

Granular Cell Tumor (GCT, Abrikossoff's Tumor) with Coexisting HPV16 Infection. Case Report

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ABSTRACT

Introduction: Granular cell tumor (GCT) also known as Abrikossoff's tumor is a structure composed of the granular eosinophilic cells. Usually presents as a benign lesion which occurs in all body parts, most frequently in the oral cavity, especially affect the tongue.

Case presentation: A 28-year-old woman referred to the otolaryngology and head and neck surgery clinic due to a tumor-like lesion located in the front third of the tongue shaft in the midline. The patient reported that first time she noticed the tumor six months earlier after suffering from an infection of the upper respiratory tract and throat. In physical examination the tumor was hard, immobile and painless and measured about 1cm without visible infiltration of surrounding structures. Histopathological examination of the sections revealed thickened and acantotic hyperplasia of the

paraepidermoid epithelium with the appearance of leukoplakia. There were visible signs of fibrosis in the stroma. Histopathological examination suggested fibroma if the clinical data were consistent. Due to the appearance of leukoplakia and the lack of a history of mechanical risk factors, the histopathologist decided to commission a Real-Time PCR test to assess HPV infection. The obtained result proved the presence of viral DNA of high risk HPV-16 genotype. It was recommended to remove the tumor under local anesthesia and consult a maxillofacial surgery clinic before the procedure.

Conclusions: It may be rational to considered routine HPV diagnosis in patients diagnosed with GCT.

Keywords: GCT, granular cell tumor, Abrikossoff's tumor, HPV, leukoplakia

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INTRODUCTION

Granular cell tumor (GCT) also known as Abrikossoff's tumor is a structure composed of the granular eosinophilic cells. Usually presents as a benign lesion which occurs in all body parts, most frequently in the oral cavity, especially affect the tongue (around 10-25% cases of GCT) [1,2]. It may occur at any age but mostly seen in females between the fourth and sixth decades of life [3].

CASE PRESENTATION

A 28-year-old woman referred to the otolaryngology and head and neck surgery clinic due to a tumor-like lesion located in the front third of the tongue shaft in the midline. The patient reported that first time she noticed the tumor six months earlier after suffering from an infection of the upper respiratory tract and throat. On the hands and feet skin were papillomatous lesions and hyperkeratosis. Further interview revealed numerous recurrent infections of the upper respiratory tract, recurrent cold sores, recurrent fungal infections of the genital tract. Patient was also treated for gastroesophageal reflux. A year earlier patient was consulted at the immunology department because of a history of numerous infections. Doctor recommended vitamin D3 treatment, laboratory tests and a repeat visit after obtaining the test results.

In physical examination the tumor was hard, immobile and painless and measured about 1cm without visible infiltration of surrounding

structures. Doctor collected small sections from the surface of the tumor. Histopathological examination of the sections revealed thickened and acantotic hyperplasia of the paraepidermoid epithelium with the appearance of leukoplakia. There were visible signs of fibrosis in the stroma. Histopathological examination suggested fibroma. Due to appearance of leukoplakia and the lack of a history of mechanical risk factors, the histopathologist decided to commission a Real-Time PCR test to assess HPV infection. The obtained result proved the presence of viral DNA of high risk HPV-16 genotype. It was recommended to remove the tumor under local anesthesia and consult a maxillofacial surgery clinic before the procedure.

The patient was qualified for an open tongue biopsy (ASO) procedure. The procedure was performed under local anesthesia. Lump was closely attached to the mucosa. After removal, the muscles of the tongue were macroscopically unchanged and of a normal structure. A histopathological examination of the collected material was ordered in which the diagnosis was verified. Based on the possessed tumor tissue histopathologists diagnosed granular cell tumor (myoblastoma Abrikossoff) (Fig 1). As the lesion had not been resected within borders of the healthy tissues, it was recommended to widen the field of surgery. Kefzol, Perfalgan and Dexaven were used for postoperative treatment. The patient was advised to intensify oral hygiene. Rinsing the mouth with Eludril twice a day and sage decoction after each meal. Check-up at the surgical clinic 10 days after the procedure.

