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THE FEATURES OF COMORBID PATHOLOGY OF THE ORAL CAVITY AND GASTROINTESTINAL TRACT

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Abstract. *This study investigates the relationship between oral cavity conditions and gastrointestinal tract diseases in patients from the Chernivtsi region. The research involved 26 patients aged 22 to 58 with acute gastrointestinal diseases, categorized into three groups: Group I (acid-dependent diseases), Group II (chronic pancreatitis), and Group III (chronic colitis). Clinical examinations assessed dental caries (DMFT index), periodontal health (CPI), and oral hygiene (OHI-S). Results indicated significant oral health deterioration in patients with gastrointestinal diseases, particularly in Group I, which exhibited the highest DMFT values and prevalence of periodontal diseases. Notably, dental erosions were prevalent among patients with erosive gastroesophageal reflux disease (GERD). Additionally, tongue changes, including plaque and edema, were observed in all GIT patients, and recurrent aphthous stomatitis was significantly more common in Groups I and III. These findings underscore the intricate connection between oral health and gastrointestinal conditions, highlighting the oral cavity as a potential indicator of systemic disease.*

Key words: *dental caries, periodontal disease, stomatitis, gastrointestinal diseases.*

Introduction.

Nowadays the relationship between diseases of the oral cavity and the gastrointestinal tract (GIT) has been proven [1, 2, 3]. Both the oral cavity and the GIT deal with the external environment and microorganisms because of their vital epithelial barrier function in the digestive system [4]. The common reflex mechanisms can affect the motility and secretory activity of the digestive system, on one hand, and have a negative impact on the oral cavity, on the other. Often, manifestations of the disease in the oral cavity may appear before systemic signs and symptoms [1]. Oral microbiomes are essential to both oral and GIT diseases [2].

The purpose of the study was to establish a connection between the clinical manifestations of pathology in the oral cavity and GIT diseases in patients from Chernivtsi region.

Materials and methods. 26 people aged from 22 to 58 years with gastrointestinal diseases in the acute phase were examined. Patients were divided into 3 groups

depending on the somatic disease: Group I consisted of 12 people with acid-dependent diseases (gastroesophageal reflux disease, peptic ulcer), Group II – 9 people with chronic pancreatitis, Group III – 5 people with chronic colitis. The control group consisted of 10 practically healthy people. All patients underwent a clinical examination of the oral cavity. The indicators of the prevalence (in %) and intensity of dental caries – DMFT index, intensity of periodontal tissue diseases – CPI were studied, and the depth of periodontal pockets was measured in all patients. The hygienic condition of the oral cavity was assessed using the Green-Vermillion index (OHI-S). The diagnosis of periodontal diseases in patients was established according to the classification of M.F. Danylevskyj (1994). Statistical processing was performed in the Microsoft Excel 2016 program (Microsoft, USA).

Results.

Changes in the oral cavity were observed, which depended on the form and duration of a particular gastrointestinal disease in patients who suffer from diseases of the hard tissues of the teeth, periodontium and oral mucosa. When analyzing the caries intensity indicators according to the DMFT index, it was found that the maximum value of the indicator was in patients of the group I – 27.88±0.12. The DMFT index was significantly lower by 21.4 % in the group II ($p<0.05$), by 18.6 % in the group III ($p<0.05$) and by 51.3 % in the control group ($p<0.05$).

Among non-carious lesions of hard dental tissues, 58.31 % of the group I had dental erosions. According to the classification of Eccles and Jenkins (1974), grade I erosion was found in 6 people, grade II in 1 patient. Dental erosion was found mainly in patients with erosive GERD, and the severity of hard tissue lesions depended on the severity of GERD. Pathological erosion was found in 2 patients (16.66 %), mainly of the lower frontal group of teeth.

A high prevalence of periodontal diseases was found in patients of the group I, where this indicator was 83.3 %, the group II – 77.7 %, the group III – 100 %. The lowest prevalence of periodontal diseases was found in the control group – 20.0%. This confirms the idea that it is the periodontium, in the first place, that reflects pathological processes occurring in the GIT [5].

Changes in the tongue were characterized by the appearance of plaque on its surface in 100 % of people with GIT diseases. The development of edema – the appearance of teeth marks on the lateral surface of the tongue – was found in 49.98 % of group I, 33.33 % of group II and 20.0 % of group III. In 33.32 % cases of the group I desquamative glossitis was detected.

The most common pathological changes of oral mucosa were in the form of chronic recurrent aphthous stomatitis. In group I, its prevalence reached 33.2%, in group III – 60%, which exceeded the indicator in the control group by 3.3 times and 6.0 times, respectively ($p<0.05$). At the same time, the prevalence in patients in group II did not differ from that in the control group – 11.1% and 10.0%, respectively ($p>0.05$). The number of relapses of stomatitis in group I was on average 2.4±0.13 times per year, in group III – 2.9±0.21 times per year. The patient in group II indicated the number of 1.5 times per year, the patient in the control group could not clearly indicate the number of relapses. The most frequent localization of aphthae was in the cheek area at the level of premolars, on the transitional fold in the incisor area, on the mucous membrane of the lips.

Conclusions

The study confirms a significant link between oral health and gastrointestinal diseases, with specific oral manifestations correlating to the type and severity of GIT conditions. Patients with acid-dependent diseases exhibited the most pronounced oral health issues, including higher rates of dental caries and periodontal diseases, while changes in the oral mucosa, tongue, and recurrent aphthous stomatitis were prevalent across all patient groups. These findings suggest that clinicians should consider the oral cavity as a critical area for monitoring in patients with gastrointestinal disorders, as early identification and management of oral health issues may play a vital role in the overall treatment and well-being of these patients. Further research is warranted to explore the underlying mechanisms and potential therapeutic interventions that address both oral and gastrointestinal health.

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