Implant survival in periodontal susceptible and non-susceptible patients: a prospective long-term study

A. De BOVERE and M. QUIRYNEN

Department of Periodontology, Ghent University, Belgium

Aim: To evaluate implant survival rate of non-submerged implants with two different surfaces in healthy patients (NSP) and in patients with chronic advanced (CAP) or generalized aggressive periodontitis (GAP).

Material and methods: In 110 healthy subjects, in 63 with CAP and in 47 with GAP, 315 implants were installed. Follow-up, 4.8 ± 2.9 years. Smoking, health status, plaque score, BOB, surface, bone quality, bone loss and lost implants were noted.

Results: Survival in NSP and CAP: 98 and 96% (ns); 86% in GAP (P = 0.003). Overall rate of loss: 4.67%. Loss in GAP: 15.2%. Overall mean bone loss: mesially 0.12 ± 0.07 mm and distally 0.11 ± 0.08 mm. Bone loss in GAP: 0.08 ± 0.31 mm and 0.07 ± 0.3 mm distally in NSP, and in GAP 0.17 ± 0.2 and 0.17 ± 0.19 mm. TPS surfaces result in a lower survival compared to SLA surfaces (93% versus 97%: P = 0.06) especially in GAP (80% versus 83%; P = 0.06). Survival in current smokers with GAP dropped to 67%. Overall, impaired health had no influence on implant survival (P = 0.34). However, impaired health reduced survival in GAP to 71%. In a statistical analysis of implant survival, periodontal classification (P = 0.01) and implant surface type (P = 0.01) were significant.

Conclusions: NSP and CAP patients were not different in peri-implant variables and implant survival rate. GAP patients had more peri-implant pathology, more bone loss and a lower implant survival rate. SLA surface had a better prognosis than TPS surface.

Ref no: EUAB0614590
Survival and success of astra tech osseosed implants after 2 years

P. VERWAAYE, E. GILLARDT AND H. DE BRUYNE

University of Ghent, Belgium

Aim: To determine 2-year survival and success of Osseosed Implants.

Materials and methods: Of 350 patients who were consecutively treated by the same surgeon (BC) with 1100 Osseosed Implants (Astra Tech, Mälunda, Sweden) at least 2 years ago, 89 patients (57 females, 32 males; age range 29–76) with 357 implants responded to the 2-year recall. 210 implants (58.8%) were loaded immediately; 99 implants were placed according to a 1-stage and 48 implants according to a 2-stage procedure. Bone-level changes were assessed (SV) on digital radiographs from implant surgery up to 2 years in function. Implant success was determined as bone loss < 1.7 mm after 2 years.

Results: Nine implants in seven patients were lost, resulting in an overall survival rate of 97.5% and mean bone loss of 0.40 mm (SD = 0.77 mm). 69 lost implants occurred in the posterior mandible. Survival rate and mean bone loss was 99% and 0.28 mm (SD = 0.54) for immediate loading, 92.5% and 0.46 mm (SD = 0.90) for 1-stage and 100% and 0.81 mm (SD = 1.18) for 2-stage. Bone loss was significantly higher (P < 0.01) for maxillary (0.43 mm, SD = 0.83) compared to mandibular implants (0.34 mm, SD = 0.74). A percentage of 93.3% of all implants had less than 1.7 mm of bone loss and was considered successful.

Conclusions: Osseosed implants yielded a survival rate of 97.5% after 2 years with a mean bone loss of 0.40 mm.

Ref no: EUAB0614452
Retrospective clinical and radiological evaluation of mini versus conventional dental implants

T. TAYEB-ALI, A. M. ALI AND N. YUNUS

Faculty of Dentistry, Uni. of Malaya, Malaysia

Objective: To evaluate and compare clinically and radiologically the peri-implant soft and hard tissue status around Conventional (Ankylos®) and Mini Dental Implants (IMTEC®) supporting various prostheses.

Methods: Twenty-two patients (14 men and 8 women) with mean age 45.5 years (age range 22–65 years) were treated at the Faculty of Dentistry, University of Malaysia for missing teeth with implant supported prostheses. Peri-implant soft and hard tissue of 28 Mini Dental Implants (MDI) and 48 Conventional Dental implants (CDI) were examined clinically and radiologically. Clinical parameters assessed included Plaque Index (PI), Bleeding on Probing (BOP), Gingival Index (GI), Probing Pocket Depth (PPD), and Keratinized Mucosa (K.M). Radiological assessments of peri-implant bone status were conducted using Leica Qwin® image analysis software after more than 1 year (1–5 years) in relation to the baseline radiographs. Statistical analysis was performed using Mann–Whitney test.

Results: All clinical parameters (PI, BOP, GI, PPD and K.M) and radiological evaluation showed no statistically significant differences between all CDI and MDI. Mean bone loss was statistically significantly less around MDI, supporting removable prostheses (P < 0.05). Mean GI was significantly greater for MDI versus CDI, supporting fixed appliances (P < 0.01).

Conclusions: Within limitations of this study, overall clinical parameters and bone level status around CDI and MDI were not significantly different.

Ref no: EUAB0614456
Prevalence and risk factors of late biological failures of oral implants: a 5-year follow-up study

J. F. KELLER, C. BELLANGER AND E. NICOLAS

Univ Lyon 1, UMR DREUM 7107, France

Background: Implant survival has a very high rate, but biological complications are frequent in the peri-implant area.

Objective: To evaluate the prevalence of late biological failures of oral implants, then determine risk factors of those complications.

Methods: Patients rehabilitated in hospital units with implant procedures 5 years ago were selected. Periodontal and peri-implant clinical examinations were made. Intra-oral radiographs were performed to assess peri-implant bone level.