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CASE REPORT

Plasma Cell Gingivitis posing a Diagnostic Dilemma

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ABSTRACT

Introduction: Plasma cell gingivitis is an unusual form of gingivitis which causes gingival enlargement of varying degree. Proper diagnosis is important for effective case management.

Case report: Here we report a case of intense gingival inflammation and enlargement predominantly in the upper anterior region in an otherwise healthy male patient 24 years of age. Patient gave a history of recurrence after surgical excision 2 to 3 months back. Considering all differential diagnosis options and after proper investigations, the case was diagnosed as allergic/atypical gingivitis. Histopathologic examination confirmed clinical diagnosis. However, the history failed to identify the attributing allergen.

Treatment: Surgical recontouring of gingiva was done and the patient was advised to avoid certain food substances and solutions and pastes used for oral hygiene maintenance, which as per review of literature were identified as allergens causing allergic or plasma cell gingivitis.

Conclusion: In cases of atypical gingival enlargement, treatment should be planned after proper diagnosis clinically and histopathologically.

Keywords: Allergic/atypical gingivitis, Diffuse enlargement, Plasma cell gingivitis.

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INTRODUCTION

Gingival enlargement is a common manifestation of inflammatory gingival disease, Also it may be present in a variety of noninflammatory conditions. Of these, Plasma cell gingivitis, a form of allergic gingivitis may pose a diagnostic dilemma in many situations.

CASE REPORT

A 24-year-old male student reported to the Department of Periodontics with the complaint of bleeding from enlarged gums since last 6 months. He was otherwise healthy. He underwent surgical excision of upper anterior gingiva 2 months back, but the condition recurred to the present stage within 3 months. There was no positive family, systemic, or drug history relevant to this situation.

CLINICAL FEATURES

On examination, there was generalized gingival enlargement. Specifically, there was more pronounced grade II enlargement of gingiva in relation to 13 to 23 with red, soft, edematous and fine granular surface. Loss of natural gingival contour was more pronounced in the anterior region (Figs 1 and 2).

The inner aspect of upper lip coming in contact with the upper anterior gingiva was erythematous. The level

