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Vakoliuk Olena Borisovna,
Bukovynian State Medical University,
Assistant of the Children's Dental Surgery department,
Chernivtsi, Ukraine
E-mail: dronykivan@ukr.net
Dronyk Ivan Ivanovych,
Bukovyna State Medical University,
Assistant of the Children's Dental Surgery department
E-mail: dronykivan@ukr.net

Caries intensity index in the students of the boarding school "Multiple-discipline lyceum for talented children" improvement and stabilization methods

Abstract: High increase of dental diseases is caused by worsening of the ecological situation, general somatic health of children who always live on the ecologically unfavorable territories of Ukraine [1; 2].

Keywords: dental diseases, children, tooth caries.

Many dental diseases are developed due to the local factors like insufficient oral hygiene; on the other hand very important role is played by other system processes which may cause not only deep changes in the organism but also infect tooth tissues.

Tooth caries occurs most of the time, due to the WHO its prevalence among children is 60–98%, and in Ukraine its prevalence in children aged 6–14 is 98% [3]. Investigation of the dental diseases in Ukrainian population shows a rapid increase of caries, gingivitis, parodontitis. There was defined a connection of these diseases with the ecologically unfavorable regions, insufficient fluorine content in water (especially in the western regions of Ukraine), quality of the individual oral hygiene. Due to N. O. Savichuk and O. V. Savichuk in the western regions of Ukraine in 12-year-old children caries prevalence is 93–100%, intensity — 3.4–6.5.

The aim of the research is to evaluate an index of teenagers' caries intensity of the boarding school "Multiple-discipline lyceum for talented children", Chernivtsi, Ukraine. One of the important caries characteristics is its intensity, to evaluate which we use CSM index — number of cariotic surfaces, stopped teeth and missing teeth in one of the examined patients. Caries intensity index varies according to the influence of many internal and external factors. That is why WHO offered to take into account caries intensity in 12-year-old children as a basis for the hard teeth tissues condition evaluation. In these children there are five levels of caries intensity:

- very low 0-1.1;
- low 1.2–2.6;
- middle 2.7–4.4;
- high 4.5–6.5;
- very high 6.6 and more [4].

In the lyceum 115 teenagers study: 64 boys and 51 girls. These teenagers make 6 classes: one 8 form, one — 9, two 10 forms and two 11. We practice centralized form of the planned oral cavity sanitation of the lyceum students. Treatment and preventive measures are carried out together with the lyceum authorities. The department assistants make up a schedule of the planned oral sanitation for the whole learning year taking into account the internship schedule. Also the schedule of sanitations is composed for every month where date and time of the sanitations is specified. Plans-schedules are signed by the Chair of Department of Children and Surgical Dentistry and approved by the Vice-President of Bukovyna State Medical University. Then they are coordinated with the Director of Studies and signed by

the Director of Lyceum. On the basis of this documents there are special hours dedicated to planned sanitation, developed for every class and taken into account while composing an education plan and schedule.

To make the sanitation successful it's important to organize calculation and accounts. The main accounting document is medical card of the stomatologic patient (form N^0 043/0), started for every child and kept during all the period of his/her studying at the lyceum. In the middle of September every learning year there is a detailed medical examination of all the lyceum students by a mobile doctors' brigade. Assistants of the Children's Dental Surgery Department together with the doctors-interns of the first year of education take part in this examination.

Table 1. – Caries indices of the students of the boarding school "Multiple-discipline lyceum for talented children".

| 8 form, 15 students | Boys, 7 students | Girls, 8 students |
|------------------------|-------------------|--------------------|
| healthy | 2 | 1 |
| sanitated | _ | 1 |
| CSM | C-18, S-2, M-0; | C-20, S-8, M-0; |
| | 2.8 (medium) | 3.5 (medium) |
| 9 form, 17 students | Boys, 9 students | Girls, 8 students |
| healthy | 2 | 1 |
| sanitated | 5 | 6 |
| CSM | C –8, S-10, M-0; | C-10, S-33, M-0; |
| | 2.0 (low) | 5.3 (high) |
| 10-A form, 25 studenst | Boys, 15 students | Girls, 10 studenst |
| healthy | 4 | 2 |
| sanitated | 9 | 1 |
| CSM | C-4, S-38, M-0; | C-5, S-28, M-0; |
| | 2.8 (medium) | 3.3 (medium) |
| 10-B form, 17 students | Boys, 13 students | Girls, 4 students |
| healthy | 3 | - |
| sanitated | 9 | 4 |
| CSM | C-4, S-35, M-0; | C-0, S-23, M-0; |
| | 3.0 (medium) | 5.8 (high) |
| 11-A form, 25 students | Boys, 11 students | Girls, 14 students |
| healthy | _ | _ |
| sanitated | 9 | 12 |
| CSM | C-5, S-41, M-1; | C-4, S-50, M-3; |
| | 4.3 (medium) | 4.0 (medium) |
| 11-B form, 16 students | Boys, 9 students | Girls, 7 students |
| healthy | 3 | 1 |
| sanitated | 7 | 5 |
| CSM | C-4, S-26, M-1; | C-3, S-22, M-0; |
| | 3.4 (medium) | 3.6 (medium) |

