

# PRELIMINARY REPORT ON THE OUTCOME OF TILTED IMPLANTS WITH LONGER LENGTHS (20–25 MM) IN LOW-DENSITY BONE: ONE-YEAR FOLLOW-UP OF A PROSPECTIVE COHORT STUDY

Maló, Paulo / de Araújo Nobre, Miguel / Lopes, Armando / Rodrigues, Rolando

## PURPOSE

The aim of this preliminary study was to report on the short-term outcome of tilted implants with 20 to 25 mm of length in immediate function with bicortical anchorage for prosthetic rehabilitation of complete edentulous jaws with low-density bone.

## MATERIALS AND METHODS

Sixteen patients (with 25 study implants and 43 nonstudy implants) presenting low-density bone were included in a prospective single cohort study to evaluate the short-term outcome of partial and complete edentulous rehabilitations using implants with 20 to 25 mm of length (NobelSpeedy Groovy, Nobel Biocare AB, Gothenburg, Sweden) in immediate function with bicortical anchorage (maxilla: alveolar ridge and nasal corticals; mandible: mandibular corticals). The patients were followed between 6 and 26 months (average of 14 months). Outcome measures were implant survival, marginal bone remodeling, biological and mechanical complications assessed at 10 days, 2, 4, and 6 months, 1-year posttreatment, and thereafter every 6 months.

## RESULTS

Two patients with four implants were lost to follow-up after 6 and 11 months. There were no implant failures, rendering a cumulative implant survival rate of 100%. The average marginal bone remodeling was 0.50 mm (SD = 0.34 mm) and 0.86 mm (SD = 0.46 mm), after 6 months and 1 year, respectively. There was one mechanical complication in one patient (abutment loosening) 1 month post-surgery.

## CONCLUSIONS

Within the limitations of this study, the short-term outcome of prosthetic rehabilitations of patients with low-density bone using implants of 20 to 25 mm in length in immediate function with bicortical anchorage is viable judging by the high implant survival rate, low marginal bone remodeling, and low incidence of complications. Long-term evaluation of these implants through studies using a prospective design is mandatory.