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Research Article

**FEATURES OF THE DENTAL STATUS OF PATIENTS TAKING  
NARCOTIC SMOKING MIXTURES**<sup>1</sup>Timoshin A.V., <sup>2</sup>Dorofeev A.E., <sup>3</sup>Davidiants A.A., <sup>4</sup>Ershov K.A., <sup>5</sup>Pustokhina I.G.,  
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*This article describes the effect of "Spice" smoking mixtures containing synthetic cannabimimetics on the human body as a whole and on the condition of the mouth and teeth of drug-dependent patients.*

**Key words:** *drug-dependent patients, dental status, narcotic smoking mixtures.*

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## INTRODUCTION:

The world drug problem, which is multifaceted and dynamic by its nature, is one of the most serious challenges facing the modern world.

According to estimates by the United Nations Office on Drugs and Crime, in 2013, a total of 246 million people, or every twentieth inhabitant of the planet between the ages of 15 and 64, took illicit drugs. During the period from 1992 to 2012, the number of drug-dependent persons in Russia has increased by more than 10 times and the dynamics of the overall incidence of drug-dependent testifies to its steady growth. Consumption of so-called designer drugs has increased. By which are understood psychoactive remedies, designed to circumvent the current legislation. These include synthetic substitutes of any natural substance that completely reproduce their narcotic properties - these are the drugs that hide behind the harmless trademarks of "bath salts," "fertilizer for plants," or aromatic smoking mixtures [1].

"Spice" - one of the brands of smoking mixtures. This is a complex of synthetic psychoactive substances-cannabinoids, similar to those found in plant hemp, applied by spraying on ordinary dried grass. It is usually smoked, some are consumed inside, brewing like tea. The narcotic effect comes almost instantaneously and more often it surpasses the effect of smoking natural cannabis preparations, but is less long in time [2].

In addition, the composition of smoking mixtures "Spice" includes chemicals that can act on cannabinoid receptors - a class of cellular receptors belonging to the superfamily of G-protein-bound membrane receptors and binding to endocannabinoid ligands and exogenous ligands (actually cannabinoids and their synthetic counterparts). These substances are created by synthesis and do not have anything in common with their plant analogues in their chemical structure, and are included in the list of banned substances [3].

In domestic and foreign literature, the issues of the influence of smoking mixtures on the state of the human body are insufficiently elucidated, which causes the modernity and relevance of our study [4].

In this regard, **the purpose of our study** is to identify the specific effects of smoking mixtures "Spice" on the state of the body and the state of the mouth and teeth of drug dependent patients.

## MATERIALS AND METHODS:

This work was done at Sechenov University with supported by the "Russian Academic Excellence Project 5-100".

As indicated above, the use of active substances of synthetic "spice" not only increases the narcotic effect, but also increases the likelihood of general intoxication of the body.

In 2011, Italian researchers analyzed 17 cases of acute poisoning with synthetic cannabinoids at the poisoning center of Pavia (Lombardy, Italy) for the period 2008-2010 [5].

The use of synthetic cannabinoids can lead to the development of acute intoxication, overdoses, and also cause psychotic disorders.

As a result, the following symptoms of the "spice" effect were detected and described: rapid heartbeat, intense emotional arousal, accompanied by a feeling of anxiety and fear, confusion, pupil dilatation, hallucinations, skin sensitization in various places, drowsiness, dry mouth, fainting, dizziness, trembling limbs, increased blood pressure, disruption of the eye (ciliary) muscle, twitching of the trunk and extremities, speech disorders, rapid involuntary eye movements, split image in the eyes, low blood pressure, respiration rate, and nausea. In two cases there was a coma and in two cases - convulsive seizures. The duration of acute intoxication psychoses can be from 1 to 3 days, less often up to 5-7 days. Psychoses most often occur with hallucinatory, delirious or polymorphic symptoms. This is characterized by psychomotor agitation, fear, the presence of auditory and visual illusions of perception, expressed anxiety. There is a rapid change in emotional reactions, which is reflected in mimicry: fear can be replaced by an expression of confusion, and then an unreasonable fun. The delusional syndrome is characterized by delusions of persecution that develop shortly after the consumption of the substance. Sometimes this condition may resemble an acute attack of schizophrenia [6,7].

A number of authors suggest the possibility of the initiating role of the use of synthetic agonists of cannabinoid receptors in the development of a paranoid form of schizophrenia. Thus, cases of development of epileptic status, ischemic strokes and acute renal failure are described under the influence of synthetic cannabinoids in the medical literature [8,9].