Every teenager in his card gets a date of examination, tooth formula, caries index and sanitation schedule. The immediate results of the planned sanitation are reflected in the class record, as well as the refusal from preventive examinations, bite abnormalities, problems connected with surgical intervention. Class supervisors tell parents the information at the meetings. Treatment-preventive measures include 4 stages.

- First stage every teenager gets a defined index of Fedorov-Volodkina (1971) and a corresponding evaluation and also caries intensity evaluated by CSM index.
- The second stage is individual preventive measures.
- The third stage is professional teeth cleaning. This procedure should be regular for every person also while there are no dental diseases.
- *The fourth stage* includes treatment of the non-complicated teeth caries.

The investigation results show that the caries indices are higher in girls — 4.3; while in boys it is — 3.2. These indices correspond to the medium level of the caries intensity (2.7-4.4). The investigations results prove that boys who constantly live in the country with an ecologically reasoned fluorine deficiency as they grow older have higher indices of teeth caries; in students of 8–9 form this index is 2.4 and in students of 10-11 form — 3.6.

Teenager period is quite difficult for teachers and parents because this period of maturing is characterized by acute reactions to different changes like teenager social orientation changes.

Between boys and girls appear interesting relations. Since this time oral hygiene influences teenager's appearance. In this age students start independently care of their look [5]. That is why in individual talks we concentrate students' attention on the main aspects of hygienic education: how dangerous the teeth diseases are; nutrition rules; what the harmful habits are; teeth brushing rules; how to keep teeth healthy without medicine; teeth caries infection; parodontitis and the disease of the mucous membrane of the mouth cavity; changes in the mouth cavity within the general diseases.

Group dental preventive measures are very important in the general preventive measures. The assistants of department together with the doctor give lectures to the students with the aim to keep dental health, persuade

that oral hygiene is an index of human culture. Certain topics are chosen for the lecture. For example, "The basis of the dental health", "Cariogenic factors in the oral cavity. Ways of indication and elimination", "Preventive measures of the parodontitis in teenagers", "Main diseases of the mucous membrane of the oral cavity in children. Preventive measures and treatment". Every presentation should contain not only scientific information but also interesting facts from the history of medicine, animal life, cooking.

A very important is the fact that for the caries index stabilization the boarding-school teenagers can cooperate with the diet nurse of the lyceum who composes menu for them every day. We offer two important interrelated factors in the diet: sufficient set of different products and reasonable dose of carbohydrates. Diet nurse take these recommendations into account while composing a menu: dairy products contain calcium (milk, yogurt, cheese, green vegetable, carrot, cabbage, lettuce, nuts, apricots, apples). Milk contains 120 mg. % calcium, cheese — 135 mg. %, cottage cheese — 95-160 mg. %; 0.5 l. of milk provides a day necessity of calcium for a teenager. Other sources of calcium are beans, nuts, eggs, oatmeal, meat, vegetables, fruits. Very important is a balanced diet. Optimal is the correlation of the calcium and phosphorus 4:5–1:1.5; magnesium and calcium — 1:3-1:2. Fish and meat are rich in phosphorus. Fluorine is found in fish, laminaria, tea. Sweets and baking should be limited. Too many sweets, lack of vitamins and microelements are the main factors of the teeth caries.

Thus, the investigation results show that the caries intensity index is 3.7. It corresponds to the medium level of the caries intensity. To improve it we have to:

- provide dental preventive measures individually and in group to increase the level of the dental knowledge;
- take part in composing a balanced menu;
- provide preventive examinations with further treatment and making sanitation schedules.

