

The influence of age on survival and success of dental implants

Background: This study investigated the influence of age on survival and success of dental implants supporting prostheses, as well as the influence of age on the following parameters: gingival health, oral hygiene, and patient satisfaction.

Methods: The study is based on data collected for a large multicenter trial. The study population consisted of 199 patients who received a total of 622 implants. Group A patients (N = 73) were completely edentulous and received a mandibular restoration (385 implants) and group B patients (N = 126) received restoration of single or more teeth in the anterior maxilla (237 implants). Patients in both groups were further divided in following age strata: age <45 years, age between 45 and <60 years, age ≤ 60 years. Observations were done over 5 years. Life Table calculations were used for age related implant survival and success. Gingival health, oral hygiene, and patient satisfaction was done with univariate as well as multivariate regression with the oldest age group as reference for influence of age, treatment type, time and gender.

Results: The 5-year results showed excellent cumulative survival rates of 100% in all 3 age strata Group A and of 99%, 97% and 100% in Group B respectively. Cumulative success rates were similar: 100%, 99%, and 99% for Group A and 95%, 93%, and 97% for Group B respectively. Results did not show statistically significant influence of age. Regression analysis of gingival health revealed the age group in the middle to perform significantly better, for oral hygiene and patients satisfaction. Statistical significance was found for several parameters in favor of the youngest patient group.

Conclusion: There is no indication that age has an influence on survival and success of dental implants over a period of 5 years. Age has a statistically significant effect on several gingival health, oral hygiene and patient satisfaction parameters, however not limiting the indication to implant. The findings of this study confirm the results already published, in that age is not a limiting factor for implant- supported prostheses.