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Dental disease incidence among the students of Rostov state medical university

Abstract: to study the structure of dental diseases among the students of Rostov state medical University. **Materials and methods:** the dental clinical examination of 102 students of Rostov state medical University was carried out. **Results:** various nosological forms of dental pathology were found. It was determined that 63.7 % of students have comorbidity which characterized by the presence of more than 3 dental diseases. High dental caries intensity is accompanied by a large number of periodontal complications. Periodontal disease was noted in 85.7 % of examined students. **Conclusions:** the teeth and mouth disease incidence among the students was clearly marked and was characterized by a variety of nosological forms.

Keywords: dental disease incidence, prevalence, caries, periodontal diseases, oral cavity.

Students are the separate part of population characterized by a certain age and a specific way of life. The total level of health among young people in the period of student life is influenced by many factors such as the increased psycho-emotional stress and uncomfortable social and hygienic conditions. The dependence of the increase of dental disease incidence from the rhythm of life, level of hygienic culture and education, dietary habits and medical care has noted in numerous investigations [1; 2; 3]. One of the most effective ways to maintain the health during the period of study is clinical examination which enables to reveal the symptoms of teeth and gums lesions in early stages and to provide the complete recovery of the diagnosed abnormalities [4; 5]. Recently, the study of oral health among the students and the development of clinical programs have elucidated by many authors [6; 7]. This part of population deserves the special attention as it is enough large and has a great potential health dentition.

In this regard, the study of dental status of Rostov-on-Don students is topical interest. The aim of the work was to study the dental disease incidence of Rostov state medical University students.

Materials and methods. To study the prevalence of oral diseases among the students of Rostov state medical university 100 persons of Dental faculty were examined. The average age of students was 23 ± 2.0 and they were 4 and 5 years of students

at the time of the examination. 35.1 % (33 persons) young men and 64.9 % (67 persons) girls took part in this study. The assessment of conditions of hard teeth tissues, periodontium, gum and the oral mucosa was included in the clinical examination. The dental formula, the nature of occlusion, the presence of non- carious lesions were also estimated. The diagnosed abnormalities were classified according to ICD on the basis of ICD-10.

Prevalence and intensity of caries process were studied by means of: CFE teeth index (CFE (t)) and CEF cavities index (CEF (c)), where "C" is the tooth affected by caries, "F" tooth having a filling, E — tooth extracted on account of caries and its complications. If the tooth has several indicators ("C" and "F"), it will be recorded as "C" that requires a medical intervention. CEF cavities index gives a more objective assessment of caries process as all the indicators on each tooth are registered. Initial caries (chalky spots) were recorded as number of lesions and the degree of process demineralization activity, method of vital staining. During examination non-carious diseases were registered, their prevalence being classified according to nosology (enamel hypoplasia, increased abrasion of hard teeth tissues, wedge-shaped teeth defects). Abnormalities of dentition and occlusion were noted, as well.

The determining of periodontal diseases prevalence was evaluated according to CPI index, bleeding index, PMA (papillary, marginal, alveolar) index and Schiller-Pisarev tests.

The establishing of oral hygiene level (OHL) was conducted by OHI-S index. The condition of mouth mucosa (MM) was assessed by incidence and prevalence of diseases. The obtained data were recorded in the dental status card and were subjected to computer processing according to the generally accepted methods of medical statistics.

Results and discussion. Assessment of dental status of Rostov state medical University students showed a significant prevalence and diversity of dental pathology. It was revealed that more than half of the students (63.7 %) have concomitant pathology characterized by the presence of more than 3 dental disorders and only in 10.3 % of the examined young people single dental diseases were registered.

Analysis of dental pathology structure according to the nosological forms showed that the most often Rostov state medical University students were diagnosed caries (C02). In almost all cases dentin caries were occurred (C02.1). This pathology of hard teeth tissues were revealed in all students (100 %), both men and women (gender prevalence of dental caries was 100 %) suffering from tooth decay equally. However, the percentage of those who were in need of treatment among boys was higher than that among girls (68.3 % vs. 39.1 %). The proportion of persons with multiple caries (more than 5 teeth affected) was 73 % among all examined. Each student had an average of 3.5 ± 0.3 teeth affected by caries and they were required in treatment. The total number of teeth affected by caries were: by CFE teeth index — 8.5 ± 0.4 , and by CFE cavities index — 9.5 ± 0.5 . Mostly molars were affected by carious process (63.8 ± 1.5 %), less often — the premolars (41.5 ± 0.8 %). Analysis of the components CFE (t) index showed that a proportion of extracted teeth was a significantly high (0.3 ± 0.1). We estimated the values of CFE (t) as high (WHO recommendations). The problem is that the number of decayed and extracted teeth was almost equal to the number of filled teeth (3.9 ± 0.4 ; 0.3 ± 0.1 against 4.7 ± 0.3 , respectively). This suggests that half of the affected teeth need the serious dental treatment and the involvement of several dental specialists.