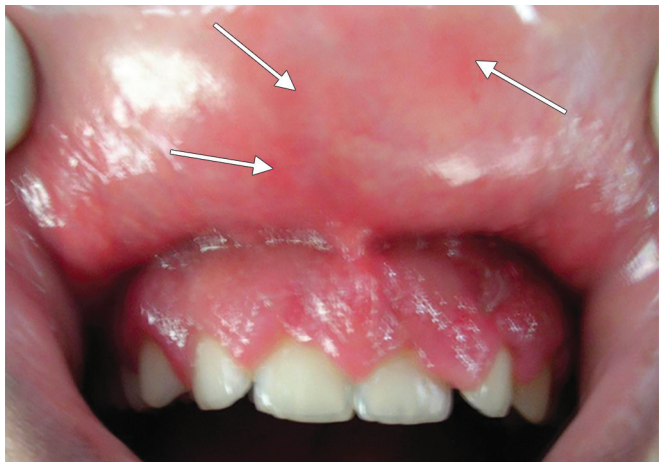

Fig. 1: Clinical appearance of upper lip in plasma cell gingivitis

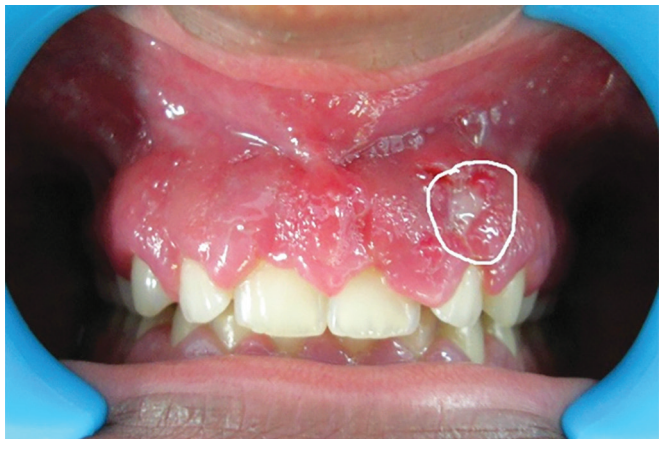

Fig. 2: Clinical appearance of 13 to 23 gingiva in plasma cell gingivitis

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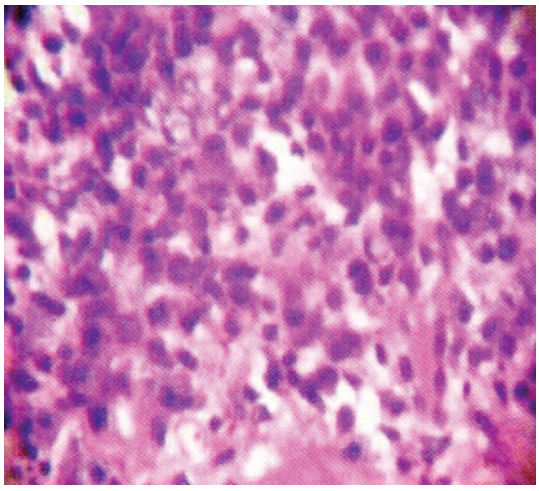

Fig. 3: Histopathologic picture of the same lesion with abundance of plasma cells

of oral hygiene was satisfactory and there was no periodontal pocket formation or attachment loss.

PROVISIONAL CLINICAL DIAGNOSIS

Based on the history obtained and from the clinical features, we made a provisional clinical diagnosis of allergic or atypical gingivitis. The history did not reveal any contributing allergen to the diseased condition.

MANAGEMENT

To proceed further and to provide proper treatment, the following investigations were done.

Investigations

- Intraoral periapical X-ray of upper and lower anterior teeth. It showed no alveolar bone loss or periapical pathologies.
- Routine blood examination to assess the general condition of the patient. There was a marginal hike in the eosinophil count, which was 11%. Other parameters were normal.
- Peripheral blood smear to rule out atypical immature cells. The results were normal.
- Incisional biopsy from upper anterior gingiva.

On histopathological examination, the stratified squamous epithelium was acanthotic, hyperplastic with subepithelial region showing dense infiltration with chronic inflammatory cells, predominantly plasma cells. The stroma had dense infiltration with lymphoplasmacytic cells. The histopathologic diagnosis was gingivitis with abundance of plasma cells (Fig. 3).

The histopathologic report supported our clinical diagnosis of allergic gingivitis, which also may be called as plasma cell gingivitis due to the abundance of plasma cells in the specimen.

TREATMENT

The patient was asked to use Benadryl mouth rinse, once daily for 2 weeks.

In the subsequent visits, it was noticed that the severity of the condition decreased.

There was reduction in the redness and inflammation of the gingiva.

Supragingival scaling was done to remove local deposit in the psuedopockets.

Surgical excision (internal bevel gingivectomy) of 14 to 24 was done. Postoperatively, the pseudopockets were eliminated and the contour of the gingiva was reestablished. Presently, this patient is under regular follow-up in the department.

Postoperative instructions given were

- To avoid the use of toothpastes for 1 month and to use only toothbrush for oral hygiene maintenance.
- To avoid chewing gum, chocolates, spicy food, and topical medicaments.
- To maintain proper oral hygiene and return to the hospital for regular follow-up.

DISCUSSION

Plasma cell gingivitis was first reported in the United States in 1968. It was more prevalent in young females. In 1971, Kerr et al[1] found out the cause as an allergic reaction to some components of chewing gum, herbal toothpaste, etc. The symptoms were hyperemia, edema, inflammation of free and attached gingiva with cheilitis, and foliate depapillation. A review of previous case reports has identified natural components of toothpastes, spicy food, contents of chocolates, etc., as allergen in plasma cell gingivitis. Kerr et al[1] classified plasma cell gingivitis as being caused by allergens, neoplastic and idiopathic. Chronic inflammatory gingival enlargement, leukemic gingival enlargement, fibrotic gingival enlargement, gingival enlargement associated with hormonal imbalance, etc., should be ruled out before arriving at the diagnosis of allergic gingivitis.

For the treatment to be effective and to prevent recurrence, proper diagnosis, clinical and histopathologic, is essential in all forms of gingival overgrowth.[2,3]

CONCLUSION

A review literature regarding the treatment of plasma cell gingivitis stresses the importance of

- Identification and avoidance of allergen.

- Elimination of plaque-retentive factors and maintenance of good oral hygiene.

In this case, we followed this protocol although the type of allergen was not identified. This case emphasizes that the management of gingival enlargement should be done only after establishing a proper diagnosis. In gingival enlargements caused by allergic reactions, surgical procedures inadvertently can cause recurrence of the lesion.

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