Long-term results in patients with aggressive periodontitis: bone-loss 10-35 years after supportive periodontal therapy

This study investigates bone resorption in patients with localized and generalized aggressive periodontitis after more than 25 years of supportive periodontal therapy in a private dental practice and attempts to identify potential bone level modifiers.

93 patients with aggressive periodontitis participated in this study and were retrospectively examined for bone resorption. The follow-up period was 10-35 years after active periodontitis therapy (mean 24.9 years). Influencing factors on the patient and teeth level were determined with the help of statistical analyzes.

At the beginning of the radiological examination there were still 2349 teeth available. Of these, 365 teeth were lost during active periodontal treatment and 24.9 years follow-up. Mean bone resorption was stable at the time of re-evaluation (28.4% [± 12.48]) compared to baseline (average bone loss of 29.9% [± 14.3]).

Relevant influencing factors for the bone loss could be determined. These were compliance during the SPT ($p = 0.003$), former smoking ($p = 0.017$), molars ($p = 0.027$) and maxillary teeth ($p < 0.001$). For bone gains initially higher bone resorption ($p = < 0.001$), anterior teeth ($p = 0.004$) and restoration with fixed dentures ($p = < 0.001$) were found statistically significant.

Overall, it can be stated that the progression of periodontitis as measured by bone loss in patients with aggressive periodontitis in the examined private practice rarely occurs over a very long follow-up period and has been prevented. The determined influencing factors also coincide with outside established significances with those described in the literature. The present study, with an average follow-up of 24.9 years, has the longest follow-up period before the studies of Dias-Faes (2016) and Graetz (2017) and is the only one to evaluate the development of radiological bone loss after a long-term SPT.