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Ermakova Anastasia Vladimirovna, Stavropol State Medical University, student, the Faculty of Medicine, Stavropol, Russian Federation E-mail: nas-prutskova@yandex.ru

Bulgakova Natalia Evgenevna, Department of Hospital Therapy, Stavropol State Medical University E-mail: natabulgakowa@yandex.ru

Belokon Oleg Sergeevich, Stavropol State Regional Clinical Hospital, Head of Department of endovascular methods of diagnostics and treatment E-mail: bos-ol@yandex.ru

Ermakov Sergei Vasilevich, Stavropol State Regional Clinical Hospital, Department of endovascular methods of diagnostics and treatments E-mail: s.v.yermakov@yandex.ru

Specific features of arterial hypertension in patients in acute and early recovery periods of non-traumatic subarachnoid hemorrhage

Abstract: investigated dynamics the blood pressure in patients with non-traumatic subarachnoid hemorrhage depending on the extent of its severity (according to Hunt and Hess). Monitoring of blood pressure in patients with SAH with its subsequent correction is a necessary preventive event in the outpatient phase of their treatment.

Keyword: non-traumatic subarachnoid hemorrhage, SAH, blood pressure, cerebral aneurysm, rupture, arterial hypertension, endovascular treatment.

Ермакова Анастасия Владимировна, Ставропольский государственный медицинский университет, студент, медицинский факультет E-mail: nas-prutskova@yandex.ru Булгаковой Наталья Евгеньевна, Кафедра госпитальной терапии, Ставропольский государственный медицинский университет, E-mail: natabulgakowa@yandex.ru

Contents

| Biological Sciences |
|---|
| Section 1. Physiology |
| Kuchkarova Lyubov Salijanovna, Kudeshova Gulchehra Tengelbaeina |
| Effect of hydrocortisone on juvenile and definitive |
| systems of disaccharide assimilation in the rat small intestine |
| Medical science |
| Section 1. Clinical medicine |
| Arai Yoichi |
| Comparison of women in department leadership in |
| obstetrics and gynecology with those in other specialties |
| Budayev Iuij Victorovych |
| The experience of the work of mobile dental clinic city |
| municipal institution «City Pediatric Dental Policlinic» Chernivtsi, Ukraine |
| Yadrihinskaya Vera Nikolaevna, Mulina Inna Ivanovna, |
| Butaev Lev Sergeevich, Tatarinova Ekaterina Terent'evna |
| Family case of hereditary deficiency of antithrombin III. |
| Vakoliuk Olena Borisovna, Dronyk Ivan Ivanovych |
| Caries intensity index in the students of the boarding school |
| "Multiple-discipline lyceum for talented children" improvement and stabilization methods |
| Ermakova Anastasia Vladimirovna, Bulgakova Natalia Evgenevna, |
| Belokon Oleg Sergeevich, Ermakov Sergei Vasilevich |
| Specific features of arterial hypertension in patients in acute |
| and early recovery periods of non-traumatic subarachnoid hemorrhage |
| Kitsak Tetiana |
| The state of disease incidence of parodontium |
| tissue in the workers of Chernivtsi railway junction of Lviv railway |
| Krasniqi Marsida, Bino Silvia |
| Characteristics of patients with Crimean-Congo hemorrhagic fever in Albania |
| Safarova Sain Sattar |
| Age influence on features polycystic ovarian on hormonal homeostasis |
| which leading to changes in bone metabolism and development of type 2 diabetes |
| Anatomic and physiological peculiarities of the buccal region |
| Boychuk Alexandra Gregoryvna, Zhdanovich Alexey Igorevich, |
| Kolomiychenko Tatyana Vasilevna |
| Role of hemostasis violations in ART programs |
| efficiency in women with hepatobiliary system pathology |
| Zhdanovich Alexey Igorevich, Anoshina Tatiana Nikolaevna |
| Features vascular regulation in HIV-infected pregnant women with herpes virus infection |
| Section 2. Biomedical science |
| |
| Akmyradov Allamyrat, Shaiymov Babaguly, |
| Nuryyev Saparmyrat, Nuryyev Kakysh Egenmyradovich |
| Survey of the endemic and rare orchid plants of Turkmenistan |
| Islamova Jannat Ikramovna Seguitorpopo lectopes as a potential source of new effective antigiardial drugs |
| Sesquiterpene lactones as a potential source of new effective antigiardial drugs |