

## Intolerance of construction materials

in the development of a flat form of leukoplakia of the mucous membrane of the mouth

M.V. Goryacheva, E.A. Dementieva, O.V. Oreshaka

(GBOU VPO AGMU Ministry of Health and Social Development of the Russian Federation, Barnaul, Russia)

One of the clinical manifestations of pathological keratinization of the oral mucosa and the red border of the lips, arising in response to exogenous stimuli, is leukoplakia. Among chronic diseases of the oral mucosa, this hyperkeratic process is diagnosed in 13% of patients over the age of 40, more often in men. Leukoplakia is considered an optional precancer of the oral mucosa. However, the likelihood and frequency of developing cancer against the background of this condition are not clearly defined and, according to different researchers, vary from 15 to 70%. According to a number of authors, the occurrence of leukoplakia on the oral mucosa is facilitated by traumatic and irritating factors that cause local inflammatory processes (poor-quality dentures and fillings, destroyed and abnormally located teeth;

Until now, the etiology and pathogenesis of leukoplakia of the oral mucosa have not been fully studied, in connection with which the issues of prevention and treatment of this pathological process remain open.

The purpose of our study was to clarify the possible causes of the development of a flat form of leukoplakia of the oral mucosa and development of preventive measures on this basis.

### Methods and materials

Us carried out in-depth clinical and laboratory study the state of organs and tissues of the oral cavity in 68 patients with pl ogly uniform leukoplakia, histologically verified in the Altai Regional Oncology Center. Patients aged from 53 to 75 years old (including 48 men and 20 women) were examined. The dental examination included the determination of the state of the hard tissues of the teeth using the KPU and KPU<sub>p</sub> indices. The hygienic state of the oral cavity was determined by the Green Vermillion index. The prevalence of gingival inflammation was assessed using the papillary-marginal-alveolar index. During visual examination of the oral mucosa, the color, moisture and soreness were determined, as well as the localization of hyperkeratosis foci, their sizes (transverse and longitudinal) using a measuring compass. All patients underwent a microbiological examination of the oral cavity and examination for candidiasis at the Department of Microbiology of the ASMU. Cytological research method, The material for which was scrapings obtained from the mucous membrane in the area of the lesion or lesions were carried out in the laboratory of the Altai Regional Clinical Hospital. Scrapings were obtained using a special probe used in gynecological practice, the material was applied to a glass slide, dried for 1 hour, and fixed in 96% alcohol and ether 1: 1. Also, patients with orthopedic structures (removable and non-removable) underwent

electroacupuncture diagnostics according to R. Voll's method for biological

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individual compatibility with used by orthopedic materials available in the oral cavity, or with samples for their further selection. The quality of the existing orthopedic structures in the oral cavity was assessed.

### Results and discussion

Of the 68 examined patients, 36 of the anamnesis had chronic diseases of the gastrointestinal tract (chronic cholecystitis, chronic gastritis), 18 had diseases of the cardiovascular system (hypertension, coronary artery disease), the remaining 14 patients denied the presence of chronic diseases. Localization of foci of hyperkeratosis was recorded in 38 patients on the red border of the lips, in 20 - on the cheek mucosa, in 4 - on the lateral surface of the tongue, in 4 - the area of the mouth angle, in 2 - the bottom of the oral cavity (the focus of hyperkeratosis does not rise above the surrounding tissues, with smooth, clear contours of irregular shape, painless on palpation, the surrounding mucous membrane is unchanged). Of the total number of patients examined, 22 had complete removable plate prostheses in the oral cavity, 18 had partial removable plate prostheses, 28 had a combination of removable and non-removable structures. The overwhelming majority of patients had clear quality impairments.

orthopedic structures, associated primarily with incorrect determination of the interalveolar distance, often downward, as well as misaligned occlusal contacts, inaccurate determination of the boundaries of removable dentures, insufficient modeling of fixed structures, which contributed, to a greater or lesser extent, to chronic mechanical trauma of the oral mucosa.

Microbiological examination of the oral cavity in 58 patients revealed representatives of normal microflora ( $10_{one}-10_2$ ) in acceptable concentrations. Dysbacteriosis was observed in 10 patients. Diagnostics by the method of R. Voll revealed a positive reaction to the available structural materials in the oral cavity in the majority of the examined, in particular, in 18 patients - to acrylic base plastic, in 22 - to stamped-brazed bridges, and in 6 - to stamped crowns with spray ...



Rice. one. Before treatment (S = 0.6 cm<sup>2</sup>)



Rice. 2. After treatment. Patient G., 61, positive dynamics of the area of the pathological focus of the flat form of leukoplakia in the area of the pta angle on the left against the background of folate therapy.

Thus, the results of our study showed that the main of the possible local causes of the development of a flat form of leukoplakia is chronic mechanical trauma associated with errors in the choice and quality of the manufacture of orthopedic structures, while it is necessary to take into account the identified biological incompatibility with the construction materials used.

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