

## CASE REPORT

### DENTURE-INDUCED HYPERPLASIA: A CASE REPORT

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#### ABSTRACT:

Denture-induced hyperplasia otherwise called epulis fissuratum is a hyperplastic condition of the oral mucosa caused by low-grade chronic trauma from ill-fitting dentures. It is frequently observed among patients associated with the use of ill-fitting dentures. The complexities of the events that contribute to gingival overgrowth have yet to be fully realized. A 69 year old female patient reported with the chief complaint of inflammation in the labial vestibule encroaching on the anterior alveolar ridge of the maxillary arch. The excised tissue revealed hyperplastic epithelium supported by fibrous connective tissue, with moderate inflammatory infiltrate consisting of predominantly lymphocytes and plasma cells. The patient was on regular follow-up for 6 months and there was no recurrence of the lesion.

**Key words:** Denture, Hyperplasia

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#### INTRODUCTION

Denture-induced hyperplasia otherwise called epulis fissuratum is a hyperplastic condition of the oral mucosa caused by low-grade chronic trauma from ill-fitting dentures. It is a reactive lesion of the oral mucosa to excessive mechanical pressure on the mucosa. Resorption of residual alveolar bone leads to overextension of denture border which if not attended to causes chronic irritation of the oral mucosa in the region of the sulcus.<sup>1-3</sup>

It is more common in women and it can appear in either the mandible or maxilla but is more commonly found on the facial aspect of alveolar ridge. It is more commonly seen in middle 2 aged and older adults. Fibroepithelial polyps, pedunculated lesions of the palate beneath an upper denture, are associated with this condition.<sup>4-6</sup> In the present case report, we presented the case of a 69 year old female patient who reported with the chief complaint of inflammation in the labial vestibule encroaching on the anterior alveolar ridge of the maxillary arch.

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A 69 year old female patient reported with the chief complaint of inflammation in the labial vestibule encroaching on the anterior alveolar ridge of the maxillary arch. She gave a history of small soft tissue mass in relation to the upper arch which has developed to the present size over a 12-month period. The patient has been wearing upper removable complete denture for 6 years. Pain was moderate and intermittent. Systemic examination revealed no significant abnormality but for mild, controlled diabetes. A provisional diagnosis of epulis fissuratum was made and an excision biopsy was planned using carbon dioxide laser under local anaesthesia as a day

care procedure. The patient's physician was consulted to verify the fitness of the patient to undergo the surgery as planned. Haemostasis was achieved. The wound was allowed to heal. Postoperatively, antibiotics and analgesics were prescribed. The excised tissue was sent for histopathological examination. It revealed hyperplastic epithelium supported by fibrous connective tissue, with moderate inflammatory infiltrate consisting of predominantly lymphocytes and plasma cells. The patient was recalled for follow-up after a week and the healing was satisfactory. The new denture was fabricated after 1 month. The patient was on regular follow-up for 6 months and there was no recurrence of the lesion.

#### DISCUSSION

Epulis fissuratum, reactive fibrous hyperplasia or denture-induced fibrous hyperplasias are the various names attributed to reactive tissue response to chronic irritation and trauma caused by a badly fitted prosthesis. Persistent trauma to oral mucosa may predispose the patient to carcinoma. When the offending denture is removed, a characteristic fissure bounded by hyperplastic soft tissue on both sides is seen. The chronic nature of the process means that discomfort is often not a prominent feature and therefore the patient may continue to wear the offending denture until hyperplastic lesions of considerable size develops before the patient becomes aware of the lesion and need for treatment.<sup>7-9</sup> In the present case report, we presented the case of a 69 year old female patient who reported with the chief complaint of inflammation in the labial vestibule encroaching on the anterior alveolar ridge of the maxillary arch.

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anterior alveolar ridge of the maxillary arch. A provisional diagnosis of epulis fissuratum was made and an excision biopsy was planned using carbon dioxide laser under local anaesthesia as a day care procedure. Firoozmand LM et al studied the cases of inflammatory fibrous hyperplasia (IFH). A total of 141 clinical file cards indicating a final diagnosis of IFH, from the archives were included in the study. Of these files, 50 indicated a diagnosis of denture-induced fibrous hyperplasia. Of the 50 analyzed cases of denture-induced lesion, 22% occurred in men and 78% in women. Patients in the age group of 41 to 50 years presented the highest frequency of the lesion. Inflammatory fibrous hyperplasia occurs more frequently in women (71.63%), and denture-induced lesions appear mainly in patients over 40 years of age (70% of cases).<sup>10</sup> In the present case report, the excised tissue was sent for histopathological examination. It revealed hyperplastic epithelium supported by fibrous connective tissue, with moderate inflammatory infiltrate consisting of predominantly lymphocytes and plasma cells. The new denture was fabricated after 1 month. The patient was on regular follow-up for 6 months and there was no recurrence of the lesion. While planning for surgical excision, great care must be taken to avoid excising attached mucosa to prevent loss of sulcus depth. In the absence of mucosal over-ridge, a skin graft must be placed and a splint inserted to maintain the patency of the sulcus following surgery. Postoperative scar contracture is a very important factor for success as in many other preprosthetic surgeries.<sup>9-11</sup>

Coelho CM et al investigated the denture-induced fibrous inflammatory hyperplasia (FIH) that occurs around the borders of an ill-fitting denture, in relation to frequency of the lesion, age and sex distribution, length of denture use, and frequency of dysplasia. The frequency of FIH was 15% of the total number of pathologies diagnosed at the service of oral pathology in that period. The disorder occurred predominantly in the fifth and sixth decades of life and more often among females, at a proportion of 5:1. The frequency of FIH was higher for a length of denture use of between 1 and 10 years. Dysplasia was found in 4% of cases.<sup>11</sup>

Mohan RP et al discussed a case of epulis fissuratum in a 69-year-old male patient. He has been wearing the current set of dentures from the last 4 years. A diagnosis of denture-induced fibrous hyperplasia was made and the patient was instructed to stop wearing dentures. After complete healing of the lesion, the patient was referred to

the prosthodontics department for fabrication of new dentures.<sup>12</sup>

Hence as a component of the treatment, the denture must usually be re-made or substantially adjusted. An epulis fissuratum is a benign condition but, if ulcerated, it can mimic more serious conditions like oral cancer and it is imperative that microscopic examination of the removed tissue be accomplished to insure that the clinical diagnosis is 2 correct.<sup>8-10</sup>

## CONCLUSION

Denture-induced hyperplasia is frequently observed among patients associated with the use of ill-fitting dentures. The complexities of the events that contribute to gingival overgrowth have yet to be fully realized.

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