



Denture Induced Hyperplasia In Bilateral Anterior Region Of Mandible

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Abstract:

One of the most common tissue reactions to a chronically ill-fitting denture is the occurrence of hyperplasia of tissue along the denture borders. Such hyperplasia of oral mucosa is not restricted to this location but occurs in many areas where chronic irritation of any type exists, such as on the gingiva, buccal mucosa, and angle of the mouth. Synonyms for denture induced hyperplasia are inflammatory fibrous hyperplasia, denture injury tumor, epulis fissuratum. Inflammatory fibrous hyperplasia as a result of denture injury is characterized by the development of elongated rolls of tissue in the mucolabial or mucobuccal fold area into which the denture flange conveniently fits.¹

This proliferation of tissue is usually slow in developing and probably is as much a result of the resorption of the alveolar ridge as of the trauma of the loose dentures. Inflammatory fibrous hyperplasia should be surgically excised, and either new dentures constructed or the old dentures rebased to provide adequate retention.¹

Keywords: Denture Hyperplasia, Ill-fitting denture, Epulis Fissuratum, Surgical excision

Introduction:

The epulis fissuratum typically appears as a single or multiple fold or folds of hyperplastic tissue in the alveolar vestibule. Most often, there are two folds of tissue, and the flange of the associated denture fits conveniently into the fissure between the folds. The redundant tissue is usually firm and fibrous, although some lesions appear erythematous and ulcerated, similar to the appearance of a pyogenic granuloma. Occasional examples of epulis fissuratum demonstrate surface areas of inflammatory papillary hyperplasia. The size of the lesion can vary from localized hyperplasia less than 1 cm in size to massive lesions that involve most of the length of the vestibule. The epulis fissuratum usually develops on the facial aspect of the alveolar ridge, although occasional lesions are seen lingual to the mandibular alveolar ridge. The epulis fissuratum most often occurs in middle-aged and older adults, as would be expected with a denture-related lesion. It may occur on either the maxilla or mandible. The anterior portion of the jaws is affected much more often than the posterior areas. There is a pronounced female predilection; most studies show that two thirds to three fourths of all cases submitted for biopsy occur in women. Microscopic examination of the epulis fissuratum reveals hyperplasia of the fibrous connective tissue. The overlying epithelium is frequently hyperparakeratotic and demonstrates irregular hyperplasia of the rete ridges. A variable chronic inflammatory infiltrate is present; sometimes, it may include eosinophils or show lymphoid follicles. If minor salivary glands are included in the specimen, then they usually show chronic sialadenitis.²

Case report:

A 62 years old female patient reported with a chief complaint of pain and discomfort of wearing a denture from past 3 months. Patient gave a history of using ill-fitting denture from past one year and also used to wear it for an entire day without removing it. Poor oral hygiene was noted and denture was not cleaned at proper intervals. On examination, in the mandibular anterior region there were three hyperplastic tissue growths extending from 3rd quadrant to 4th quadrant on the labial side with involvement of labial vestibule. Patient was treated with a rebased denture initially for couple of months, the results were not satisfactory. So to consider a permanent solution, surgical excision of the hyperplastic growth was planned under local anesthesia. A no.15 blade was considered for surgical excision, tunneling of the remaining tissue overlying the alveolar ridge was considered to mobilize the flap and to obtain a good primary closure. Primary closure was done using 3-0 silk sutures. The patient was recalled after a week for suture removal, satisfactory wound healing was noted. After four weeks proper contouring of the labial mucosa was noted and a new denture was fabricated. One year follow up showed no recurrence and there was good patient compliance.

Discussion:

Rubiya Parveen et al, in the year 2019 did a study in the Journal of Oral Health and Community Dentistry about a 60-year-old woman who presented with the chief complaint of an abnormal growth along the anterior border of her ill-fitting maxillary partial denture. An intraoral examination revealed a fibrous mass, which was polypoid and had a soft consistency and a smooth texture. The lesion was diagnosed as epulis fissuratum or a denture-induced hyperplasia and surgically managed the lesion with a scalpel and electrocautery. Postoperative instructions were given and a follow-up evaluation was done for 3 months.³

Firoozmand et al, in the year 2005, in the journal of Quintessence International stated that, a total of 141 clinical file cards indicating a final diagnosis of inflammatory fibrous hyperplasia, from

the archives of the Department of Bioscience and Oral Diagnosis and dated from 1979 to 2001, were included in the study. Of these files, 50 indicated a diagnosis of denture-induced fibrous hyperplasia. Sex, age, race, duration, and clinical features that confirm their classification in the non-neoplastic proliferating process were analyzed statistically. Results 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. They concluded, 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). Patients with denture-induced hyperplasia reported pain associated with the lesion (70%).⁴

Masanobu Wakami et al, in the year 2012 in the journal of Hard Tissue Biology stated that, a total of 142 cases (average age of 65.2 ± 11.1 years), predominantly female, with so-called “denture fibroma” was examined. The residual alveolar ridge in the posterior region (43.7 %) and in the anterior region (43.0 %) was affected with almost the same tendency. However, significant difference in the frequency between the maxilla and mandible was not observed. Regarding the site of the lesion, the maxilla was reported to be the favored site. When the anterior and posterior regions were compared, many cases of denture fibroma arose in the anterior region overwhelmingly. A denture worn for more than 10 years was reported to be relevant in the development of so-called “denture fibroma”.⁵



Figure 1: Preoperative showing hyperplastic tissue



Figure 2: 1 week postoperative with sutures intact



*Figure 3: 4 weeks
postoperative
healed edentulous
mandibular ridge*

Conclusion:

The mainstay treatment plan for a hyperplastic growth induced by a denture has been either changing the denture or surgical correction along with denture change. As most cases reported in literature has been the involvement of anterior maxillary region. In our study we came across a hyperplastic growth in multiple regions bilaterally in the anterior mandible which is usually rare. Just excision and primary closure was not possible in our study due to loss of mucogingival tissue post excision. So proper tunneling was performed after an elliptical incision design was given over the hyperplastic tissue to obtain decent primary closure. Thus a new denture fabrication, proper flange design and right intervals of removing denture is a key aspect in preventing its recurrence.

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