

## MANAGEMENT OF EPULIS FISSURATUM OF MANDIBULAR ANTERIOR REGION BY MAINTAINING THE VESTIBULAR DEPTH - A CASE REPORT

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### ABSTRACT

*Epulis Fissuratum or Denture-induced hyperplasia is benign tumor-like hyperplasia of fibrous connective tissue, which develops usually in association with an ill-fitting complete or partial denture. The aim of this report is to present a case showing the treatment of Epulis fissuratum in relation to an ill-fitting denture with a Simple but innovative technique. The epulis was removed with the conventional surgical approach in which the excision of the epulis was carried out by a split-thickness flap approach in which the wound healing is achieved by secondary closure. The existing denture was relined with a soft tissue conditioner to maintain the depth of the vestibule by preventing the post-surgical wound contracture during healing and to prevent further surgery for vestibulopathy. In addition, the patient continued using the existing denture for functional and aesthetic purposes. After two weeks of wound healing, the vestibular depth was maintained by the relined existing denture. Then the new dentures were fabricated accordingly. After one month of follow-up, no signs of recurrence of epulis fissuratum were noticed.*

**KEYWORDS:** Epulis Fissuratum, Denture-Induced Hyperplasia, A Complication of Ill-Fitted Dentures

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### INTRODUCTION

Epulis Fissuratum or Denture-induced hyperplasia is a benign tumor-like hyperplasia of fibrous connective tissue, which develops usually in association with ill-fitting complete or partial dentures. This occurs most commonly in older adults wearing removable dentures. The anterior portion of the jaws is affected much more commonly than posterior areas.<sup>1</sup> Clinically, Epulis Fissuratum appears as a single or multiple folds of hyperplastic tissue along the denture borders. It is chronic in nature and discomfort is not a prominent feature. Therefore, the patient may continue to wear the offending denture until the hyperplastic lesion of considerable size develops before the patient becomes aware of the lesion and seek the clinician for treatment.<sup>2</sup>

### CASE PRESENTATION

A 65-year-old male patient was reported to the

department of Prosthodontics, Fatima Memorial Hospital Lahore with a complaint of an overgrowth of tissue in the labial vestibular sulcus along the lower denture border. He was wearing complete dentures for over a decade. The lower denture was repaired multiple times. On clinical examination, it was observed that there was a flap of overgrowth on the labial aspect of the mandibular ridge extending from midline up to the right canine region (Fig-1). Existing dentures revealed worn-off acrylic teeth, loss of vertical occlusal dimension and the flange of the lower denture seated between the overgrowth flap and ridge (Fig-2). Based on history and examination the flap of overgrowth was diagnosed as Epulis Fissuratum. In the treatment phase, the patient was instructed to leave the dentures out of the mouth for about 2 weeks along with massage of the oral tissues.

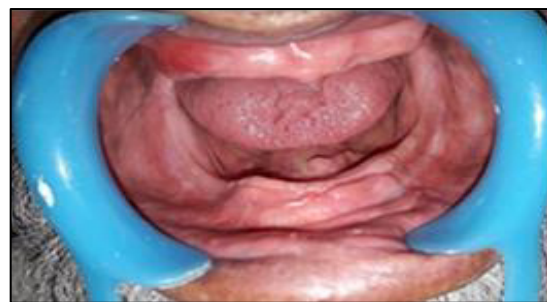
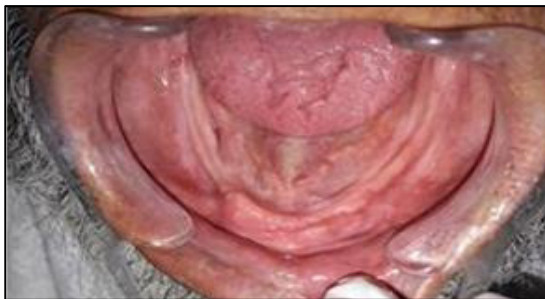


Figure 1: Flap of Overgrowth on Labial Aspect



**Figure 2: Existing Lower Denture**

After 2 weeks there was no change in the size of the epulis (Fig-3). The surgical excision of the lesion was planned. Before the excision of the lesion, the primary impression with impression compound was made. The area of epulis recorded in the impression compound was scraped off sufficiently and the wash impression with the alginate was made to record the lesion much statically (Fig-4).



