95.

Orthodontic-Prosthodontic Rehabilitation: a Case Report

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A 25 year-old female came to the Department of Prosthodontics, complaining of problems with masticatory function, described as pain in both temporomandibular joints during mastication and dissatified with esthetics in the upper jaw.

After a thorough clinical escaminations, diagnostic casts and X-ray analysis it was determined that the patent had oligodontium of 10 teeth (14, 15, 17, 18, 24, 25, 28, 38, 44, 48), discoloration of incisors caused by hypomaturated enamel (amelogenesis imperfecta), disproportion of the front teeth (in completely defined microdontia), Angle class II/1 (deep overbite) and compression of the front teeth.

The case history showed that the problems were of a congenital nature apart from the frontal compression, caused by inadequate orthodontic therapy at a younger age. Despite numerous congenital abnormalities, the patient had no systemic disorders.

In consultation with an orthodontist, the patient commenced orthodontic therapy with a fixed orthodontic appliance in the upper jaw for placing the teeth in the right position for fabrication of a semicircular bridge.

After 6 months of orthodontic therapy, a fixed prosthodontic appliance 600321 123006 (upper jaw) was made of metal ceramic. The aim of the therapy was to replace missing teeth, protect existing teeth with hypomaturated enamel and readjust occlusal height.

With the new intermaxillary relations and teeth contour esthetic and functional concordance was achieved. After therapy the patient had no pain in the temporomandibular joints.

96.

Bonding of Silicone Prosthetic Elastomers to Various Denture Resins

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PURPOSE: The aim of this study was to evaluate interfacial bond strength between different types of silicone facial elastomers and denture resins.

MATERIAL AND METHODS : The facial materials studied were Cosmesil and Ideal and SR 3/60,SR 3/60 Quick and Triad were included in the group of denture resins. The " overlap-joint" model was used to evaluate bond strength and the samples were placed in tension until failure.The bonding surfaces were treated with a primer. Ten samples for each silicone/resin group were tested. The results were subjected to two-way ANOVA and Tukey's test for comparison.

RESULTS: The results showed that bond strength was affected by the type of silicone and denture resin. Interaction was also noted. Bond strength ranged from 0.026 to 0.229 MPa.

CONCLUSION: Cosmesil condensation type silicone showed higher bond strength with the three different types of denture resins, compared to Ideal addition silicone, keeping other variables associated with silicone/resin bond fixed.

97.

Prosthetic Therapy of a Seven Year Old Patient with Oligodontia

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A seven year old male patient was referred by his dentist to a specialist in dental prothetics with a diagnosis of oligodontia. Examination of the orthopantomogram showed germs of only eight teeth. No teeth were present in the oral cavity. The first permanent molars had been esctracted because of caries.

From the case history and a clinical examination, it was established that the boy had craniofacial dysmorphosis/dysostosis and hypertelorizm with lower positioned and poorly formed ears. He had diagnosis of thickening of the right ventriculus. Kariotype normal. Also presented adactyly of digits II and III manus et pedis, clinodactyly of digit I, and syndactyly of digits IV and V was surgically treated.

By examining the oral cavity, angulus infectiosus oris was diagnosed caused by lowered vertical dimension of occlusion and candidiasis lingue, and consequently the boy was referred to an oral pathologist for appropriate therapy.

Special attention is required when fabricating a complete denture in a child's mouth in orded not to compro-me any prosthetic principle. Thus, we were faced with several problems including how to find impression trays of adequate size, and how to explain to the patient the procedure of functional movements, achievement of rest position, and the artificial teeth selection.

Because of the small and narrow dental arches we decided for the smallest size of artificial teeth (D28) and reduced occlusion. The artificial teeth were modified and reduced. The second molar took the place of the first molar. With color and shape we tried to imitate deciduous teeth.

After insertion of the complete dentures and control examination, the patient was given an appointment for making new dentures in six months, because of the growth and development of the maxilla and mandible.

98.
Evaluation of Direct and Indirect Methods of Repairing Fractured

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INTRODUCTION: The most common technology used in producing a fixed partial denture is firing porcelain to metal. The fracture of veneering material rarely occurs, although it is one of the most striking problems in daily practise.

PURPOSE: The purpose of this study was to evaluate the shear bond strength of composite to porcelain and metal by using two intraoral repair methods: direct and indirect.

MATERIAL AND METHODS: The direct method was performed by using Ceramic Repair System (Ivoclar, Lichtenstein) with and without sandblasting. The indirect method involved Co-Jet system (ESPE,Germany) and Rely X ARC (3M,USA) as luting agents. 180 specimens fabricated with feldspathic porcelain and Ni-Cr alloy were divided into 3 groups: CR/0 (direct method of repair without sandblasting), CR/S (direct method of repair with sandblasting) and CJ (indirect method based on Co-Jet system). Each of them was divided into 3 subgroups of 20: porcelain (P), porcelain and metal (P/M) and metal (M). The 10 specimens were then subjected to a shear test in a mechanical testing machine at a crosshead speed of 0.5 mm/min. Mode of failure was recorded. Means and standart deviations of loads were calculated.

RESULTS: Tested groups exhibited the following values in megapascals: CR/0-P = 20.36 ± 3.05; CR/0-P/M = 19.45 ± 3.49; CR/0-M = 10.86 ± 4.1; CR/S-P = 18.21 ± 2.62; CR/S-P/M = 19.34 ± 1.76; CR/S-M = 9,54 ± 2.48; CJ-P = 19.85 ± 1.94; CJ-P/M = 19,78 ± 3.60; CJ-M = 13.56 ± 3.82. The mean fractured loads were significantly lower for metal subgroups than for porcelain and porcelain/metal subgroups.

CONCLUSION: Higher shear bond strength is expected when porcelain was fractured without extensive metal exposure.

99.
Multidisciplinary Therapy of Upper and Lower Jaws Defects

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The aim of this study was to evaluate the possibility of multidisciplinary therapy of injury and other defects of the upper and lower jaws. The imperfections originate primary (cleft, oligodontia) or secondary (cysts, accidents, tumors, inflammation etc.).The incidence in the Czech Republic is criminal in 28 %, sports in 12 %, and home accidents in 9 %. The cleft genetic register includes at the present time more than 4500 families from Bohemia. The multidisciplinary therapy involves the following disciplines: prosthodontics, maxillofacial surgery, plastic surgery, orthodontics, speech pathology, psychology, otorhinolaryngology, genetics, and social work.

Dental care of adult patients is not simple. The five case reports demonstrate the prosthetic treatment of adult patients by multidisciplinary therapy: surgeon, orthodontist and prosthodontist. The aim of our therapy is to receive the integration oforthodontic treatment or surgi-