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內文：

Abstract

- Plasma cells are terminally differentiated B lymphocytes which are typically found in the red pulp of the spleen, medulla of the lymph nodes, tonsils, lamina propria of the entire gastrointestinal tract, mucosa of the nose and upper airway, and sites of inflammation.
- They are characterised by basophilic cytoplasm with an eccentrically placed nucleus. A plasma cell's main function is to produce immunoglobulins or antibodies.
- Plasma cell granuloma typically found in the oral cavity. This lesion is not a neoplastic process, nor is it associated with a monoclonal expansion of a single plasma cell; instead, this is a reactive, inflammatory lesion which usually involves the gingival tissue.

Introduction

- Plasma cell granuloma is a rare non-neoplastic lesion that was first described in 1973. Its exact incidence is unclear. This lesion's aetiology, biologic behaviour and most appropriate treatments are unclear, and little is known about the prognosis. It consists of a proliferation of inflammatory cells, with a predominance of plasma cells, in a fibrovascular background.
- Plasma cell granuloma has been classified as an inflammatory pseudotumour which may occur in any organ or soft tissue, including the lung and conducting airways, also been found in other organs such as the spleen, stomach, pancreas, liver, thyroid, orbit, heart, kidney and retroperitoneum, vagina, bladder and larynx.

Plasma cell granuloma has been called by different terms, for example,

- 1.inflammatory myofibroblastic tumour
- 2.inflammatory pseudotumour
- 3.inflammatory myofibrohistiocytic proliferation
- 4.xanthomatous pseudotumour.

- Microscopic examination of inflammatory myofibroblastic tumour revealed plump spindle cells set in a myxoid vascular stroma admixed with inflammatory cells.
- The most considered common treatment for plasma cell granuloma is a complete resection; however, in some cases, total surgical excision is not possible. Radiotherapy and/or steroid therapy have sometimes been successfully used to treat patients with non-resectable lesions.
- Plasma cell granulomas are seen in the salivary glands, and progenitor cells located in the bone marrow differentiate into bone marrow plasma cells, which are the cells of origin for multiple myeloma and solitary plasmacytoma of bone.
- Plasma cell granulomas of the oral cavity are seen primarily on the periodontal tissue. These lesions are often single. Maxillary and mandibular gingivas are equally involved. Bone loss may occur. These lesions have no sex predilection and may occur at any age.
- On histological evaluation, plasma cells are prominent but are intermixed with abundant other cellular elements, namely lymphocytes, neutrophils, eosinophils and

histiocytes, and usually surrounded by connective-tissue septae.

- They are microscopically characterised by a vascular stroma with reactive inflammatory cells, including but not limited to plasma cells.
- With respect to prognosis, plasma cell granuloma seems to be a generally benign, non-recurring condition; nevertheless, local aggressiveness and recurrences may complicate the outcome of the disease.

Case report

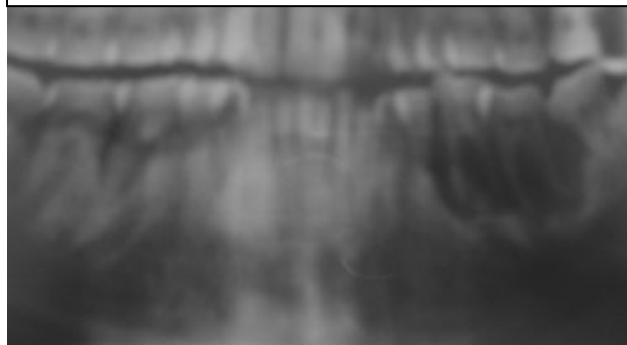
A healthy male patient, 35 years of age, visited the Department of Oral Medicine and Radiology, KLE Society's Institute of Dental Sciences, Bangalore, India, with a complaint of a mass in relation to lower left back teeth for the past month.

No relevant past history or medical history was present but he gave a history of tobacco chewing for the past 15–16 years. Vital signs were normal. On examination, no extraoral swelling was noticed. On intraoral examination, a nodular swelling in relation to lower left first molar (36) and lower left second molar (37) was seen and 36,37 showed no caries.

The teeth were not in alignment in relation to the lower left quadrant. The teeth were stained and calculus and gingival recession in relation to the involved teeth. Bleeding on probing was seen. No other significant findings were noted.

The patient had a radiographic examination. The Orthopantomogram revealed a widening of periodontal ligament space around 36, 37. Incisional biopsy was performed and was sent for histopathological examination.

radiograph showing a radiolucency around the roots of 36,37 region.



The section revealed a large number of chronic inflammatory cells, predominantly plasma cells together with neutrophils, and lymphocytes in the connective tissue stroma. The plasma cells showed no dysplastic features.

