The primary piezographic mandibular impression: a case report

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Summary

The number of patients with very resorbed mandibular crests (III and IV) continues to increase and pose a challenge during prosthetic rehabilitation with the conventional full removable prosthesis. The piezographic impression is an interesting alternative especially in case of impossibility of implant treatment. It allows making a prosthesis integrating functional muscle play (lingual and labio-jugal) [1].

Keywords: Resorbed Crest; Piezographic Impression; Prosthodontics Treatment

Introduction

Patients with a strongly absorbed mandibular crest are increasingly noticed at the consultation of the Monastir Dental Medicine clinic. This is due to the increasing number of geriatric patients following the improvement in life expectancy and medical care in Tunisia [2,3].

Presentation of the Case

The case is about a 63-year-old diabetic patient who presented for complete bimaxillary rehabilitation after failure of several previous prosthetic treatments. The clinical examination reveals a very old bimaxillary total edentation with a negative mandibular crest, an enlarged tongue and buccal floor and a very toned lower lip covering the anterior region of the crest at rest [4,5]. The technique consists of taking a conventional alginate impression, pouring the plaster model, adjusting a wire on the model first and then adjusting in the mouth [6]. This wire should perfectly fit the top of the ridge and reach the piriform eminences (Figures 1 & 2). This wire will be coated with any polysulfide material like Kerr permelast (Figures 3 & 4). Before its introduction in the mouth, the patient’s lips must be vaselined to avoid any adhesion to the material, the patient is then required to read a text (phonetic piezography) until the material is set; the impression is then removed (Figures 5 & 6). A second impression is made by adding material to the piezogram obtained and reinserted in the mouth and the same phonetic test is requested from the patient (Figure 7). This gives a piezographic primary impression which will be sent to the laboratory for formwork and casting of the primary model (Figures 8 & 9). There is a clear difference between a model from a conventional footprint and that of a piezographic footprint (Figures 10 & 11).

Figure 1: Wire adjustment on model.

Figure 2: Wire adjustment in the mouth.
Figure 3: Preparation of the material.

Figure 4: The wire is coated with material.

Figure 5: The patient reads a text.

Figure 6: Initial result of the impression.

Figure 7: Second time of the impression.

Figure 8: The piezographic impression.

Figure 9: Boxing of the impression.

Figure 10: Model (alginate impression).
References