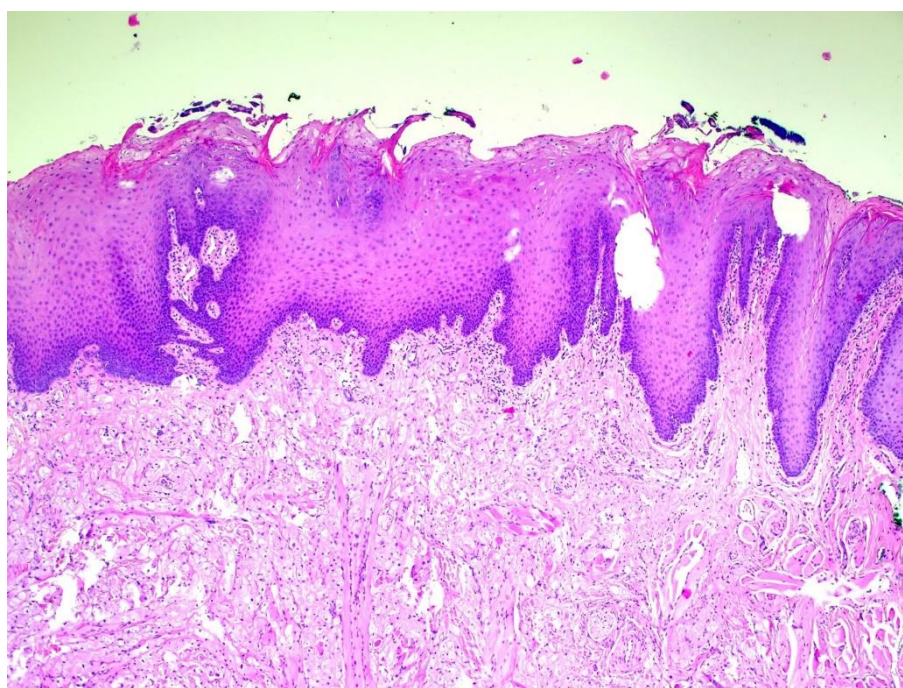


Figure 1. Granular cell tumor (myoblastoma Abrikossoff); H+E staining, magn. x100

DISCUSSION

Granular cell tumor in the oral cavity may be a single or multiple lesion. It appears at different ages, even twice as often in women. There are known cases of familial occurrence. It is a rare tumor, most often located on the lateral wall of the body or the tip of the tongue, and there are known cases of other locations [4,5]. In the tongue, it can be located in the mucosa or intramuscularly. Usually, the squamous epithelium covering the lesion shows significant growth. The lesion is usually small, single, hard, smooth to the touch, arched above the surface of the tongue, well-defined, motionless, covered with mucosa [6,7]. It is characterized by slow growth. It is asymptomatic. Most often it grows to a diameter of about 2 cm, does not ulcerate. It may be larger in cases of malignant process [4]. Granular cell tumor is often detected accidentally and its diagnosis is determined by histopathological examination. Microscopically it is composed of lobes, nests and round, polygonal or elongated bands, cells with abundant granular, acidophilic cytoplasm. Ultra-structural studies showed cytoplasmic eosinophilic granules, which are large secondary lysosomes. There may also be spherical eosinophilic structures with a pale envelope in the cytoplasm. Cell groups are separated by bands of connective tissue [4,5]. A distinct nuclear membrane is visible in the structure of the cells, the nuclei are round, small and highly stained, and the nucleoli are small. Mitoses are rarely present. In the tumor stroma there are characteristic macrophages containing large arcuate eosinophils corresponding to the lysosomes. The epithelium covering the tumor may show pseudo-cellular hyperplasia, which may be mistaken for squamous cell carcinoma. However, the literature presents cases of GCT coexisting with oral SCC [8]. Decisive importance for proper diagnosis is differentiating immunohistochemical staining. The treatment by choice consists of surgical removal of the lesion with a margin of healthy tissue [5].

CONCLUSIONS

A benign GCT most often presents as a tumor on the tongue. Despite its rare population occurrence, it should be considered as one of the possible diagnoses.

The literature presents cases of GCT coexisting with oral SCC.

The patient we describe does not have SCC, however, in view of the presence of HPV-16 in the epithelium covering the tumor, we believe that it should remain under constant control. It may be rational to consider routine HPV diagnosis in patients diagnosed with GCT.

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Conflicts of interest

The authors declared no conflict of interest

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