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Case Report | **Oral Medicine and Pathology**

Tongue Granular Cell Tumor of a Seropositive Patient. A Rare Case Report and a Brief Review of the Literature

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Abstract

A seropositive patient who developed a granular cell tumor on the dorsum of the tongue is referred. The lesion was surgically excised. His clinical state is thoroughly studied, along with the histopathological and immunohistochemical examinations findings. Numerous histogenesis theories and the appropriate tumor treatment are mentioned within the article being always in accordance with the relative literature. The case mentioned contributes to the literature by being the first report of a seropositive patient with a tongue granular cell tumor ever noted.

Keywords: Congenital granular cell tumor oral, Granular cell tumor oral, Granular cell tumor, Oral and systematic diseases.

INTRODUCTION

The granular cell tumor (GCT) is a benign neoplasm, strongly believed to be of neural origin, usually located on the head and neck area (45% to 65% of the cases) [1-4]. Among the head and neck cases, 70% of lesions are located intraorally and merely 2% of all GCTs turn out to be malignant [2-6]. The oral GCT is mostly encountered in the dorsum and the lateral borders of the tongue. Extra tongue location is rarely observed, like on the floor of the mouth, the hard or soft palate and the buccal mucosa [1-12]. A slight female prevalence is noted, especially between the third and the fourth decade of life [2-9]. Usually, GCT is perceived either during an intraoral clinical examination or by the patient himself [1-8]. The treatment of choice is the surgical excision; relapses do not exist in most cases [1-8]. In any case, clinical diagnosis must be established by the histological, as well as immunohistochemical examination [13].

CASE REPORT

A 59-year-old male patient visited our clinic following his dentist's advice. According to his medical history, he has been seropositive (HIV+) since 1993 and prescribed with reverse transcriptase inhibitors (commercial name Altipla) due to this reason. He has also been under medication for diagnosed depression and chronic obstructive pulmonary disease. Moreover, the patient is a heavy smoker, smoking 60 cigarettes on a daily basis for the last 40 years. Finally, he is allergic to antibiotic quinolone.

The clinical examination revealed a swelling of approximately 0.5 cm in diameter, secile and well circumscribed, located on the dorsum of the tongue on the left half, near the central fissure (Fig.1).

Figure 1: Initial Clinical Appearance

The swelling was pinkish in color and painless in palpation. Under local anesthesia, thorough surgical excision was carried out. The patient's postoperative course was uneventful.

The histopathological examination revealed that thetumor was a tongue GCT. Sizable polygonal cells with plenty of eosinophilic granular cytoplasm in the form of compact groups in the dermis were pointed out (Fig.2).

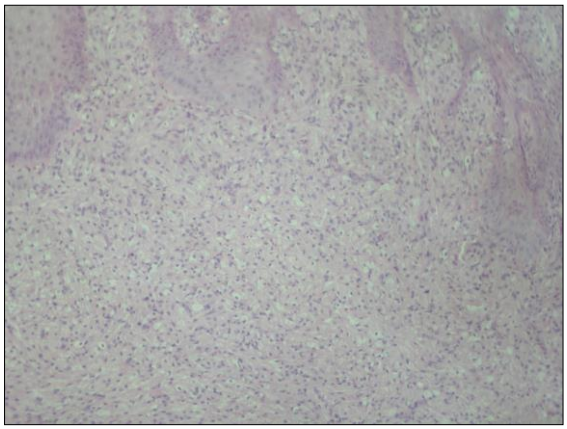

Figure 2: The Lesion Grows in Lamina Propria. The Overlying Stratified Squamous Epithelium Shows Severe Hyperplasia (H-E X40)

Additionally, cellular atypias or mitoses were not noted. The supernatant epithelium was characterized by an intense hyperkeratosis and a moderate pseudoepitheliomatus hyperplasia without atypias (Fig.3).

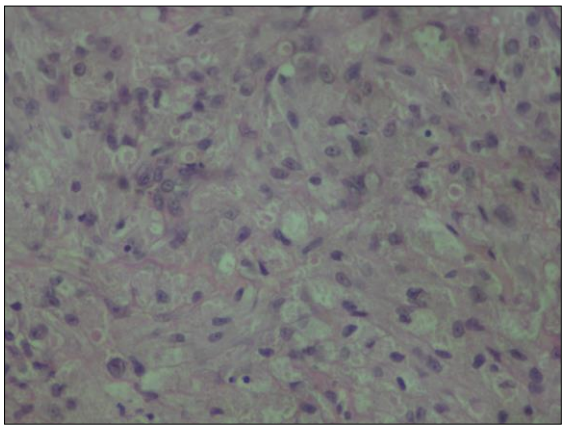

Figure 3: Lesional Cells Are Characterized Be Granular, Eosionophilic Cytoplasm and Small, Round Nuclei without Atypia (H-E X400)

The immunohistochemical examination revealed that the lesion was positive for S-100 protein (Fig.4 & 5).

