

## 18. Maintenance Requirements of Implant Supported Fixed Prosthesis Opposed by Either Implant Supported Fixed Prosthesis or Natural Teeth: 5 Years Results

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**AIM:** To compare the maintenance requirements of implant supported fixed prosthesis opposed by implant supported fixed prosthesis natural teeth or complete dentures.

**METHOD:** The maintenance requirements were obtained by examining the dental records of 15 people, of whom 6 were edentulous in both arches and 9 edentulous in one arch. The results were compared to those obtained from 22 edentulous people in whom implants had been used in the mandible (control group). All the patients were treated with Nobel Biocare implants using standard implant and prosthetic protocols.

**RESULTS:** The main maintenance requirement was the need to repair part of the superstructure. The artificial teeth and the acrylic resin had to be repaired on 44 occasions in the group with implants in both jaws and 14 occasions in the group with implants opposed by natural teeth. This compared with 2 occasions in the control group. Similarly the group with implants in both jaws were more likely to fracture the gold alloy framework, an event which occurred on 6 occasions. The Kruskal-Wallis one way analysis of variance on ranks was used to identify significant differences and Dunn's method of All Pairwise Multiple Comparison Procedures was used to distinguish which group differed from the other. The group with implants in both jaws was significantly different to the other two groups in relation to the higher incidence of fracture of the teeth and acrylic resin superstructure ( $p < 0.0001$ ) and fracture of the gold alloy framework ( $p = 0.0002$ ).

**CONCLUSION:** The maintenance requirements of implant supported fixed prosthesis opposed by implant supported fixed prosthesis are much greater than when opposed by natural teeth or complete dentures.

## 19. Follow up Clinical Observations of a Patient with Replantation, Transplantation and Implantation

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The paper presents the case of a young female patient treated with T.B.R. implants after unsuccessful replantation. The patient applied for the treatment in the Prosthodontic Department in January 1994, three months after the procedure of retained canine replantation. Before the replantation the patient had been treated with an orthodontic traction device, but the treatment was unsuccessful. The lack of bony restitution and permanent inflammation was the reason for canine extraction and immediate denture application. Bony defect after unsuccessful replantation and canine extraction was the reason for the surgical procedure of augmentation by transplantation from iliac bone 6 months later. Healing after bone augmentation was satisfactory and provided favourable conditions for implant installation. Two cylinder T.B.R. implants were placed in the region of the missing canines in September 1995. After 6 months the healing screws were connected to the implants. After 1 week a small correction of the gingival flap, pulling the mucous membrane on the labial surface, was made on the right side. Healing then proceeded without additional problems. The final prosthetic restorations were made in March 1996. The patient has a regular check-up. The implant mobility is measured with Periotest and depth of gingival pockets with Florida probe.

## 20. Preplanned Esthetics in Prosthodontics - A Controlled Approach

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The benefits of preplanned oral rehabilitation procedures are: high quality dentistry, better patient-dentist communication, increased efficiency, and reduced stress

throughout treatment. The preplanned esthetic approach is a controlled, staged procedure in which every stage is a copy of the previous one, allowing for improvement where necessary. The final result fulfills the patient's expectations, agreed upon and documented at the outset.

The procedure follows these three steps:

1. Imaging. Imaging is based on esthetic evaluation and diagnosis of the patient. Composite resin and a black marker are commonly used to add or reduce tooth structure in this process. Documentation by photography and stone casts are used for reference and duplication. The proposed result should be approved by the patient.
2. Provisional restorations. The teeth are waxed according to the imaging models and then duplicated in acrylic resin. On delivery, the provisional restorations are evaluated functionally and esthetically and improved upon if necessary. The result is confirmed and agreed upon and documented again by photography and stone casts.
3. Final restoration. The final restoration is a duplicate of the provisional restoration. A technique of cross mounting is used to mount the provisional casts and the working cast on the same articulator. Silicone keys guide the dental technician in constructing the metal framework and the porcelain buildup.

This systematic approach can be applied in every dental procedure that involves changes in the esthetic zone. It ensures a better match between the patients expectations and the final result and promotes higher quality dentistry.

## 21. Utilization of Guided Bone Regeneration Techniques in Treatment of a Single Tooth Missing with Implant Supported Crown

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Guided bone regeneration is developing very dynamically in dental surgery and in implantology. It relies on building up bone in places where it is lacking, utilizing a variety of grafting materials. Methods of guided bone regeneration utilize biological materials or synthetic specimens. The use of autogenous platelets rich plasma derived in the thromboforetic process (COBE spectra system) allows the employment of growth factors, which blood platelets contain in the formation of new bone tissues. Usage of BioOss together with platelet rich plasmas allows the creation of a resorbable carrier for growth factor (auto-xenogenic graft).

The aim of the presentation is the analysis of clinical cases where usage of bone augmentation enabled the insertion of implants. Rebuilding the bone by means of guided bone regeneration facilitated the implant treatment and consequently the accomplishment of fixed prosthetics supported on implants.

## 22. TMJ Disc and Condylar Displacement in the Frontal Plane

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It is known from the literature that an anterior disc displacement is as a rule associated with a dorsal and (or) superior condylar displacement, whereas a dorsal disc displacement is connected with an anterior displacement of the condyle in the intercuspal position. No investigations have been done on this subject in the frontal plane. MR investigations of the TMJs were carried out in 38 patients. Disc displacement in the frontal plane was analysed in 72 TMJs. In 47.2% it was associated with condylar displacement in this plane. In 55.5% medial disc displacement was connected with lateral condylar displacement, whereas lateral disc displacement was accompanied by medial displacement of the condyle ( $p>0.05$ ) in 33.3%. Central position of the condyles was significantly more often (66.6%) noted in TMJs with lateral disc displacement than in TMJs with medial disc displacement (44.4%) ( $p>0.05$ ). These results were confirmed by tomography in 40 TMJs.