16064 POSTER DISPLAY
CLINICAL RESEARCH – SURGERY

Immediate loading of the edentulous multi-risk patient jaw – An up to 3-year cohort study

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Background: The issue of how to realize the transition from a failing dentition to an implant-supported prosthesis has been insufficiently addressed, especially in the multi-risk patient. In this case, implants are simultaneously placed in healed (H) and post-extraction (PE) sites to support an immediately loaded temporary full prosthesis. Distribution between H and PE sites in the mandible and the maxilla can vary. Information about respective failure rates and contributing factors to failure are needed.

Aim/Hypothesis: Objective of this cohort study was to record the failure rates of C1 and V3 implants (MIS) placed in H and PE sites in the mandible and the maxilla of the multi-risk patient following a 36 hours immediate loading protocol. Aim was to check the predictability of implants placed in PE and H sites.

Material and Methods: Patients with several health risks attended implant therapy because of a failing bridge relying on teeth in the mandible or maxilla or had an edentulous jaw. They required an immediate fixed solution. Patients were affected by at least 2 of the following risks- advanced period. disease, poor hygiene, bruxism, diabetes, smoking, cholesterol, cardiovascular issues and blood pressure. Implants were placed in either H and or PE sites, 4–7 implants in the mandible and 6–9 implants in the maxilla; some implants were also left unloaded. When insertion torque was ≥40 Ncm, multi-unit abutments (MUA) of various heights were affixed. Following impression, the lab prepared a temporary acrylic prosthesis. After 36 hours, the prosthesis was delivered. After 3 mo. in the mandible and 6 months. in the maxilla, the final prosthetic steps were undertaken and included the unloaded implants. Variables contributing to failure rates were investigated using the Kaplan-Meier survival estimate method and the Chi-square test.

Results: 215 imp (Ø3.3–5 × 8–16 mm) were placed in 16 mandibles and maxillae of 9 men and 17 women, median age 68.5 year. H PE sites were 47 49 in the mandible, 57 62 in the maxilla. C1 V3 imp were 101 1,114. MUAs of 1, 2, 3, 4–5 mm were 26, 56, 94, 39. 25 prostheses relied on implants placed in mixed H and PE sites, 13 in the maxilla; 2 relied on PE sites only, 1 in the maxilla; 5 relied on H sites only, 3 in the mandible. All imp passed the 1 year control 57 the 2 year and 21 the 3 year one. Failure rate was 2.3% in 4 patients during the healing time only; no temporization was interrupted. Failures were 1 in the mandible in a PE site and 4 in the maxilla, 3 in H sites and 1 in a PE. No variable was a significant contributor to implant failure. Failures occurred in mixed situations only, none when placed in H or PE sites only. In the maxilla, failure rate of H PE was 5.3% 1.6% ($P = 0.26$); in the mandible, failure rate of H PE was 0% 2.0%(NS). Most failures happened in the maxilla, in H sites but not in PE sites.

Conclusion and Clinical Implications: Immediately loaded prostheses relying on C1 and V3 implants placed in the multi-risk patient were highly predictable when 4–7 and 6–9 implants were placed in the mandible and the maxilla. More implants failed in the maxilla but not in PE sites. The low number of failures did not permit to identify any variable as a contributor to failure. Our experience showed that the multi-risk patient is willing to cope with implant failure as far as temporization is not interrupted during the healing phase.