

wide enough and the diameters of the implants were not very long, no vestibuloplasty was necessary. We installed ITI, IMZ, ASTRA and Ankylos implants. All systems proved to be equally functional.

## 72.

### Electromiograph Study of Patients Treated with Overdentures Retined with Implants

**Contreras MJ, Del Rio J, Balda M.**

*Department of Prosthodontics, Faculty of Dentistry, Complutense University, Madrid, Spain*

**INTRODUCTION:** Long Term edentulous patients present severe bone loss in their alveolar ridges, as a consequence there is serious compromise in esthetics and function.

A therapeutic alternative which we can offer to these patients is an overdenture retined with dental implants, in order to improve retention and stability.

**AIM OF THE WORK:** The aim of the study was to determine by electromiography whether the muscular groups involved in masticatory function present any special activity in patients treated with overdentures retined with dental implants.

**MATERIAL AND METHODS:** We selected ten complete edentulous patients with inferior overdentures retined with two implants and a bar. Myotronics K6-I with eight channels, and registration of anterior and posterior temporalis muscle masseter and dygastric muscles.

We performed recordings in rest positions and maximum force bite.

**RESULTS AND CONCLUSION:** The results obtained indicate an increase in activity in the rest position of the posterior temporalis group.

## 73.

### ITI Implant-Supported Dentures: Assessment of Peri-Implant Bone Changes

**Knezović-Zlatarić D, Čelebić A, Pandurić J.**

*Department of Prosthodontics, School of Dental Medicine University of Zagreb, Croatia*

Mandibular overdentures, supported by osseointegrated implants, is a well established, successful treatment of partially edentulous patients. The aim of the study was to analyse the bone mineral density (BMD) in the implant site of the mandibles with ITI implant-supported overdentures when compared with the same site of the edentulous mandibles in complete denture wearers. Eight patients (4 males, 4 females) with 16 ITI implants and overdentures in the mandible and 8 complete denture wearers (4 males, 4 females) who had approximately the same body mass index and the same age participated. The BMD measurements were performed on digitised periapical radiographs with a 10 steps copper stepwedge attached to each film. Grey levels of each step of the stepwedge were transformed to optical density values and using the 3rd degree polynomial the regression formula was calculated for each film. The BMD values of each measured region of interest (ROI) were expressed in the copper stepwedge thickness equivalents. BMD values of the ROIs close to the implant were statistically compared to the same ROIs in the edentulous mandible using t test for independent samples. BMD values were significantly higher in ITI implant ROIs compared to the matching edentulous mandible sites ( $p < 0.05$ ). We concluded that an increased function after the implant-overdenture treatment caused a load-related bone formation which minimizes the physiologic age-related mandibular BMD loss.

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