Gingival Hyperplasia Due to a Removable Partial Prosthesis - Case Report

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The authors report a clinical case of a patient who received a lower removable partial prosthesis with a T-bar clasp and developed the habit of sucking in her lower lip due to the design of the prosthesis, thus provoking gingival hyperplasia in the region close to the approach arm of the clasp. The importance of long-term follow-up for the preservation of a healthy mastigatory apparatus is also emphasized.

Key Words: hyperplasia, removable partial denture, design.

The main objective of oral rehabilitation is the maintenance of a healthy stomatognathic system. To achieve this goal, it is essential to plan the restorative procedures on the basis of sufficient data to permit the production of a mechanical device that will form a biomechanical unit with the support system.

A thorough clinical examination, together with radiographic examination and examination of the study cast are routine in any type of oral rehabilitation to obtain the data needed for planning. However, after the procedure is performed, the professional should give the same priority to long-term maintenance of the rehabilitation as given to the previous phases of treatment.

In the present paper we report a clinical case of a removable partial prosthesis with a T-bar clasp for which the postoperative procedures were of fundamental importance for the maintenance of a healthy system, due to details that could not be predicted during the treatment phase.

Patient report

A 50-year old woman sought treatment at the prosthesis clinic of FORP-USP presenting total upper edentia and partial lower edentia of the Class I type in the Kennedy classification, with the remaining teeth as follows: 41, 31, 32, 33, 34, 35.

Clinical examination revealed a situation which, despite the great loss of teeth and slightly deficient oral hygiene, was favorable to oral rehabilitation, with absence of dental
mobility or periodontal pockets. No tooth decay was observed. In addition to poor hygiene, the only problem detected upon clinical examination was severe periodontal retraction in the distal region of tooth 41.

Radiographic examination confirmed the good situation of the periodontium and revealed reduced osseous support for the middle third in the distal region of tooth 41.

After analysis of the diagnostic casts, it was decided to prepare a total upper denture and a removable partial denture with a T-bar clasp in the lower arch, as soon as oral hygiene was under control. The reduced support offered by tooth 41, although not indicating the need for exodontia, was decisive in the selection of tooth 31 to receive the direct clasp of the removable partial denture (Figure 1A).

After rehabilitation and the necessary adjustments, the patient was asked to return for evaluation 30 days later. At that time, an extensive inflammatory reaction was observed

Figure 1 - A, Inflammatory gingival hyperplasia related to the approach arm of the bar-type clasp (arrow). B, Removal of the fused clasp and preparation of a wrought wire clasp of more appropriate design.
in the region related to the approach of the T-bar arm in tooth 31 (Figure 1A). The initial suspicion was that insufficient relief below the staple arm had provoked this inflammation.

The patient was instructed not to wear the prosthesis and return visits were scheduled. When the inflammatory reaction disappeared, the remaining hyperplasia was surgically removed. After healing, the prosthesis was reinstalled and, although relief below the staple arm was considered to be satisfactory, the structure was filed down to increase the relief. During this phase, we also performed a relining of the acrylic resin saddle.

Weekly return visits revealed early recurrence of the gingival lesion. A new evaluation of the situation permitted us to determine the fact that the patient had developed the habit of sucking in her lower lip, this being the major cause of the hyperplasia observed. The bar-type clasp was then removed and replaced with a wrought wire clasp (0.7 mm stainless steel) constructed on the prosthesis itself, as shown in Figure 1B. The elimination of the space between the clasp and the anterior border of the saddle broke the patient's sucking habit and led to a definitive solution of the problem, as verified during later return visits.

Conclusions

As commented earlier, the long-term follow-up of restorative procedures used in oral rehabilitation should have the same priority for the clinician as the preceding phases. In the specific case of removable partial prostheses, the alteration in tooth contour provoked by the T-bar clasp and the contact of the prosthesis with soft tissues require continual post-insertion follow-up.

It is extremely difficult, during this phase, to keep the patient motivated to visit the dentist periodically even in the absence of symptoms. However, this difficulty should not be reason for professional omission. It is essential that the dentist make an effort to transmit the importance of postoperative procedures from the beginning of treatment, without simply inviting the patient to visit the office periodically.

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