

313. RADIOLOGICAL DETECTION OF OSTEOPOROSIS IN FEMALE PATIENTS IN REHABILITATION FOR MANDIBULAR IMPLANT PROSTHESIS

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Introduction. Implant prosthesis rehabilitation may be affected by osteoporosis, which occurs more frequently in women than in men in a 4:1 ratio. Early radiological changes of osteopenia/osteoporosis determined on orthopantomography and CT-scans provides data that can be taken into account when planning implant treatment.

Aim of the study. The aim is to determine the correlation of osteoporosis with peri- implant bone resorption based on the data obtained by radiological examinations.

Materials and methods. In this study, we have included 158 female patients with mandibular edentations, which underwent radiological examination (576 OPGs and 162 CTs). After processing the information from OPG on the available equipment offered by the OPG digital image processing software (Sidexis 4.0) using Klemetti's classification, in four age-based study groups we have determined the presence of osteoporosis, its correlation with peri-implant bone resorption during the surveillance period.

Results. The results obtained in the age-based groups allowed us obtaining data on the proposed subject, highlighting the correlation between age – number of implants – osteoporosis – resorption. The examination period was 3-72 months, a period sufficient to analyze and determine peri-implant resorption occurring over time in patients from all study groups. The number of implants in the general characteristic of the patients was equal to 655 implants divided into 4 groups. A moderate direct statistical correlation was observed between the age and the number of inserted implants ($r_{xy}=0.231$, $p < 0.01$). This phenomenon is also confirmed by a strong direct correlation between the age and the degree of osteoporosis ($r_{xy}=0.676$, $p < 0.001$). We have determined a dependence between the female patients' age, the detection of peri-implant resorption in relation with the number of implants, their location, and functional overload.

Conclusions. The examination using the OPG allows establishing an accurate, clear and correct diagnosis, as well as choosing a safe treatment plan acceptable in each clinical case. In case of edentation in female patients of an elderly age, prosthetic rehabilitation through dental implants for its controlled functional load on the bone can be considered a pathogenetic treatment to prevent regional atrophy and osteoporosis of the jaws.

Key words: osteoporosis, edentation, orthopantomography, mandible, implant prosthesis rehabilitation