

Aim of the study. 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 20 people with single missing tooth, who received implant prosthetic treatment. Patients were divided into two groups: the study group with 10 screw retained restorations and the control group with 10 cemented-retained restorations. The following parameters consisted of PES, WES, ceramic fracture, abutment screw loosening, metal frame fracture and radiographic bone level were evaluated.

Results. Twenty patients were treated with implant supported crowns, 10 in the cemented group and 10 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

Key words: implant, cement- retained, screw- retained

337. TREATMENT OF DEEP CARIES USING MODERN TECHNIQUES

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Introduction. Deep caries is treated using Stepwise technique with subsequent application of calcium hydroxide filling (Base.it, Spident). Mineral trioxide aggregate (ProRoot MTA, Dentsply) is used in the treatment of deep caries, inducing pulp cell proliferation and high-strength tissue formation.

Aim of the study. To evaluate the success rate of modern techniques in the treatment of deep caries.

Materials and methods. The study was based on the treatment of 18 patients diagnosed with deep caries. Half of the patients were treated with Stepwise technique using calcium hydroxide, while mineral trioxide aggregate was used to treat other patients. The operative protocol was performed at a single visit: X-ray, professional teeth cleaning, vitality tests, isolation of the operative field, cavity preparation, applying the medicated and insulating filling, applying the final filling and control X-ray.

Results. To carry out a correct and successful treatment of deep caries it is important to establish the right diagnosis. Compliance with all stages of clinical and paraclinical examination will allow to minimize diagnosis errors. Treatment entailing compliance with all stages increases the chance of preserving dental vitality. Each method of treatment needs to be staged and assessed over time. Periodic control increases the rate of success and prevents the occurrence of complications.

Conclusions. The study results demonstrate that the treatment of deep caries by using mineral trioxide aggregate has a higher success rate as it induces pulp cell proliferation, cytokine release, formation of very high-strength tissue, and synthesis of dentin interface that resembles hydroxyapatite. The treatment of deep caries with Stepwise technique using calcium hydroxide shows a lower success rate due to the fact that calcium hydroxide does not offer a sealed adaptation to dentin, it is cytotoxic in cell cultures and reparative dentin is characterized by "tunnel defect".

Key words: deep caries, Stepwise technique, calcium hydroxide, mineral trioxide aggregate