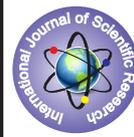


Granular cell tumor of posterior mandible: case report



Dental Science

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ABSTRACT

Granular cell tumor (GCT) is a quite rare neoplasm occurring in females in 4th to 6th decade of life. It can occur in any part of body but approximately 45% of all cases are known to affect head and neck region. About 70% of GCT's are seen in intraoral site and 1/3rd of cases affecting whole body. Most common site is tongue followed by buccal mucosa and palate. These are locally aggressive lesions and frank malignancy has been reported in few. Some lesions show surface ulcerations and pseudoepitheliomatous hyperplasia histologically may imitate malignancy if biopsy is not adequately taken. We report a rare case of swelling of soft tissue involving the right posterior mandible in a middle aged female patient which was histopathologically diagnosed as GCT with a brief on review of literature has been discussed.

Introduction

GCT is a benign soft tissue tumor which is quite rare with an unknown etiology. [1] The first case involving tongue was reported by Abrikossoff in 1926, which he called as granular cell myoblastoma due to presence of granular cells and skeletal muscles. [2] About 45% cases are reported to occur in head and neck region with age of presentation being 4th to 6th decade of life. [3] Tongue is the most common site affected in oral cavity. Females are affected twice as compared to males. The management includes surgical excision. [4]

We report a rare case of GCT involving left posterior mandibular gingival region in a 35 years old female patient. A brief on review of literature has been discussed.

Case report

A 35 years old female patient reported with chief complaint of swelling of the lower left gums region since 4 months. Intraoral examination revealed pink sessile lesion of firm consistency with normal texture. Lesion was 1.5 cm in size and was asymptomatic. The OPG and Intraoral periapical radiograph were non contributory. The past medical history was non significant. Routine blood findings were within normal limits. Based on the clinical examination a provisional diagnosis of irritational fibroma, granular cell tumor, neurofibroma and lipoma was made. An excisional biopsy was performed under local anesthesia and tissue was sent for histopathology.

Histopathological examination revealed polyhedral cells with pale and granular cytoplasm and pyknotic nucleus. The cells were arranged in the form of nests and cords surrounding skeletal muscle fibre bundles with dense connective tissue stroma. The overall features were suggestive of Granular cell tumor.

Patient was on follow up for 6 months and did not report any complication.

Discussion

GCT is also known as Abrikossoff tumor and is a slow growing and asymptomatic tumor which is accidentally discovered. [5] It presents as a nodular mass of 1.5-3cm size which is hard in consistency and is covered with intact surface. [6] Some lesions present with ulcerations which may be due to local trauma. Most GCT's are found in head and neck. Postero-lateral aspect of tongue is the most common site of involvement. [7] The present case reported with a lesion of right posterior mandible. Tumor is usually solitary, but multiple nodules have also been reported. Apart from oral mucosa, it is also noted in skin, respiratory tract, GI tract, reproductive system and

other regions of head and neck including orbits, parotid gland, cranial nerves and larynx. [8]

Differential diagnosis includes benign soft tissue tumors including fibromas, lipoma or neural tumors like neurofibroma or malignant tumors of salivary glands and other carcinomas. [9] In the present case, lesion was involving posterior mandible. So these lesions were included in the differential diagnosis.

The origin of GCT is controversial. First it was thought to arise from muscle fibres, based on which it was known as Myoblastoma as reported by Abrikossoff in 1926. [10] Some authors supported a histiocytic origin but there was no supporting evidence. Later on, Fust and Custer in 1940, anticipated a neurogenetic basis, ascribed to Schwann cells as the origin for this tumor. [10] Immunohistochemical studies have confirmed the neural origin of these cells by showing positivity of these granular cells for Neuron Specific Enolase and S-100. [10]

Histologically, GCT is poorly circumscribed and comprises of strands and sheets of polyhedral cells with distinct cell membrane. The nuclei are placed centrally, and the cytoplasm is eosinophilic and coarsely granular. The overlying epithelium shows extensive proliferation known as pseudoepitheliomatous hyperplasia. In some cases the pseudoepitheliomatous hyperplasia may be so pronounced that it may mimic squamous cell carcinoma. This may occur if the fragment of tissue is from incisional biopsy or a superficial tissue. [9]

GCT is a benign condition, but malignancy has been reported in 10% cases. The histological distinction between the benign and malignant variant is difficult, so only presence of metastasis either regional or distant will help in distinction between the two. [8]

Surgical excision is the most accepted treatment regardless of whether lesion is solitary or multifocal. The margins are poorly defined, so excision with safety margins is recommended. [10] Recurrence is quite uncommon, but may occur due to inadequate excision. 41% cases show local recurrence and around 63% cases may show distant metastasis. [7] Radiotherapy and chemotherapy are indicated in malignant cases which cause regression of lesion. [10] Present case was approached intraorally using local anesthesia and excision of lesion was done. Patient was under 1 year follow-up and did not present any complications.

Conclusion

Granular cell tumor, though uncommon, needs to be approached systematically at clinical, histological and immunohistological level.

A close follow up should be performed to avoid relapse of lesion.

Figures and legends



Figure 1 intraoral examination reveals solitary swelling in the right posterior mucosa

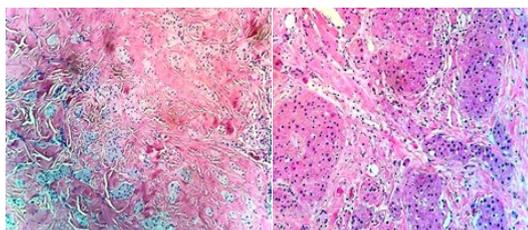


Figure 2a. Photomicrograph reveals numerous nests and islands of granular cells in fibrocollagenous stroma (H & E 4 x)

Figure 2 b. photomicrograph reveals islands and nests of granular cells in densely packed fibrous stroma. Note the polyhedral cells with granular eosinophilic cytoplasm and pyknotic nuclei (H&E 10 x)

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