

- ② immediate implantation and immediate loading.
- ③ implantation with simultaneous bone regeneration procedure.
- ④ soft tissue management for esthetics.(guided soft tissue healing)

OV-5

Clinical Evaluation of Magnet with Milled Bar for Implant-supported Overdenture

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This report describes a technique of combining magnetic attachment with milling bar for implant-supported overdenture and evaluates the clinical performance of such design used in 30 patients between 12 to 48 months period. Two types of rare earth magnet systems, Magfit EX600, Aichi steel works Ltd. Japan and Hicorex super, Hitachi metal Corp., Japan, were used in this project. During prosthetic fabrication phase, the keepers of magnetic attachments were embedded in wax pattern and cast on the occlusal surface of metal bar with Pd-Ag alloy. The keepers were placed in between implant abutments and/or on the cantilevered portion of cast bar. The cast metal bar was then machine-milled for guiding denture insert: on and increasing stability.

A total of 112 magnets were combined with milling bars for 31 implant-including peri-implant soft tissue health, corrosion resistance of magnetic attachment, and the degree of patients' satisfaction for denture clinical performance. The results indicate none of the 125 implants (IMZ 92, Branemark 15, and 3i 8) support overdentures was failed during 12 to 48 months functional period. There were only few soft tissue problems around implant-abutment areas after prosthetic treatment. No corrosion of magnetic attachments was found. From subjective questionnaire evaluation, the majority of the 30 patients were satisfied with the retention and stability of their implant-supported overdentures. Based on the limited clinical observation, we conclude that combining magnetic attachments with cast milled bar for implant-supported overdenture can be used successfully for fully edentulous patients over a medium-term period.

Oral

OV-6

Implant Supported Prosthodontic Restoration In severely Atrophied Posterior Mandible using Distraction Osteogenesis

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Implant assisted dental restorations have been recognized as predictable prosthodontics treatment modality with excellent long-term prognosis. The survival rate of implants and the implant prosthesis in fully and partially edentulism case are 91%~99% in the mandible, 85%~95% in the maxilla in area 10 years. However, failures also have been reported. The most common reasons of failures are due to the improper low bone density, the inadequate bone quantity, infection, overloads etc. Especially in lower posterior mandibular regions, often encountered with severely atrophied alveolar ridges. In such cases, onlay procedures, inferior alveolar nerve lateral reposition procedures or short implants placement were inevitable to

restore with implant prosthesis. However, still these procedures are debatable in complications and prognosis. In this presentation, authors used distraction osteogenesis procedures to increase the severely atrophied posterior mandibular alvolar ridges vertically using dental implants and customized devices preceding the final implant placement, and those missing teeth have been restored with implant supported bridges. Basic animal researches also will be presented followed by the clinical presentations.

OV-7

A Study on the Effect of UV Light Absorber on the Color Change of Maxillofacial Silicone

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The color change of maxillofacial silicone has been attributed to certain environmental factors such as exposure to the UV component of natural sunlight, wetting and drying of the elastomer, and surface abrasion resulting from the application and removal of cosmetics.

The purpose of this study was to evaluate the color change of maxillofacial silicone (Silastic MDX4-4210) according to type of pigment (cadmium yellow, titanium white, cosmetic red), and UV absorber application method after 200, 400, and 600 hours of 350nm UV light irradiation.

The results were as follows.

1. According to type of pigments, after 200 hours cosmetic red showed significantly larger color change than cadmium yellow and titanium white, and after 400 and 600 hours color change significantly decreased in the order of cosmetic red, cadmium yellow, and titanium white ($p < 0.05$).
2. In the cadmium yellow group, the color change according to UV light absorber application method indicated that, after 200 hours, the non-treatment group showed significantly larger color change than the surface application and mixed group, but after 400 and 600 hours, color change significantly decreased in the order of non-treatment, surface application and mixed group ($p < 0.05$).
3. In the titanium white group, the color change according to UV light absorber application method showed that there was no significant color change difference between the three groups after 200 and 400 hours, but after 600 hours, the mixed group showed significantly smaller color change than the non-treatment and surface application groups ($p < 0.05$).
4. In the cosmetic red group, the color change according to UV light absorber application method showed significant decrease in color change in the order of non-treatment, surface application and mixed group ($p < 0.05$).

From the results above, the effect of UV light absorber differed according to the type of pigment, but mixing UV light absorber with maxillofacial silicone is thought to give superior resistance against UV light irradiation in the long run.