EVALUATION OF CEMENT-RETAINED VERSUS SCREW-RETAINED FIXED IMPLANT-SUPPORTED RECONSTRUCTIONS

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Introduction: Prosthetic rehabilitation of partial edentulous patients remains clinical challenge for dental practitioners [1]. A satisfying aesthetic result may not only depend on a visually pleasing prosthesis but also on natural surrounding peri implant soft tissue architecture. Application of dental implants in order to recover areas of missing teeth is going to be a predictable technique, however some important points about the implant angulation, the stress distribution over the bone tissue and prosthetic components should be well investigated for having final long term clinical results [1,3]. There are two different methods of retaining a fixed implant-supported restoration: screw retention and cementation. Both of the restoration techniques give to the clinicians several advantages and some disadvantages [2]. The aim was to evaluate the survival and success of screw versus cement-retained implant crowns and to compare the long-term outcome and complications of cemented versus screw – retained implant crown prostheses.

Materials and methods: The study included 12 people with single missing tooth, who received implant prosthetic treatment. Patients were divided into two groups: the study group with 6 cemented-retained restorations and the control group with 6 screw retained restorations. Ceramic fracture, abutment screw loosening, metal frame fracture and radiographic bone level were evaluated.

Results: Twelve patients were treated with implant supported crowns, 6 in the cemented group and 6 patients in the screw-retained group. Significant differences between groups were not found. There were no metal frame fractures, ceramic fracture or abutment screw loosening in either type of restoration.

Conclusions: Single tooth implants seem to be an achievable treatment option for functional rehabilitation of tooth loss. There is no significant difference between cement- and screw-retained restorations for major and minor outcomes with regard to implant survival or crown loss.

References:

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