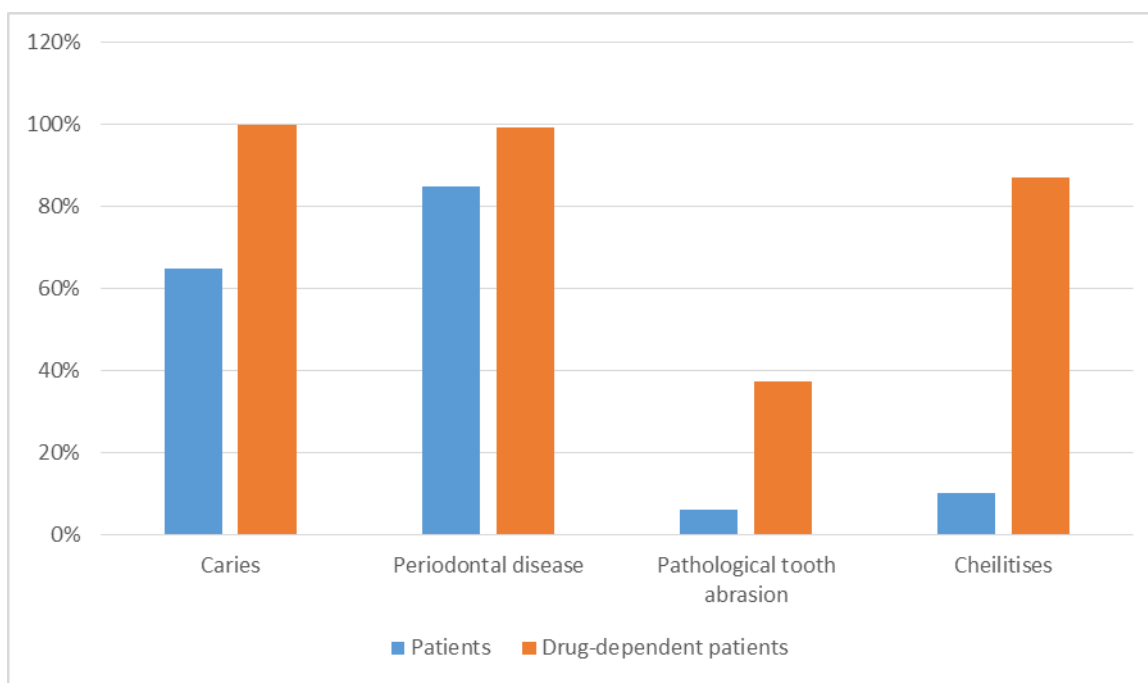
Unlike natural cannabinoids, at the use of synthetic agonists, psychophysical dependence develops quite rapidly, which is extremely difficult to treat. With prolonged use, there is a decrease in cognitive functions - memory, attention, ability to abstract thinking.

The psychological portrait of the modern consumer of drugs is also changing. In the 90s, 2000s, for the help in drug treatment facilities, socially maladjusted individuals with long-term experience of opium and subsequently joined alcohol dependence applied most often. Today the contingent is already different: adolescents and young people from 16 to 27 years [10].

### RESULTS AND DISCUSSION:

The dental status of drug-dependent patients reflects the general processes taking place in the body. There are significant changes in the dental status of persons suffering from drug dependence, along with severe changes in the body as a whole. This is largely due to the total lack of desire to lead a healthy lifestyle and to observe basic hygiene standards, including proper oral care and regular visits to the dentist.

Among drug-dependent patients dental caries affects 100% of the examined, 100% of them have caries of dentin. This indicates an extremely unfavorable trend of dental health disorders of drug-dependent persons already in adolescence. A significant number of patients with periodontal disease also attract attention. If the students were diagnosed with periodontal disease in 85% of cases, this value was 99.3% for drug-dependent patients (pic. 1).



**Fig. 1 Prevalence of dental diseases in drug-dependent and non-drug-using patients.**

The growth of abnormal abrasion of teeth was noted up to 37.4% in comparison with 6% in student youth. Significant differences were observed in the study of the mucous membrane of the mouth and lips. Thus, high prevalence of cheilitis of drug-dependent patients was noted, including angular of 73 patients aged 15-18 years, various forms of cheilitis were detected in 48 (54.2%) people. For adult patients with drug dependence, cheilitis is more common: 88.6% of men and 85.5% of women, while in student youth, cheilitis is detected in only 10% of cases (pic. 1).

Objectives of the planned study:

1. To study the features of the carious process of patients taking narcotic smoking mixtures.
2. To study the peculiarities of the periodontal, mucous membrane of the mouth and lips of patients taking narcotic smoking mixtures.
3. To determine the level of hygienic condition and the features of hygienic care for the oral cavity and teeth of the patients in the study group.
4. Identify the motivation of drug-dependent patients to learn proper dental cleaning, dental

treatment and orthopedic rehabilitation.

### CONCLUSIONS:

1. Smoking mixes "Spice" absolutely negatively affect the state of human health.
2. Further study of the characteristics of diseases of the mouth and teeth with the use of smoking mixtures "Spice" - is an urgent task.

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