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ANALYSIS OF CARIES PREVALENCE AND CARIES COMPLICATIONS AMONG YOUNG PEOPLE IN TRANSCARPATHIAN REGION OF UKRAINE

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Purpose – determine the prevalence of major dental diseases in young people Transcarpathian region allowing for the demographic situation.

Materials and methods. 980 young people who live in the Transcarpathian region, aged 10 to 24 years, which determined the prevalence and intensity of caries, tooth decay installing complicated structure.

Results. The prevalence of dental caries and complications in young people Transcarpathian region is very high.

Conclusions. The prevalence of a large set of complicated caries in particular, chronic granulomatous periodontitis (194 cases – 19.8%), chronic periodontitis fibrous (138 cases – 14.1%) and chronic fibrous pulpitis (81 cases – 8.3%) treatment which is multistage, and has a low percentage of predictive success.

Key words: young persons, caries, tooth decay is complicated, Transcarpathian region.

The study is a fragment of scientific theme of the department of pediatric dentistry dental faculty SU "Uzhhorod National University" "Perfection Dental providing assistance to children who live in conditions biochemical fluorine and iodine deficiency" (state registration number 0114U004123).

Introduction

Despite the rapid development of materials science techniques in dental caries prevalence and complicated caries (pulpitis, periodontitis) among the population of Ukraine remains high [9]. Therefore endodontic dentistry occupies a significant place among all dental therapeutic interventions [1, 2].

According to the official reports of the Ministry of Health of Ukraine, over the past decade level of dental disease among the population of Ukraine increased, which is especially noticeable among children and young adults and leads to complications seeking the radical surgery to restore the structure and functioning of the teeth-jaw system [6–8].

However, radiological success of endodontic surgery, despite the considerable arsenal of drugs and tools that are constantly updated and improved, is only 30–35% [3, 10]. A significant prevalence of chronic apical periodontitis, accompanied by destruction of bone tissue alveolar process leads to the need for surgical treatment of said disease (root apex resection) to preserve teeth. This is especially true of the front teeth, which bear the aesthetic function as part of the patient's quality of life [5], especially among young people, which preserve their own teeth during the growth and

formation of the teeth-jaw system and is extremely important task in the work of dental specialist.

Purpose – determine the prevalence of major dental diseases among young people of Transcarpathian region allowing for the demographic situation.

Materials and methods

Were conducted the survey of 980 young people aged from 10 to 24 years, residents of the Transcarpathian region. The examination of the oral cavity was performed, following WHO recommendations, using conventional dental techniques and schemes of odontopatology diagnosis. Survey data were entered in the "Card survey" [4].

The presence of defects dentition and pathology of hard tissues of individual teeth examined and systematized by known classification [9]. Among which the most attention was paid to the prevalence of caries, complicated caries, periodontal disease and tissue analysis of the effectiveness of the treatment of complicated caries.

In determining the parameters of common dental diseases (were created groups of patients by age, according to WHO recommendations: the first group included 220 persons from 10 to 12 years with a variable bite, including 122 girls and 98 boys, the second group included 310 patients age 12 to 16 years, 200 girls and 110 boys, part of the third group included 235 patients, 115 boys and 120 girls aged 16 to 20 years, the fourth group was represented by 215 residents of the Transcarpathian region, aged 20 to 24 years – 120 girls and 95 boys (Table 1).

Table 1
Division by sex

Sex	Groups									
	1 group		2 group		3 group		4 group		Total	
	abs.	%	abs.	%	abs.	%	abs.	%	abs.	%
Boys	98	10.0	110	11.3	115	11.7	95	9.7	440	44.9
Girls	122	12.4	200	20.5	120	12.2	120	12.2	540	55.1
Total	220	22.4	310	31.8	235	23.9	215	21.9	980	100.0

As shown in Table 1 girls constituted 55.1% (540 people), and boys 44.9% (440 people), which corresponds to the demographic situation Transcarpathian region. With that, the girls surveyed had more than boys in all groups. This is due to a greater vulnerability of females to carious disease, despite the timely treatment of most patients.

The second largest age group were patients (12–16 years), 310 people (31.8%), and the third age group (16–20 years) – 235 persons (23.9%).

Percent division in groups described in a form of diagram (Fig. 1).