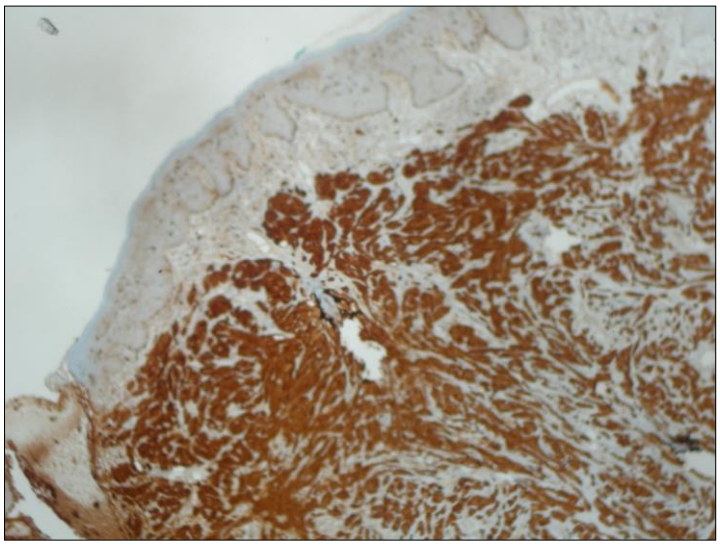

Figure 4: Strong Immunohistochemical Positivity of Lesional Cells for S100 Protein (Immunoperoxidase X40)

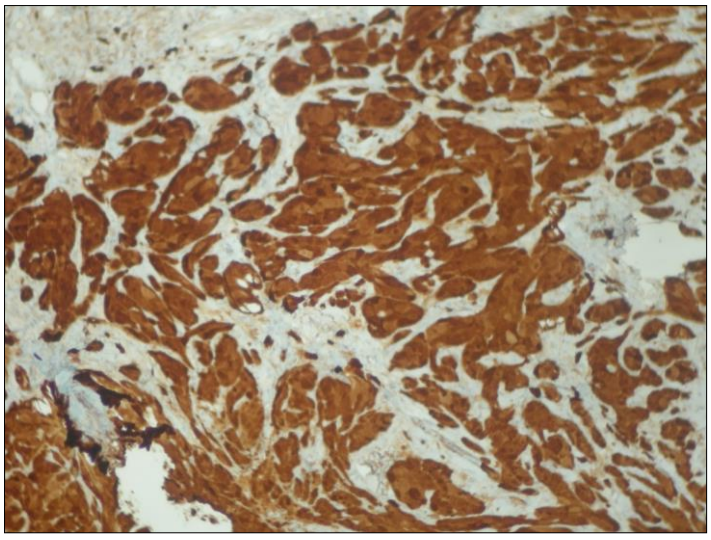

Figure 5: Strong Immunohistochemical Positivity of Lesional cells for S100 Protein (Immunoperoxidase X400)

The above findings confirmed that this tumor was a GCT of the tongue.

DISCUSSION

A case of a seropositive (HIV+) patient who developed a Granular Cell Tumor (GCT) at the dorsum of his tongue has been described. The treatment of choice was the surgical excision of the tumor, since the patient was hematologically stable.

The histological origin of GCT was primarily described by Abrikossoff in 1926, stating that the granular cells of the tumor derive from the skeletal muscles and consequently he named it myoblastoma [1-9]. Other theories of histogenesis claim that GCT derives from neurons, fibroblasts, mast cells and myoepithelial cells [2-14]. Furthermore, a number of authors have correlated regenerative changes and proliferation after injury with the morphogenesis of the GCT [14]. According to the prevailing theory, the oral GCT derives from cells of the neural tissue, and more specifically from the Schwann cells [1-15]. In support of the previous theory, the GCT is positive to the S-100 protein during the immunohistochemical examination [1-15], just as it was in our case, in order to confirm the initial diagnosis. However, a very rare GCT negative to S-100 protein case, has been described [16].

The oral GCT of newborns is a congenital lesion, called congenital epoulis of newborns. However, some authors state that despite the histological similarity between the congenital epoulis and the GCT, they differ in origin, recalling that the congenital epoulis derives from mesenchymal cells [15-19].

Extra caution is needed throughout the differential diagnosis between oral GCT and oral

squamus cell carcinoma (OSCC) [8, 9]. Pseudoepitheliomatus hyperplasia is a histological feature which appears in both tumors and as a result, might lead to a misdiagnosis of OSCC [1-11]. The oral GCT does not bear the characteristics of malignancy, such as tumor necrosis, spindle cells, vesicular nuclei with prominent nucleoli, increased mitotic activity (>2/10 HPF), high nucleocytoplasmic ratio or pleomorphism (cellular and/or nuclear) [9]. Conversely, the location, the clear boundaries and the duration of the oral GCT suggest that the lesion is benign. It has also been claimed that small structural differences of the subjacent connective tissue alone, lead to a proper differential diagnosis between these two lesions [11]. Based on the above elements, a close and substantial cooperation between a clinician and an expert pathologist is substantial.

Correlation between GCT and systemic diseases has never been ascertained, according to the relative literature. Furthermore, all articles concerning the subject refer to free medical history patients, who developed oral GCT.

We ought to point out that our patient's medical history is not free, since he is a seropositive (HIV+) patient. Of course, we did not find any correlation between his medical history and oral GCT, which is the reason why the referred case is considered to be the first in literature.

The treatment of choice of oral GCT is the surgical excision of the tumor, without any relapse at most cases, just as in our case of a seropositive (HIV+) patient [1-6].

CONCLUSIONS

The GCT is not a rare lesion in the oral mucosa. Thorough surgical excision is the treatment of choice. Always, the diagnosis is based on the histopathological examination, throughout which the pseudoelitheliomatus hyperplasia may lead to misdiagnosis of malignancy (OSCC). The referred case is the first oral GCT of a diagnosed seropositive (HIV+) patient to be reported in the English literature.

Conflict of Interest: No potential conflict of interest relevant to this article was reported.

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