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**STUDYING THE PECULIARITIES OF DENTAL STATUS IN SMOKING PATIENTS**

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**ABOUT ARTICLE**

**Key words:** Smoking, young people, dental caries, inflammatory periodontal diseases, diseases of the oral mucosa.

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**Abstract:** The oral cavity plays a special role in the perception of undesirable factors of tobacco smoke, and the state of the oral organs is an informative indicator that dynamically reflects and reacts to its effects. This article examines the peculiarities of the influence of tobacco smoke components on the development of major dental diseases of the oral cavity in young people. The specifics of the occurrence and course of the main dental diseases - caries, inflammatory diseases of the ligamentous apparatus of the periodontal and oral mucosa are discussed. It was found that in young smokers, compared with non-smokers, dental caries is more common, mild chronic generalized periodontitis is more often diagnosed, and diseases of the oral mucosa with hyperkeratosis as the main sign are more common. Almost all (98.7%) smokers were diagnosed with cheilitis. Oral hygiene was "unsatisfactory" in the non-smokers group and "poor" in the smokers group.

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**INTRODUCTION**

Today, smoking is an important risk factor for the development of oral diseases, regardless of age. Tobacco addiction has a particularly negative impact on the health of young people. Smoking is more dangerous for young people in terms of the intensity and degree of destructive effects both on the body as a whole and on the condition of the oral cavity [4]. Tobacco addiction is classified in the International Classification of Diseases (ICD-10) (along with drug addiction) as a "mental and behavioral disorder caused by substance use." Tobacco smoking is the most common type of drug addiction in the country and a serious social and medical problem: according to WHO (2009), the prevalence of tobacco smoking

among the adult population of Russia is 39.1%, 60.2% among men and 21.7% among women. Smoking is the leading cause of death in the world. Between 3.5 and 5.4 million people die from smoking every year. The first components of tobacco smoke in the body (carbon monoxide, hydrogen cyanide, cadmium, benzanthracene, etc.) enter the oral cavity and nasopharynx. The temperature of the smoke entering the mouth is 50-60 °C. In order for the smoke to pass through the nasopharynx and enter the lungs, the smoker must open his mouth to inhale fresh air, the temperature of which is 35-40 °C below the smoke temperature. In addition, hot smoke promotes the expansion of capillaries in the mucous membranes of the cheeks, palate and gums, causing their chronic inflammation, which can lead to a chronic inflammatory process in periodontal tissues and the development of diseases of the oral mucosa - leukoplakia [1,2, 5,6]. In this regard, research aimed at determining the clinical features of the occurrence and course of major dental diseases in smokers, as well as the search for appropriate therapeutic and preventive prevention and treatment programs, is of particular importance. The purpose of this study was to study the dental status of young smokers. Materials and methods A comprehensive dental examination of 120 young men and women aged 20-25 years was carried out. Of this group, 60 smokers (40 men and 20 women) were included in group I. The criteria for including patients in this group were: regular smoking experience of at least five years, smoking at least five cigarettes a day, participation in the study and agreement with its conditions, residence in Ufa and the absence of significant physical pathology. Group II consisted of 60 people of the same sex and age, non-smokers and without pronounced physical pathology. The clinical study was conducted at the Department of Therapeutic Dentistry within the framework of the IPO GBOU HPE BSMU in the period 2011-2013. The examination and dynamic observation were carried out in the same time period in all groups. Generally accepted classifications were used to diagnose dental caries and inflammatory periodontal diseases, assess the severity and prevalence. To obtain epidemiological data on the assessment of the prevalence and intensity of major dental diseases, as well as to obtain uniform and comparable results on dental examination methods in this category, a combined map recommended by WHO (1985) was used. The dental patient's chart included survey and examination data, the results of additional examination methods, index assessments of the condition of hard dental tissues (TTZ) and periodontal tissues (PMA (1968), OHI-S (1964), PI (Russell, 1956), the SBI bleeding index (Muhlemann, Son, 1971)). The diagnosis was made on the basis of clinical data and X-ray examination (orthopantomography, dental computed tomography). Statistical processing of the obtained data was carried out on an IBM PC/AT personal computer using Statistica 7.0 and Exel 2007 programs. The Student's criterion was used to compare the data. The significant level of significance was  $p \leq 0.05$ .

