at the Department of Oral and Maxillo Facial Surgery University Magna Graecia of Catanzaro with non-healing isolated painful ulcer of the tongue since 7 days.

Intraoral examination revealed an ulcer on the dorsal surface and left side of the tongue measuring 2 cm x 1,5 cm in size with well defined and raised margins surrounded by a small area of erythema, opposite teeth 2.4-2.5-2.6. On palpation the ulcer was smooth and firm in consistency with indurated margins. (Fig.1). No regional limphoadenopaty was present. She gave history of pain radiating to cheek and neck region.

Her previous medical history was not remarkable. She referred an episode of tongue self-bite 2 weeks ago with no improvement of the lesion after medication. No dentoscheletrical or other intraoral anomalies were found.

Blood and chemistry tests were performed to exclude haematological or metabolic disorders. Furthermore microbiological and serological tests were also carried out to investigate leishmaniasis, toxoplasmosis, EBV, CMV, Epatitis B or C, HIV, zygomycosis,aspergillosis, histoplasmosis, blastomycosis, siphilis or autoimmune diseases like Lupus erythematosus, Reiter’s syndrome (HLA-B27) and Wegener’s disease (ANCA).

Tuberculosis skin test was added too. Negative results of these laboratories exams excluded a systemic condition and than biopsy was recommended to define diagnosis.

Ultrasonographic exam of Lymph Nodes in Head and Neck showed reactive lymph nodes in left submandibular region.

One week later an incisional biopsy was performed under local anesthesia for histopathological analysis.

Microscopic examination showed superficial hyperplastic epithelium with hyperkeratosis and central area of ulceration. This ulcerated area was infiltrated with mixed inflammatory cells chiefly composed of eosinophils, CD 20+ and CD3+ B and T lymphocytes, CD68+ histiocytes, CD31+ cells and macrophages extending deep into the muscle layer. The infiltrated tissue was

well vascularized. No presence of atypical cells (Fig. 2-5).

On the basis of these results a diagnosis of TUGSE was made. The patient underwent to antibiotic therapy with oral Amoxicillin 1gr for 10 days and was advised to use corticosteroid and chlorexidine 0,2% mouthwashes. Then she has been monitored closely with routine check-ups. No further treatment was required. Complete healing was noticed after two months with structural and functional resolution (Fig.6).

DISCUSSION

TUGSE is an infrequent lesion of the oral mucosa with unclear aetiology and pathogenesis. It has been known by different names such as Riga-Fede disease, eosinophilic granuloma, traumatic granuloma (1). In 1970 Shapiro and Juhlin identified this lesion as a distinct entity.

Nowadays etiology of TUGSE remains still obscure. The clinical presentation mimics a large range of different pathologies like oral cancer, infectious diseases, metabolic or autoimmune disorders and aphtous-like lesions. Some authors identified trauma as main factor in the development of lesion in less than 50% of cases (2); among them an accidental bite or repeated injury leads to introduction of viral or toxic agents in the tissues causing inflammatory response (3,4) and local immune reaction (5). However, an absolute linkage between injuries and the development of these lesions wasn’t found in all studies (6,7).

Clinically ulcer appears solitary with elevated and indurated margins associated with pain in many cases. It can persist for several weeks or months without treatment and generally tends to resolve spontaneously (8).

It affects a wide age range of patients from childhood to old age with a peak incidence between the 6th and 7th decades of life and a slight female predominance. Ventral or lateral surface of the tongue is generally involved perhaps because is more vulnerable to injuries. Other oral areas like lip, palate and vestibular mucosa may also be involved. In our case TUGSE presented in a female child atipically on the left dorsal surface of the tongue measuring about 2 cm x 1,5 cm, tender on palpation with indurated margins surrounded by hyperemic area. Dentoscheletrical system has presented no anomalies. Traumatic episode of an accidental bite referred by the patient a week ago has not justified completely the entity of lesion. No lymphoadenopathy was founded. Negative results of laboratory exams excluded a systemic condition, and then biopsy was recommended to define diagnosis.

Indeed benign nature of lesion has been confirmed by histopathological findings .Microscopical examination of our lesion revealed a polymorphic inflammatory infiltrate mainly composed of eosinophils and histiocytes CD68+, accompanied by a population of CD3+ lymphocytes T, CD20+ lymphocytes B and macrophages (3) with abundant cytoplasm, irregular nuclear contours, small nucleoli and fine chromatin (8); immunohistochemical tecnique results consisted of CD31+ in vascular component and CD30 and S100 rarely expressed. This inflammatory infiltrate extends from the superficial mucosa to the sub mucosa involving muscle fibers and sometimes salivary glands. The role of eosinophils is not completely clear because they are not present in all traumatic oral ulcers ; they may be involved in a tissue reaction to some unknown antigen introduced through traumatic lesion. Degeneration of oral mucosa may be attributed to proliferation of cytotoxic T cells or toxic product released by degranulating eosinophils. It supports the role of cytotoxic T cells in the pathogenesis of TUGSE.

The differential diagnosis is complex because clinical presentation mimics malignancies such as squamous cell carcinoma, lymphoma, salivary gland tumors, infective diseases such as leishmaniasis, toxoplasmosis, epatitis or autoimmune diseases.The histologic differential diagnosis may include many lesions characterized by infiltration of eosinophils within the connective tissue such as Langerhan’s cell disease, Angiolymphoid Hiperplasia with Eosinophilia (ALHE), Kimura disease,certain types of lymphomas, allergic reactions and parasitic diseases. (9,10) In our case rarely expressed CD30 antigen excluded a lymphoproliferative disorder.

In our patient we observed a marked improvement of the lesion after incisional biopsy with no need for more radical surgery; a complete resolution at 2 and 6 months follow-up visits was observed, indicating a full recovery.

CONCLUSIONS

TUGSE is a benign lesion of the oral mucosa of an unclear pathogenesis. This case report analyzed clinical and histopathological characteristics of TUGSE highlighting the complexity of diagnosis, due to a large number of patologies with overlapping clinical and histopathological features. According with literature, some cases show correlation between TUGSE and recurrent traumatic injury to the tongue. The present case characterized by young age of patient, history of an accidental bite and spontaneous self-healing of the lesion related to typical clinical picture and histopathological findings led up to diagnosis of TUGSE. This lesion could be considered a reactive process secondary to trauma excluding other similar suspected ulcerative lesions.

Awareness of this entity is important to emphasize the correct diagnosis of ulcerated lesions and deliver appropriate and effective treatment.

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LEGENDES

Figure 1 .Ulcerated lesion on dorsolateral surface of the tongue at clinical presentation.

Figure 2. Ulcerated area with mixed inflammatory cells (10X, H&E)

Figure 3. Inflammatory infiltrate of granuloma composed by small lymphocytes B and T and granulocytes (40X, H&E)

Figure 4. Immunohistochemical analysis showing CD3+ T Lymphocytes aggregates.

Figure 5. Immunohistochemical analysis showing composed by small lymphocytes B and T and CD20+ B Lymphocytes.

Figure 6. Complete resolution two months post biopsy.