**Figure 3: After 2 Weeks No Change in the Size of the Epulis**



**Figure 4: Primary Impression**

The lesion was scraped on the cast to establish the vestibular depth and then a custom tray of Auto-polymerizing acrylic was made with the sprinkle-on method. The purpose of making a primary impression before surgery was to save the extra review visits of the patient. The excision of the epulis was carried out by a split-thickness flap approach, the wound was not sutured and left for secondary healing (fig: 5 and 6). The existing denture was relined with a soft tissue conditioner

to maintain the depth of the vestibule by preventing the post-surgical wound contracture during healing (fig: 7 and 8). The patient was recalled for follow-up after 1 week.



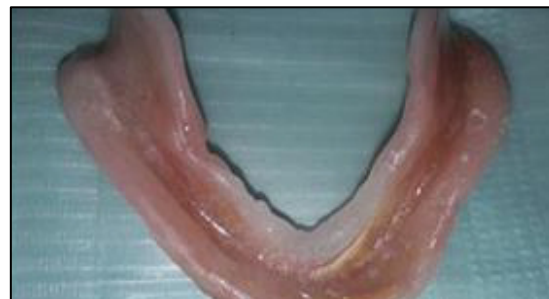
**Figure 5: Surgical Excision of Epulis**



**Figure 6: Complete Excision of Epulis**



**Figure 7: Relined Denture Inserted Immediately After**



**Figure 8: Denture Relined With Soft Tissue Conditioner  
Excision of Epulis**

After 1 week, the wound was healed sufficiently, and the desired depth of the vestibule was

maintained (Fig-9). At this appointment, the denture was relined again with a fresh mix of soft tissue conditioner and the patient was recalled after 1 week.



Figure 9: One Week After Excision of Epulis

After 2 weeks the wound was completely healed (Fig-10). The secondary impression along with border molding done. The new sets of complete dentures were made accordingly. Several Follow-up visits did not show any signs of recurrence of the lesion.

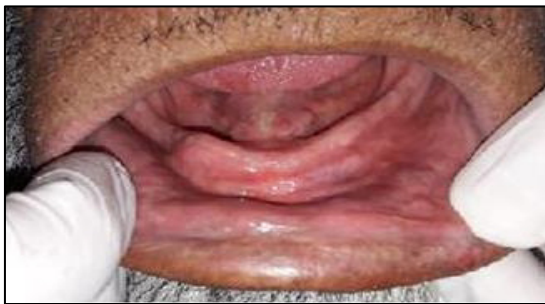


Figure 10: After 2 Weeks the Wound Completely Healed



Figure 11: After 2 Weeks the Wound Completely Healed

## DISCUSSION

Epulis Fissuratum is not a tumor but an adaptive fibro-epithelial response due to chronic low-grade irritation from poorly adapted prosthesis with variable degrees of hypertrophy and hyperplasia. The term epulis, first used by Virchoff, means over the gums, it's not appropriate for these lesions as

the affected mucosa is oral mucosa of the vestibular sulcus and not gingival mucosa.<sup>3</sup> It is seen more in the maxilla than the mandible because the area of mucosa covered by a denture is greater in the maxilla than the mandible so the pressure being inserted to the underlying mucosa is higher in the maxilla. There are some contradictory results, such as those in the De Baat et al study that shows that the lesions are more in the mandible than the maxilla.<sup>4</sup> Treatment of Epulis Fissuratum can be of two types:

**Conservative and Surgical.** The conservative approach should be the first option as it is non-invasive. This includes leaving the CD/ RPD out of the mouth for several days so that the edema will subside, and the remaining lesion will become considerably smaller. The use of tissue conditioners will also help to subside the lesion.<sup>5</sup> If the lesion still does not resolve, a surgical excision becomes necessary. The surgical approach includes using any of the following: the conventional scalpel approach, electrocauterization, soft tissue lasers and liquid nitrogen cryosurgery.<sup>6</sup> In this presented case, the lesion was removed with a conventional scalpel approach. The depth of the vestibule was maintained by not removing the full thickness flap and left for secondary healing. The existing denture was inserted with tissue conditioner lining. The full thickness flap with full thickness periosteal reflection and then suturing the area without denture insertion could lead to a decrease in the depth of the vestibule. Vestibulopathy would be needed for achieving the vestibular depth for extension of the denture border. After 1 week, the desired depth of the vestibule was maintained. The denture was relined repeatedly until the wound healed completely.

## CONCLUSION

Management of Epulis fissuratum by maintaining the vestibular depth is a simple and conservative approach which omits the need for further surgery like vestibulopathy. This approach will not only maintain the vestibular depth but also give anatomical form to the vestibule. The patient faces no social and functional problems as the patient will continue to wear existing dentures.

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