Periodontal diseases (C05) take the 2nd place among the diagnosed dental disorders. They were observed in 85.7 % of students and were presented with gingivitis and periodontitis. In 45 patients an inflammatory process in periodontal tissues with redness, swelling, bleeding and in some cases with hypertrophy were revealed. There was no any malfunction of periodontal connection that allowed us to diagnose this pathologic process as gingivitis (C05.1). Clinically in 84 % of students gingivitis had catarrhal character, in 16 % — hypertrophic. Bleeding was one of the signs of inflammation in the periodontal tissues. During the probing of dentogingival connection marked degree of bleeding according to hemorrhage index occurred in 43.9 % of young people.

Periodontal pocket was diagnosed in 3 people. During examination both abnormality in periodontal connection and periodontal pocket were revealed, they being the evidence of periodontitis (C05.2). In all the examined students the depth of periodontal pockets was not more than 3.5 mm., it

indicating mild pathology of periodontal tissues. In the majority of student localized periodontitis against the background of gingivitis was noted. We discovered the periodontal pockets in the region of 1–2 teeth in all patients that was evidence of the prevalence of local forms of periodontitis.

There were dental deposits. (C03.6), they being presented as soft plaque (81.6 %) and mineralized deposits (above — and subgingival dental calculus) (27.2 %). Oral hygiene index averaged 1.78 ± 0.04 points that corresponds to a satisfactory hygiene level. Only a small part of students (27.6 %) brushed their teeth well enough, the rest took care of the oral cavity satisfactory or bad.

Dental and facial abnormalities including malocclusion (C07) were diagnosed in 49.3 % of students (anomalies of dental arches correlation (C07.2) were revealed in 21 %, anomalies of tooth position (C07.3) were found in 25.3 % of patients). In most cases, anomalies of tooth position were combined among themselves and with other anomalies of dentition. Crowding of teeth in the dentition was frequently observed, it being accompanied by a large number of dental plaque. There were signs of inflammation in the periodontal tissues.

The result of gum and alveolar ridge changes (C06) was gum recession (C06.0), which was diagnosed in 39 % of the students. Generally, it was observed in teeth with overhanging fillings or in the presence of malocclusion. Almost all diagnosed recession (93 %) can be characterized as ill-defined and only in 4 % of cases they were more essential, which corresponded to 1 and 2 class according Miller classification. They were due to the small vestibule of mouth.

Other diseases of hard teeth tissues were diagnosed in 43.4 % of examined students. Increased (pathological) dental abrasion (C03.0) was observed in 0.8 % of young people. In most cases pathological dental abrasion was defined against the background of malocclusion and defects of dentition. The teeth grinding (C03.1) was associated with wedge-shaped defect found in 16.8 % of students. The defect was located on the first and second premolars of the upper jaw and was combined with gum recession. Hyperesthesia was determined in 26.6 % (27 people).

Diseases of pulp and periapical tissues (C04) are a complication of tooth decay. During examination they were diagnosed in 27 students. For accurate diagnosis by nosologies (Pulpitis (C04.0) and Periodontitis (C04.5)) this pathology requires a deeper clinical and radiographic examination, however, all 27 students were noted a significant destruction of teeth crowns.

Diseases of lips and mucous membranes of oral cavity (C13) were revealed in 10.7 % of students. Cheilitis (C13.0), mainly exfoliativa, was found in 2.7 % of cases among the diseases of mouth mucosa. Tongue diseases (C14.0) were diagnosed in 2 students (2.1 % of the total number of identified diseases of mouth mucosa). They were presented in 2 forms: Geographic tongue (C14.1) and Folded tongue (C14.05). Geographic tongue was appeared in the form of pinkish-red spots with clearly outlined white borders. In folded tongue

filiform papillae were smoothed and a tongue back was lined with deep folds. Other diseases of mouth mucosa were diagnosed in a few cases and were presented by: recurrent aphthae, leukoplakia and chronic recurrent herpetic stomatitis.

The temporomandibular joint pathology (C07.6) was revealed in a single case and was due to clicking in the joint and a mild pain.

The above data evidence that dental and mouth disease incidence among the students of Rostov state medical

University is clearly marked and is characterized by a variety of nosological forms, hence the necessity in dental care is significant. Failure to provide necessary dental treatment at this stage will lead to further tooth decay and pathology aggravation, which will require further intervention of specialists and the use of more complex and expensive treatments. At the same time, a wide preventive and clinical examination by a dentist can afford to maintain teeth health and cure a larger part of the pathology in the early stages.

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Monitoring of the patients operated on nodular goiter and features of the operated thyroid gland functional state depending on the surgical intervention extent

Abstract: The paper presents some data about a monitoring of the changes in the thyroid residue: hormonal status, antibody rate depending on the scope of nodular goiter surgical treatment. It was established that 2 months after the surgery the autoimmune process becomes more active, the intensity of which gradually fades to the 6th and 12th months of post-operative intervention. It should be noted that a compensatory growth of the residual thyroid tissue after the surgery was observed.

Keywords: Thyroid gland, surgical interventions, monitoring of patients.