

This paper reports the results of dental identification of 1200 human remains exhumed from mass graves in Croatia up to 2000. A total of 989 (82%) victims were positively identified, while 211 (18%) victims remained unidentified. Dental identification based on available dental ante mortem data was achieved in 25% of the cases. Dental identification based on dental charts was achieved in 35%, on x-rays in 15%, on photographs of teeth in 22%, on interviews in 18%, and on dental supports in 10% of the cases. Teeth, in combination with anthropological parameters - age, sex and height as well as with other specific characteristics such as tattoos, personal identification cards, clothes, jewelry and DNA - were helpful for identification of 64% of victims, but their significance for the identification was not dominant. Only in 11% of the cases identification was achieved by other relevant means of identification and teeth were not used at all. Dental findings that were the most significant for the identifications were prosthetic appliances in 30% of cases. Dentures were helpful in the identification of only 1% of the cases, while crowns and bridges were helpful in 29% of the cases. Non marked full dentures caused problems in the determination of identification.

## 10. Effectiveness of Sports Mouthguards

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Participants in a wide variety of sports commonly experience orofacial injuries. Dentists have a responsibility for both the treatment and prevention of these injuries.

Equipment for the protection of the face and mouth includes facemasks and mouthguards.

There are three broad categories of mouthguards:

- Type 1 (Stock) mouthguards are purchased over the counter at sports shops;
- Type 2 (Mouth-formed) mouthguards are purchased in the same way but are modified in the mouth to improve fit;
- Type 3 (Custom-made) mouthguards are made in the laboratory on casts made from impressions of the mouth.

Evidence suggests that mouthguards can help prevent damage to soft tissues and teeth and possibly prevent concussion. Custom-made mouthguards are the most

retentive and are best tolerated. Incidents have been recorded when ill-fitting mouthguards have been dislodged and blocked the airway

Many claims have been made regarding the relative effectiveness of different types of mouthguards. The evidence for the relative effectiveness of different mouthguard materials and designs will be described. The available data from *in-vitro* and *in-vivo* investigations must be interpreted with caution

There is a need for further scientific research to develop optimum protection for participants in sports.

## 11. Clinical and Laboratory Techniques for the Custom-Fabrication of Athletic Mouthguards

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The efficacy of mouthguards for preventing sports-related traumatic oral injuries is well documented in those sports that mandate their use. There are three general categories of athletic mouthguards that currently are available. These include stock, mouth-formed and custom fabricated mouthguards made over a dental cast. Most mouthguards in each of these categories are made from ethylene vinyl acetate (EVA) material. Fabrication and design require professional services for impression taking and laboratory processing. Custom-fabricated mouthguards are, therefore, the most retentive. This presentation is designed to describe, in detail, clinical and laboratory procedures that are used to fabricate custom athletic mouthguards and will include the vacuum-forming technique and the heat-pressure-lamination technique. Information on a new vacuum-pressure-lamination technique will be described as well as an experimental technique that utilizes photopolymerized urethane diacrylate. Several research topics for future investigation will be identified.

## 12. Denture Repairs: Surveys, Methods and Trends

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Denture repairing is a very common practice encountered in everyday clinical removable prosthodontics. It may be consisted of fractured dentures, debonded or broken denture teeth etc. These may be due to intraoral fatigue failure of acrylic resin or the accidental dropping of dentures outside the mouth. The purpose of this presentation is under the lights of the best available evidence to identify first from surveys the most common and more important denture repairing procedures. It well known that the purpose of repairing e.g. a fractured denture is to restore its strength at least to the original one. It seems in practice that it is not the fact. The most popular methods of repairing dentures will be analyzed regarding their strength and the attempts to enhance it through reinforcing materials like metal wires or fibers will be presented. Finally suggestions and thoughts for further investigations considering he recent available evidence will be discussed.

## 13.

### Fibre - Gives Inner Strength to Patients and Their Dentures

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As soon as Methyl Methacrylate became "the" denture base material it became clear that it had a weakness and a tendency to fracture. In the early days "improvements" to tooth position were suggested as a way to prevent fractures. Soon various other ways were tried but there were always problems.

The search for an easy cheap way of strengthening "acrylic" has continued. This paper will look at the history of complete denture strength from the patient's perspective and some of the techniques of denture base reinforcements that have been used over last 40 years.

Will fibre help our dentures as much as it helps us?

## 14.

### Overdentures Versus Fixed Prosthesis

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Two concepts of prosthetic restorations exist for the edentulous jaw: the fixed prosthesis (mostly screw retained)

and the overdenture. It appears that overdentures are preferably placed in old patients and in compromised situations.

Since the eighties, a series of studies - including long-term results - have demonstrated the reliability of treatment with fixed prostheses for the upper and lower jaw. An increasing number of studies on mandibular overdentures supported by only two implants give evidence of the effectiveness of this treatment modality. Comparable data for maxillary overdentures are still missing.

While dentists tend to base the selection of the prosthetic design on the number of implants that can be placed, other criteria have to be considered: esthetic appearance, facial morphology and restitution of lost hard and soft tissues, costs of implant-prosthodontic treatment, stability of the prostheses, complications and adjustments required, assessment of individual needs. From an economic point of view overdentures supported by two to four implants might be preferred.

Prosthetic methods in general and related to implants are not evidence based. They rely on clinical experiences, patients' demands technical considerations and reports of success and failure. However, from clinical experience, well-designed clinical concepts have evolved and the benefit of the patients concerned appears to be high and obvious.

The lecture will discuss the use of implants for prosthodontic rehabilitation in the completely edentulous jaw. Indications and various types of removable prostheses are presented and variations of design discussed. Biomechanical aspects of fixation and stabilization of prosthesis complete the overview.

## 15.

### The Role of Bone Morphogenetic Proteins in Regeneration of Bone and Cartilage

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In the last ten years a significant amount of knowledge has accumulated in the field of molecular and developmental biology. New genes responsible for the skeleton development have been discovered, and their function in the postnatal life of mammals has been defined. The most important genes responsible for the morphogenesis on all three embryonic envelopes include bone morphogenetic proteins (BMPs) and cartilage derived morphogenetic proteins (CDMPs), recently renamed into morphogens. Since