A probable histological diagnosis of a solitary plasmacytoma was made. Immunostaining for κ (kappa) and λ (lambda) light chains confirmed a polyclonal plasma cell population after which a confirmatory diagnosis of plasma cell granuloma was made.

The lesion was completely excised, and extraction of 36,37 was also done under local anaesthesia. The patient failed to turn up for a follow-up but reported that the lesion had completely healed.

Discussion

- The phenomenon of plasma cell infiltrate was first described by Zoon in 1952, been found on the vulva, buccal mucosa, palate, nasal aperture, gingiva, lips, tongue, epiglottis, larynx and other orificial surfaces.
- During the late 1960s and early 1970s, cases of plasma cell infiltrates of the lips, gums and tongue were described primarily in the dental literature under the names atypical gingivostomatitis, idiopathic gingivostomatitis and allergic gingivostomatitis.
- The lesions were thought to be a result of a reaction to chewing gum, dentifrices and other foreign substances, although extensive allergy testing had been inconclusive.
- In 1986, White *et al.* grouped all plasma cell infiltrates of the aerodigestive tract under the name 'plasma cell orificial mucositis'
- Histological examination of the tissue can exclude carcinoma from the differential

- diagnosis.
- Only two cases of inflammatory myoblastic tumour (plasma cell granuloma) of the bone have been reported in the literature, both by Sciote *et al.*, which exhibited an aggressive expanding growth into the surrounding soft tissue.
 - Plasma cell granulomas tend to locate in the oral cavity, primarily on the periodontal tissue and exact incidence of these cases have not been reported in literature. This lesion probably represents the oral counterpart of the cutaneous angioplasmocellular hyperplasia.
 - These lesions are often single, whereas the lesions of mucous membrane plasmacytosis tend to be multiple.
 - On histological evaluation, plasma cells are prominent, but are intermixed with abundant other cellular elements and usually surrounded by connective-tissue septae, distinguishing it from mucous membrane plasmacytosis.
 - Histologically, plasmacytomas are composed of a diffuse infiltrate of plasma cells in the dermis and subcutaneous tissue. There is minimal to prominent nuclear atypia of the plasma cells and on immunohistochemistry they are monoclonal, distinguishing plasmacytoma from plasmacytosis.
 - Gene-rearrangement studies can be done if immunohistochemistry is inconclusive.
 - The aetiology of this condition is unclear but is believed to be a non-specific inflammatory response, in the form of a plasma cell infiltrate, to an unknown exogenous agent. Attempts to induce plasma cell infiltrations on mucosal and non-mucosal surfaces by allergic and irritant stimuli were not successful.
 - Roman hypothesised that plasma cell gingivitis may be associated with low levels of serum IgA and secretory IgA, which allows localised, repetitive, subclinical infections that could lead to the plasma cell infiltrate.
 - Aiba points out that a plasma cell infiltrate is a rare histological feature in ordinary inflammatory dermatoses but is often found around such epidermal neoplasms as actinic keratosis, Bowen disease, squamous cell carcinoma and syringocystadenoma papilliferum.
 - A probable diagnosis of solitary plasmacytoma was made and the polyclonality of plasma cells with the kappa and lambda chain immunostaining pointed to the conclusive diagnosis of plasma cell granuloma.

Conclusion

- Plasma cell granuloma is a diagnosis of exclusion, distinguished primarily on the histological finding of a marked submucosal plasma-cell infiltrate, after conditions such as infection and plasmacytoma have been eliminated.
- The aetiology of this condition is unclear but is believed to be a non-specific inflammatory response, in the form of a plasma cell infiltrate, to an unknown exogenous agent.
- This report reinforces the existence of inflammatory pseudotumours in the oral region as well as the need for clarification of the unknown nature of inflammatory pseudotumours.

題號	題目
1	關於Plasma cell granuloma 下列何者錯誤? (A) classified as an inflammatory pseudotumour (B) have sex predilection for male (C) seen primarily on the periodontal tissue. (D) seems to be a generally benign, non-recurring condition
答案(B)	出處：Oral & maxillofacial pathology P527 plasmacytoma The plasmacytoma usually is detected in an adult male,the male-to-female

	ratio is 3:1
題號	題目
2	關於plasma cell gingivitis 下列何者錯誤? (A) A hypersensitivity to a component of chewing gum (B) A polyclonal mixture of plasma cells and anormal profile on plasma immunoelectrophoresis. (C) Gingiva is diffuse enlargementy with dark erythema and loss of normal stippling (D) Can be treated with topical or systemic immunosuppressive medications
答案(C)	出處：Oral & maxillofacial pathology P141 plasma cell gingivitis Gingiva is diffuse enlargementy with bright erythema and loss of normal stippling