

*Godovanets O.I.*

## STATE OF CONNECTIVE TISSUE ELEMENTS OF THE DENTAL-MAXILLARY SYSTEM IN CHILDREN WITH DIFFUSE NONTOXIC GOITER

Bukovinian State Medical University, Chernivtsi, Ukraine

The dental-maxillary human system consists of the tissues, the majority of which is a kind of the connective tissue. The osseous alveolus, periodontium, gums, pulp, and dentine – all of them contain the main structure-forming elements as fibers and extracellular matrix. The latter one is presented by proteoglycans, heterogeneous proteins covalently bound with glycosaminoglycans playing a crucial role in biochemistry of the connective tissue. Changes of the connective tissue in case of pronounced functional disorders of the thyroid gland are described in endocrinology.

**Materials and methods.** 60 children suffering from diffuse nontoxic goiter and 60 somatically healthy children aged from 12 to 15 years were examined. The following biochemical indices were determined in the oral fluid of children: crude protein level by O.H. Lowry's method; glycoproteins level by E.G. Romanenko's method; glycosaminoglycans level and their fractions by E.V. Kariakina's method. The results obtained were statistically processed applying variation statistics methods.

**Results.** The results of the study showed that in children under conditions of diffuse nontoxic goiter general glycosaminoglycans level in the oral cavity is reliably higher than that of the somatically healthy children. Particularly, in case of clinically intact periodontium the difference between the indices was found to be approximately twice as much: IA group –  $(0,16 \pm 0,01)$  g/L, IIA –  $(0,31 \pm 0,03)$  g/L ( $p < 0,05$ ). In children suffering from CCG a reliable difference between the indices was found as well: IB group –  $(0,22 \pm 0,02)$  g/L, IIB –  $(0,38 \pm 0,01)$  g/L ( $p < 0,05$ ).

In glycosaminoglycans structure in children from all the groups of observation the fraction of sulfated glycosaminoglycans (SGAG) prevailed. The variants of it are the following compounds: chondroitin-4-sulfate, chondroitin-6-sulfate, dermatin-sulfate, and heparin-sulfate. Due to a high negative charge they bind water well and thus regulate water-salt metabolism in tissues. Increased amount of SGAG is a characteristic feature of such typical pathological process as inflammation, since they take part in the formation of tissue swelling.

**Conclusions.** The applied biochemical methods of investigation enable to assess the state of the connective tissue components of the dental-maxillary system under different conditions and determine a risk group of children who do not possess clinical changes in the periodontal tissues, but could reliably have them in future.

*Hasiuk P.A., Rosolovska S.O., Vorobets A.B.*

## SHAPE RECONSTRUCTION OF THE MOLAR CROWNS OF THE UPPER AND LOWER JAWS IN MALES AND FEMALES

I. Horbachevsky Ternopil National Medical University, Ternopil, Ukraine

**Introduction.** Dental crowns and teeth row defects orthopedic treatment is accompanied by the necessity of reconstruction of lost morphological teeth parts or the missing teeth in teeth row. That is the reason why rational orthopedic treatment (including anatomic tooth shape reconstruction and preservation of aesthetic) is an important assignment in prosthodontics.

**The aim.** To study odontological and odontometrical parameters of molar crowns of the upper and lower jaws in males and females.

**Materials and methods.** We used odontoglyphical, odontometrical and statistical methods of researches to achieve the desired results. The occlusal surface of molars (of male and female respectively) was a material for study. We conducted clinical studies of 250 persons. During this study, assessment of odontological status according to odontoglyphic pattern of occlusion surface of molars was held. The odontometric analyze took place on intact molars with the well-expressed anatomical pattern of crowns according to the O. Zubov and N. I. Khaldeyeva's methodology.

**Results.** The average values of the main indicators for the crown were established according to the odontometrical analyze.

The following indicators have been ascertained: the height of the crown varies from 6,67 to 6,81 mm (male) and 5,89 to 5,94 mm (female), the vestibule-lingual size is 11,4 mm (male) and 10,7 mm (female), the size value of the mesio-distal crown size is 10,4 mm and 10,24 mm, for male and female respectively.

Chewing surface of the first molar on the upper jaw is formed by four tubers, which form igrek-four type of odontoglyphic pattern. As a result of odontoglyphic study, we have found that for all molars of the upper jaw and the first molar of the mandible, the presence of a continuous distal crest of the trigon, which forms the igrek-type odontoglyphic pattern, is considered to be an archaic sign. The works of the number of authors prove this statement. Cases of the distal crest lowering in the center of the crown were observed frequently. The highest part of the crest is an edge that connects the epi- and the diaconus. Two options of the distal crest of trigon formation were established during our study. In the first case, it was formed due to the merger of the distal crests of the