11. DETERMINATION OF DEVIATION COEFFICIENT OF MASTICATORY MUSCLES IN FIXED IMPLANT-SUPPORTED RESTORATION USING SURFACE ELECTROMYOGRAPHY

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Introduction. Electromyography is often used to assess the changes in the masticatory system due to different restorations including implants. Changes can be noticed both in the muscular activity and interactions between muscles in the same patients. However, many indicators are individual and cannot be compared, which in the end lead to the loss of useful data for the clinician.

Aim of study. Comparative evaluation of deviation coefficient in implant-supported restoration and dentate patients.

Methods and materials. The study was based on 63 patients (33 women and 20 men) that were divided in two groups. Dentate patients were the control group (33 subjects) and the edentulous ones with full-arch implant restorations (30 subjects) were the study group. A total of 204 two-piece dental implants have been placed and loaded with immediate provisional prostheses. The surface electromyography was performed with evaluation of muscle electrical activity as well as mean deviation coefficient out of the 6 parameters (PocTa, PocMM, Bar, Impact, Tors and Asym). Statistical analysis was done in R-Studio using variations of the Wilcoxon test.

Results. Statistical analysis has shown that both groups had a deviation from the normal range provided by the device. The study group had a mean deviation of 21,4 % and control one of 20.5%. Per to per comparison didn't reveal any statistical differences between groups in all six deviation coefficients as well as in mean one ($p>0.05$).

Conclusion. Fixed implant supported restoration provided an immediate equilibration of muscle activity similar to the dentate subjects. Despite the fact that implant-retained prostheses were new to the patients and there were no adaptational periods, that did not create any interferences in muscle function.