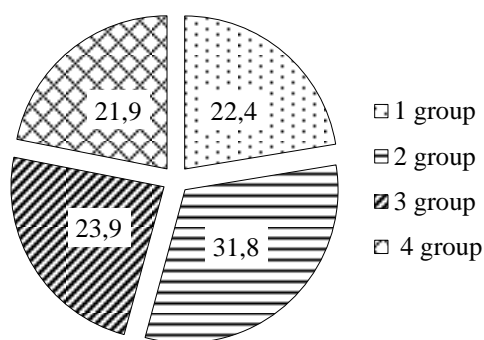


Fig. 1. Group division (%)

To install the dental status of patients studied were identified prevalence and intensity of caries and malocclusion condition using conventional classifications.

Study of the prevalence of dental caries among different age groups of men and women presented in Figure 2.

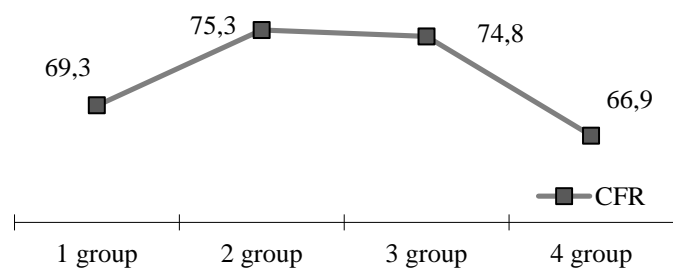


Fig. 2. Prevalence of dental caries (%)

The prevalence of caries in all groups was very high, and was in the first group on average 69.3±6.5%, in the second – 75.3±6.8%, the third – 74.8±6.7%, in fourth –

66.9±6.4%. No significant differences in the prevalence of dental caries by gender were found in all groups of observation.

Study of intensity of caries using index cf + CFR and the CFR and its structure among different age groups for male and female and are presented in Table 2.

Table 2
Indicators of intensity of caries in young people surveyed

Structure of CFR index	Groups surveyed			
	1 group (n=220)	2 group (n=310)	3 group (n=235)	4 group (n=215)
Caries	2.3±0.2	2.1±0.2	2.2±0.2	0.9±0.1
Filling	2.1±0.2	3.4±0.5	3.2±0.8	2.3±0.9
Removed	1.2±0.1	2.4±0.4	2.7±0.6	2.9±0.8
Index	5.6±0.9	7.9±1.3	8.1±1.7	6.1±0.9

Number of cavities among examined in the first group on average was 2.3±0.2; the second – 2.1±0.2; the third – 2.2±0.2; and the fourth – 0.9±0.1. Number of fillings in a first group surveyed an average of 2.1±0.2; second – 3.4±0.5; third – 3.2±0.8; and fourth – 2.3±0.9. Thus, each examined first, second and third groups are on average 2 cavities, and the fourth group 1 cavity. Number of fillings in teeth on average in the first three groups were 2, and the fourth – 3 fillings.

In the study the number of teeth removed stipulates that a first group surveyed an average of 1.2±0.1; the second group – 2.4±0.4; the third group – 2.7±0.6; and the fourth group – 2.9±0.8. That everyone surveyed in the mouth for 2 to 3 missing teeth (Fig. 3).

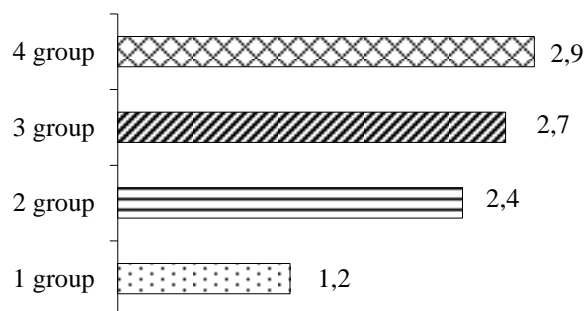


Fig. 3. The average number of teeth removed in groups surveyed

In the 980 surveyed was found a high prevalence of pulpitis and chronic periodontitis for each age group. caries complications. Established percentage of chronic Analysis of the results presented in Table 3.

Table 3

Distribution of the prevalence of various forms of complicated caries in young people

Types of complicated caries	Groups							
	1 group (n=220)		2 group (n=98)		3 group (n=235)		4 group (n=215)	
	abs.	%	abs.	%	abs.	%	abs.	%
Chronic fibrous pulpitis	16	7.3	25	8.1	22	9.4	18	8.4
Chronic periodontitis fibrous	15	6.8	31	10.0	45	19.1	47	21.9
Chronic granulomatous periodontitis	25	11.4	54	17.4	64	27.2	51	23.7
Total	56	25.5	110	35.5	131	55.7	116	54.0

In the first age group aged 10–14 years (220 surveyed) among chronic complicated caries dominated chronic granulomatous periodontitis, the existence of which was diagnosed in 11.4% (25 cases), chronic fibrous pulpitis – 7.3% (16 cases), the prevalence of chronic fibrotic periodontitis is 6.8% (15 cases). The overall complication rate of caries in this age group is 25.5% (56 cases).

In the second age group among 310 surveyed 34% (98 cases) were diagnosed with complicated caries prevalence of chronic granulomatous periodontitis 17.4% (54 cases); Chronic periodontitis fibrous percentage was 10.0% (31 case) and chronic fibrous pulpitis were found among the 25 patients, representing 8.1% respectively.

In the third group of 235 patients was met this type of pathology in 55.7% (131 cases) – chronic granulomatous periodontitis and prevalence was 27.2% (64 cases); the second largest number of diagnosed chronic fibrotic lesions taken with periodontitis rates at 19.1% (45 cases), and last in this clinical group took the pulpitis of chronic fibrotic rates at 9.4% (22 clinical cases).

In the fourth study group of 215 patients was the most common – chronic fibrotic pathology of periodontitis index of 21.9% (47 cases); less common chronic granulomatous periodontitis was 23.7% (51 cases) and chronic fibrotic pulpitis,

which was detected in 8.4% of patients (18 cases), respectively.

Conclusions

As a result of a thorough analysis of the results of epidemiological survey of 980 young people Transcarpathian region aged 10 to 24 years was found a significant prevalence of complicated caries in all age groups. The most common pathologies are chronic granulomatous periodontitis (194 cases – 19.8%), chronic fibrotic periodontitis (138 cases – 14.1%) and chronic fibrous pulpitis (81 cases – 8.3%).

Prospects for further research

Since the structure of complicated forms of caries in young people high prevalence of chronic pulpitis and destructive chronic periodontitis, and according to leading experts in the field of dentistry these types of complicated caries are the most difficult in treatment and have a low percentage of predictive success. As a result, searching for new, modern and effective methods of rehabilitation of patients with this pathology is timely, relevant and necessary scientific objectives.

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Аналіз поширеності карієсу та ускладненого карієсу в осіб молодого віку Закарпатської області

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Мета – визначити поширеність основних стоматологічних захворювань в осіб молодого віку Закарпатської області з урахуванням особливостей демографічної ситуації.

Матеріали та методи. У 980 осіб молодого віку, які мешкають у Закарпатській області, віком від 10 до 24 років, визначено поширеність та інтенсивність карієсу, ускладненого карієсу зі встановленням структури.

Результати. Поширеність карієсу та ускладненого карієсу в осіб молодого віку Закарпатської області є дуже високою.

Висновки. Встановлено значний рівень поширеності ускладненого карієсу, зокрема, хронічного гранулематозного періодонтиту (194 випадки – 19,8%), хронічного фіброзного періодонтиту (138 випадків – 14,1%) та хронічного фіброзного пульпіту (81 випадок – 8,3%), лікування яких є багатоетапним і має низький відсоток прогностичного успіху.

Ключові слова: особи молодого віку, карієс, ускладнений карієс, Закарпатська область.

Анализ распространенности кариеса и осложненного кариеса у лиц молодого возраста Закарпатской области

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Цель – изучить распространенность основных стоматологических заболеваний у людей молодого возраста Закарпатской области с учетом особенностей демографической ситуации.

Материалы и методы. У 980 лиц молодого возраста, которые живут в Закарпатской области, в возрасте от 10 до 24 лет, определены распространенность и интенсивность кариеса, осложненного кариеса и установлена структура данной патологии.

Результаты. Распространенность кариеса и осложненного кариеса у людей молодого возраста Закарпатья является очень высокой.

Выводы. Установлен значительный уровень распространенности осложненного кариеса, в частности, хронического гранулематозного периодонтита (194 случая – 19,8%), хронического фиброзного периодонтита (138 случаев – 14,1%) и хронического фиброзного пульпита (81 случай – 8,3%), лечение данных патологий является многоэтапным и имеет низкий прогностический успех.

Ключевые слова: люди молодого возраста, кариес, осложненный кариес, Закарпатская область.

Відомості про авторів

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