

system, during Tae-Kwon-Do, and the use of protection devices during training and competitions. This investigation included 43 examinees, 15 female and 28 male, among which were members of the national representatives of the Republic of Croatia. They were required to complete a questionnaire. The result revealed a very low number of injuries, in fact, lack of injuries in the female and male junior categories. In the male junior and both senior categories 134 injuries were reported, 118 or 88% of them were laceration of the lips, cheeks and tongue. Other injuries to the stomatognathic system represent only 16 injuries or 12% of all injuries. The majority of injuries occurred during training (68%), and 32% during competition. Protection devices (helmets) were used during training only by 5 examinees (11.63%), and during competition (100%). Mouthguards of any type were not used by any examinee. Helmets used are obligatory during competition and prevent the occurrence of injuries to the stomatognathic system, and decrease the severity of injury.

107.

## Type And Material of Fixed Prosthodontic Appliances in Patients Living in the Region of Metković

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The aim of this study was to evaluate the type and the aesthetic material in relation to age, gender, level of education, employment, socio-economic status and frequency of visits to the dentist. The examination was performed on 212 patients who had a fixed prosthodontic appliance for more than a year (55% males and 45% females, age 18-80 yrs.). The following conclusions were made: 1. The older patients and retired patients had significantly more bridges than crowns ( $p < 0.05$ ). There was no significant difference between gender and patients with a different level of education in the distribution of crowns and bridges ( $p > 0.05$ ). Patients who visit their dentist regularly have significantly more crowns than bridges than patients who visit their dentist irregularly or when in pain ( $p < 0.01$ ). Age or the first visit to the dentist made no significant influence on crown and bridge prevalence ( $p > 0.05$ ). 2. Almost all fixed prosthodontic appliances older than 10 years were made of porcelain (98%), while

acrylic veneer crowns were more frequent in appliances older than 10 or 15 years ( $p < 0.01$ ). Relatively high frequency of porcelain (64%) was recorded in comparison to acrylic material (32%) or chromasite (4%). There was no gender difference with regard to the material used ( $p > 0.05$ ). Patients older than 60 years had more acrylic material compared to younger patients. While patients younger than 39 years had almost exclusively ceramic appliances ( $p < 0.01$ ). Less educated patients had more acrylic veneer appliances. Employed patients had significantly more ceramic appliances than retired patients.

108.

## Evaluation of Tension and Intensity of Electrogalvanical Currents between Dental Alloys and Silver Amalgam

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It is a well-known fact, that the presence of metals, distant from each other in electrogalvanical sequence, causes the occurrence of electrical tensions in the oral cavity environment and, as a result, there is current flow between them.

Tensions and galvanical currents may cause not only discomfort for the patient, metallic taste, oral local changes on mucous membrane, but they may also have negative influence on immunological, internal or gynecological diseases.

The object of this study was the definition of dimension of tension and intensity of electrogalvanical currents, which are induced by the presence of different dental alloys and silver amalgams in artificial saliva with different pH-value. For the study artificial saliva was used, prepared according to the method of Fusayama in modification of Holland.

The examined alloys were the products of the Kulzer-concern:

- Heraenium NA: chrom-nicelic alloy;
- Heraenium NF and Heraenium P: cobalt-chrom-molybdenic alloys;
- and silver amalgams (polished and unpolished) from the SDI-concern.

The above mentioned alloys and silver amalgams were placed in pairs in artificial saliva solutions with different

pH-values (3-11) using the each with each rule. The tension and intensity of the examined electrodes were evaluated with the help of a Digitalvoltmeter G1002.500.

The results of the study proved that the highest tension and intensity of currents were found for chrom-nickelic and cobalt-chrom-molybdenic alloys in the presence of silver amalgams: polished and unpolished, in artificial saliva solution with extremely high and/or low pH-value.

## 109. Optical Identification of Inaccuracies Caused by Improper Handling on Type IV Gypsum Casts

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Type IV gypsum (stone gypsum) is an essential material in prosthetic treatment. Improper handling can change hardness, expansion and compressive strength and it is the most common reason for inaccurate casts. In that case even the most perfect impressions will result in inadequate prosthetic treatment.

Using optical instruments-digital camera (2.5 million pixels) and digital microscope we attempted to identify the visual appearance of inadequate casts and relate them to specific causes. All casts were poured in highly controlled conditions and only one factor, whose influence we tried to determine, was changed during the procedure.

Most common mistakes are: outdated gypsum, incorrect powder to water ratio, mixing without a vacuum-mixer, pouring without a vibrator and etching by alginate acid. All the mistakes were visualised, easily recognized and categorized by using digital optical equipment.

## 110. Possibility of Making Crowns on Canines

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The need for prosthetic care of injured canines is evident. Canine morphology provides for the possibility of preparation of the tooth crown and placement of an artificial crown on the abutment.

The study presents an original approach to the preparation of the tooth crown, impression, crown testing and cementing.

## 111. Control and Correction of Occlusal Relations of Complete Dentures

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Control and correction of occlusal relations are a constituent part of clinical and laboratory procedures of complete denture fabrication. Denture materials and fabrication procedures cannot ensure dimensionally correct complete dentures, and therefore it is necessary to check the occlusion. A remount procedure is carried out in order to establish correct occlusal contacts of denture teeth by mounting the finished dentures back on the articulator. There are several reasons for remounting: changed volume of the acrylic resin during polymerisation, dimensional changes in the early days of wearing due to water absorption in the acrylic base and placement of denture bases to the denture foundation area. Remounting starts with fabrication of transfer casts, determination and transfer of interarch relations to the articulator. When the dynamic concept of occlusion is chosen, priority is given to incisor or canine teeth guided occlusion. Remounting should be a constituent part of complete denture fabrication.

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