Results and discussion: As a result of a comprehensive clinical examination of young smokers (group I), the following subgroups were formed by type of disease: Ia - 35 patients with chronic generalized catarrhal gingivitis (HCG); Ib - 25 patients with mild generalized chronic periodontitis (CPHP). Young non-smoking patients (group II) were distributed according to the type of disease after clinical examination as follows: group IIa - 38 patients with chronic generalized catarrhal gingivitis (HCG); group IIb - 22 patients with mild chronic generalized periodontitis (CGPLP). As a rule, patients of both groups complained of bad breath, bleeding gums when brushing teeth or eating solid food, abnormal appearance of gingival papillae, aesthetic complaints due to tooth pigmentation, increased sensitivity of teeth and irritation of the oral mucosa. The results of a comprehensive dental examination confirmed the high prevalence and intensity of dental caries in young people, regardless of the presence or absence of a bad smoking habit. In the group of young smokers with chronic catarrhal gingivitis, the CPP index averaged  $8.85 \pm 0.01$ , with the "P" component accounting for  $4.23 \pm 0.17$ , whereas in mild chronic periodontitis, the CPP index was  $11.94 \pm 0.01$ , and the "K" constant was  $6.99 \pm 0.01$  ( $p \leq 0.05$ ). According to the WHO definition, at the age of 20-25, 24.6% of caries in group Ia was localized in the vestibular region, and 57.7% in group Ib. In group II, more caries was localized in grades 1 and 2 according to Black. Class 5 occurred in 14.3% and 29.6% of cases in groups IIa and IIb, respectively. Regardless of the disease or unfair performance, oral hygiene was lower than standard indicators [3]; the OHI-S index in group Ib was significantly higher than in groups Ia and IIa:  $1.07 \pm 0.05$  for the plaque component and  $0.86 \pm 0.04$  for the tartar component in group Ia, respectively.  $44 \pm 0.08$  and  $0.92 \pm 0.08$ , respectively ( $p \leq 0.05$ ). The predominant signs of periodontal tissue damage registered in groups I and II were bleeding gums when brushing teeth and eating solid food, high concentration of pigmented plaque and deposition of hard dental material. For the differential diagnosis of the degree of periodontal tissue damage in young people, the Russell index was studied (Table 2). The Russell index was significantly higher in group Ia compared with group IIa (pU Average hygiene index for non-smokers was  $1.09 \pm 0.08$  in group IIa and  $1.65 \pm 0.09$  in group IIb. The index of the components "hard dental deposits" was  $0.33 \pm 0.04$  and  $0.59 \pm 0.06$ , respectively ( $p \leq 0.05$ ). Oral hygiene was assessed as "poor" in group I and "unsatisfactory" in group II, erosion and ulceration regularly appeared on the oral mucosa; in group II, these lesions occurred in isolated cases, in group III - in isolated cases, in group IV - in isolated cases. Chronic mechanical injury of the mucous membrane of the buccal and anterior parts of the oral cavity was more common in smokers (42.5% in group I and 17.3% in group II). In addition, in the group of young smokers, early prodromal signs of hyperkeratosis ( $21.7 \pm 1.22\%$ ) were noted during the examination of the oral mucosa. Flat type leukoplakia was diagnosed in three patients of this group. This condition was not detected in the comparison group.

## CONCLUSION

Thus, caries was more common in young smokers, mild chronic generalized periodontitis was more often diagnosed, and diseases of the oral mucosa, mainly hyperkeratotic processes, were more common than in non-smokers. Almost all (98.7%) smokers were diagnosed with cheilitis. The level of oral hygiene was assessed as "unsatisfactory" in the group of non-smokers and "poor" in the group of smokers.

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