Peripheral giant cell granuloma is a reactive lesion and infrequent exophytic lesion of oral cavity. It is also known as giant cell epulis, osteoclastoma, giant cell reparative granuloma or giant cell hyperplasia. It is distinguished from other inflammatory hyperplastic lesion by presence of multinucleated giant cells whose etiology is still unknown. But its origin may be due to local irritation due to dental plaque or calculus, periodontal disease, poor dental restorations, ill-fitting dental appliances or dental extractions. The lesion can be found in very young children as well as in dentulous or edentulous elderly patients, commonly found between 4th to 6th decade of life with more prevalence in females than in males.

Lesions are generally asymptomatic with varying sizes and clinical appearance. It always occur on gingiva or alveolar mucosa and can be pedunculated or sessile lesion arising from deeper in tissue. It is one of the common giant cell lesions of jaw, originating from connective tissue of periosteum or periodontal ligament.

Histological features consists of non-encapsulated mass of connective tissue cells and multinucleated giant cells. Giant cells resemble osteoclast and are larger than osteoclast. Also, capillaries, foci of hemorrhage, mononuclear phagocytes and inflammatory cell infiltration are also characteristic features.

Radiographic findings may or may not reveal evidence of involvement of bone underlying lesion. In edentulous patients, superficial erosions of bone with pathognomonic peripheral “cupping” of bone may exhibit. This case report presents with peripheral giant cell granuloma.

**CASE REPORT**

A 50 year old patient reported in the department of Periodontology, NHDCRI, Bilaspur with a chief complaint of soft tissue overgrowth on right side of floor of mouth in relation to 43 to 46. The swelling was asymptomatic. The patient did not give any medical history of systemic disease. No extraoral or other abnormalities were detected.

Intraoral examination revealed the presence of firm, smooth, pedunculated swelling extending from distal aspect of mandibular right canine to mesial aspect of mandibular right 1st molar obliterating the mandibular buccal vestibule (Fig 1). The surface of the lesion was pale pink and dimension of the lesion measured was 15 mm. Other associated periodontal findings were generalized gingival recession and deep periodontal pocket present. Grade III mobility was present with 42. Grade II mobility was present with 33, 34, 35, 36, 43, 46. Oral hygiene status of patient was poor with presence of abundant plaque and calculus deposits. Patient gave history of recurrent intraoral swelling in the area of denture bearing region.

The OPG of the patient shows severe bone loss in relation to 46. After completing phase-I therapy and re-evaluation after 15 days, excision of the soft tissue was performed (Fig 2, 3). The specimen was collected in 10% formalin and sent for histopathological examination to the Department of Oral Pathology, NHDCRI. The microscopic analysis revealed features of the lesion with large number of stromal fibroblastic cells and multinucleated giant cells (Fig 4). Post-operative healing was uneventful (Fig 5).
In terms of histology, there is an unencapsulated tissue mass with acute and/or chronic inflammatory infiltrate permeating highly cellularized fibrous tissue with foci of hemorrhage and deposition of hemosiderin. There is vascular proliferation and multinucleated giant cells permeated by massive oval to spindleshaped mesenchymal cells.16,17 Giant cells varying in shapes and sizes, typically containing 8 to 15 nuclei. They may also be observed in areas of mature or immature reactive bone formation or dystrophic calcifications. The epithelial lining may be hyperplastic and/or ulcerated. Two types of giant cells have been described: type A cells, which correspond to eosinophilic polymorphonuclear cells with abundant and diffuse cytoplasm and irregular nuclei, containing chromatin spread along the inner membrane; type B cells, which have regular and well-defined shape and more abundant and dense cytoplasm.18

The differential diagnosis can be central giant cell granuloma, pyogenic granuloma, peripheral ossifying fibroma, fibrous hyperplasia, inflamed irritation fibroma, hemangioma, lymphangioma, amelodontic melanoma and metastatic tumors.19

Radiographically, it exhibits superficial erosion of bone with pathognomonic peripheral ‘cuffing’ of bone in edentulous area. When tumor occurs in dentulous area, radiograph may reveal superficial destruction of alveolar margin or crest of interdental bone. The conservative excision is typically curative. Prognosis is excellent. A recurrence rate of 10-15 % has been reported in most cases. If recurred, it can be easily managed with additional surgery.20

REFERENCES: