DENTAL ORTHOPEDIC MORBIDITY AMONG DRAFTED MEN RESIDING IN IVANO-FRANKIVSK REGION

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СТОМАТОЛОГІЧНА ОРТОПЕДИЧНА ЗАХВОРЮВАНІСТЬ У ЧОЛОВІКІВ ПРИЗОВНОГО ВІКУ ІВАНО-ФРАНКІВСЬКОЇ ОБЛАСТІ

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Abstract. The objective of the research was to establish the level of dental orthopedic morbidity among draftees in the western region of Ukraine.

Materials and Methods. A clinical dental examination of 294 drafted men residing in Ivano-Frankivsk region was carried out; among them, there were 185 urban residents and 109 rural residents.

Results. There were established a quite high prevalence of dental orthopedic morbidity and intensity of its development, especially among rural residents - 275.7 and 522.9 people per 1,000 population among urban and rural residents, respectively. The amount of orthopedic care in terms of total number of dentition defects and the teeth with destroyed coronal portion requiring orthopedic treatment, was found to be 2.4 times greater among rural residents as compared to urban ones and reached 1899.1 versus 787.6 defects, respectively. There was determined the identical structure of dentition defects among both urban and rural residents; bounded edentulous spaces accounted for 100% of cases, the absence of one tooth was observed in 92.3% of cases.

Conclusions. The urgent need for a radical reform of the system for providing comprehensive orthopedic care to drafted men with a mandatory active dispensary registration was substantiated.

Keywords: *Drafted Men; Dental Orthopedic Incidence; Prevalence; Intensity; Recommendations.*

Problem Statement and Analysis of the Latest Research

According to a number of studies, there is significant dental morbidity among both draftees and army conscripts [1-16]. However, there is a lack of information on the state of dental orthopedic morbidity among draftees and the list of measures taken by Practical Healthcare regarding this issue and, especially, a full-fledged orthopedic rehabilitation of this population category in our country.

The objective of the research was to establish the level of dental orthopedic morbidity among draftees in the western region of Ukraine.

Materials and Methods

To determine dental orthopedic morbidity among draftees in the western region of our country, we conducted an in-depth clinical dental examination of 294 male residents of Ivano-Frankivsk region being under 20 years old; among them, there were 185 urban residents and 109 rural residents.

All the initial information obtained was registered in a special "Diagnostic Record for the Examination of a Dental Orthopedic Patient" developed at the Institute of Stomatology and Maxillofacial Surgery of the National Academy of Medical Sciences of Ukraine, which consisted of three main sections: the section of dental therapeutic and surgical status, the section of dental orthopedic and orthodontic status and the section of the proposed orthopedic and orthodontic treatment with a conditional encoder of the data obtained according to the main dental diseases in all disciplines. Organizational structure of this diagnostic record allows you to simultaneously cover almost the entire dental status and determine the optimal amount of specialized medical care. To comply with the unified

methodological approaches regarding the diagnosis and the proposed type and amount of orthopedic care, the degree of hard tissue destruction in the coronal portion of the teeth was determined according to Klomin; topographic and anatomical condition of tooth roots was determined according to Tsukanova; partial absence of teeth was determined according to Kennedy, etc.

At the end of dental examinations, the obtained information was sampled and grouped by urban and rural population. There was carried out the corresponding statistical processing with the calculation of arithmetic means in compliance with the required number of subjects to obtain statistically significant data, according to the relevant guidelines of the WHO Expert Committee (1989) [17].

Results and Discussion

An in-depth comparative analysis of the obtained data showed a significant difference in the prevalence and intensity of dental orthopedic morbidity between urban and rural draftees of Ivano-Frankivsk region (Table 1).

Thus, according to Table 1, the prevalence of dental orthopedic pathology among urban population was 275.7 people per 1,000 population and among rural population, it was 522.9 people per 1,000 population, i.e., among rural residents, it was almost twofold higher – by 189.7%. There were even more impressive indicators regarding the intensity of this morbidity among urban and rural populations.

Thus, the number of teeth which required orthopedic treatment in rural residents was more than 2.3 times greater as compared to urban residents - 1302.8 against 578.4 teeth, respectively.

Table 1. Dental orthopedic morbidity in drafted men of Ivano-Frankivsk region (per 1,000 people)

Population	Number of people to be prosthethized	Number of teeth to be prosthethized	Number of dentition defects to be prosthethized	Number of teeth removed		Number of teeth and dentition defects to be prosthethized	
				Total	Per 1 examinee	Total	Per 1 examinee
Urban	275.7	578.4	189.2	210.8	0.21	787.6	0.77
Rural	522.9	1302.8	596.3	651.4	0.65	1899.1	1.90

An even more negative situation was observed in the comparative analysis of the number of dentition defects and extracted teeth among this category of the population. Thus, the number of dentition defects in drafted men residing in urban areas was 189.2, and the number of removed teeth was 210.8 per 1,000 people, while among rural residents, they were more than 3.2 and 3.1 times higher - 596.3 and 651.4, respectively.

The total number of teeth and dentition defects among urban residents was 787.6 and among rural residents, it was 1899.1, respectively, i.e., in rural residents, it was more than 2.4 times greater.

Having analyzed the indicators obtained (Table 1), there was observed the extremely high level of dental orthopedic morbidity among draftees of Ivano-Frankivsk region, especially rural residents, considering their young age.

In addition to the above materials, the indicators of the structure of dental orthopedic morbidity among drafted men who required orthopedic treatment are of some practical significance, considering further planning of orthopedic care for this category of the population (Table 2).

According to Table 2, the number of teeth to be prosthethized among urban residents was 2098.0 and among rural residents, it was 2491.0, i.e., 2.1 and 2.5 teeth per person. The numbers of dentition defects were 686.3 and 1140.4, respectively, i.e., 0.69 and 1.14 per person.

In general, these indicators are registered at the level of 2784.3 and 3736.8 among urban and rural populations, respectively, i.e., 2.78 and 3.74 per person.

Having analyzed the indicators obtained, there was found a rather noticeable and less impressive difference in these indicators among urban and rural residents; however, it was quite significant considering their very young age.

When planning dental orthopedic care, the availability of information on the structure of dentition defects in relation to implants, especially at a young age, is of both practical and theoretical significance. Table 3 presents the indicators of the structure of dentition defects the studied population of Ukraine.

According to Table 3, among the total number of dentition defects in both urban and rural populations, the most important group involved partial defects with the absence of 1 tooth, namely 92.3%; dentition defects with the absence of 2 teeth were observed in 7.7% of urban residents and 6.2% of rural residents.

Dentition defects with absence of 3 teeth were not observed in urban residents; however, among rural residents, they were observed in 9.2% of cases. These indicators showed a quite

equal distribution of partial dentition defects, similar in structure, among both urban and rural residents; most partial dentition defects, different in structure, were registered in rural residents.

Conclusions

1. The results of in-depth clinical dental examinations of 294 drafted men residing in Ivano-Frankivsk region testified a sufficiently significant prevalence of orthopedic morbidity and the intensity of its development, especially in rural areas.

2. The numbers of drafted men residing in urban and rural areas of the western region of Ukraine and requiring orthopedic treatment were found to be 275.7 and 522.9 people per 1,000 surveyed, respectively.

3. The total number of dentition defects and the teeth with destroyed coronal portion among rural draftees was 2.4 times greater than that in urban draftees - 1899.1 against 787.6 defects, respectively.

4. There was determined almost identical structure of dentition defects among both urban and rural residents; bounded edentulous spaces accounted for 100% of cases, the absence of one tooth was observed in 92.3% of cases.

Ethical Standards of the Research

The research on human subjects was conducted in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and according to World Medical Association Declaration of Helsinki – ethical principles for medical research involving human subjects.

Informed Consent

All patients gave informed consent, based on the World Medical Association Declaration of Helsinki. The information, such as names, initials, or hospital numbers is not available in the manuscript.

Material Presentation. This material was not presented to anyone else except of authors.

Financial Support. There was no financial support for this research.

Conflicts of Interest. None

Prospects for Further Research

The materials received and the above indicators showed the presence of a large dental orthopedic problem among drafted men and require the immediate and necessary development of special state programs for the radical reform of

Table 2. Structure of dental orthopedic morbidity in drafted men residing in Ivano-Frankivsk region and requiring orthopedic treatment (per 1,000 people)

Population	Number of teeth to be prosthethized		Number of dentition defects to be prosthethized		Number of teeth removed		Number of teeth and dentition defects to be prosthethized	
	Total	Per 1 examinee	Total	Per 1 examinee	Total	Per 1 examinee	Total	Per 1 examinee
Urban	2098.0	2.1	686.3	0.69	764.7	0.77	2784.3	2.78
Rural	2491.0	2.5	1140.4	1.14	1245.6	1.25	3736.8	3.74

Table 3. Structure of dentition defects requiring orthopedic treatment in drafted men residing in Ivano-Frankivsk region (per 1,000 people)

Population	Total number of dentition defects	Structure of dentition defects					
		1 tooth		2 teeth		3 teeth	
		Total	Percentage in %	Total	Percentage in %	Total	Percentage in %
Urban	189.2	173.3	92.3	15.9	7.7	–	–
Rural	596.3	550.5	92.3	36.7	6.2	9.2	1.5

organizing dental care for this population category, especially in context of their future military status and responsibility.

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