



IMMUNOGLOBULIN IN ORAL FLUID AS A RELIABLE BIOMARKER FOR ASSESSING THE STATE OF LOCAL IMMUNITY IN THE ORAL CAVITY IN PATIENTS WITH CERVICAL CANCER

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Relevance of the study is determined by the following provisions:

Cervical cancer (CC) occupies a significant place in the structure of oncological morbidity among women and remains an important medical and social issue. In modern clinical practice, chemotherapy, radiotherapy, and their combinations are widely used in the treatment of this pathology, contributing to improved patient survival. However, these treatment modalities are associated with the development of both systemic and local adverse effects.

One of the most common and clinically significant complications of anticancer therapy is oral mucositis. This condition is characterized by inflammatory and destructive changes of the oral mucosa, the formation of erosive and ulcerative lesions, pronounced pain syndrome, and impairment of essential oral functions, including food intake and speech articulation.

In patients with cervical cancer undergoing anticancer therapy, an immunodeficient state develops, accompanied by a decrease in both systemic and local immunity, suppression of regenerative processes, and impairment of the barrier function of the oral mucosa. This leads to a more severe and prolonged course of mucositis.



From a modern perspective, mucositis should be considered not only as a local inflammatory process but also as a multifactorial pathological condition based on disturbances of mucosal immunity. A significant role in its pathogenesis is played by a decrease in the level of secretory immunoglobulin A (sIgA), which is a key factor of humoral protection of mucous membranes.

Lesions of the oral mucosa are secondary in nature and are primarily caused by the toxic and radiation effects of anticancer therapy rather than by the direct influence of the underlying oncological disease.

The high incidence and severity of mucositis often necessitate modifications of anticancer treatment, including forced interruptions and dose reductions of chemotherapeutic agents, which may negatively affect treatment efficacy and patient prognosis.

Despite the clinical importance of this problem, the features of the oral mucosa condition in women with cervical cancer remain insufficiently studied, which limits the development of pathogenetically substantiated and differentiated methods for the prevention and treatment of mucositis.

Materials and Methods

The oral cavity was examined in 90 patients.

In accordance with the aims and objectives of the study, all patients were divided into four groups, with a total of 90 participants:

- Group 1 consisted of 26 patients with oral mucositis after chemotherapy;
- Group 2 included 26 patients with oral mucositis after radiotherapy;
- Group 3 consisted of 23 patients with oral mucositis who had not received treatment;
- The control group included 15 healthy individuals.

Results and Discussion



The results of the study allow the formulation of the following clinical and practical conclusions for oncostomatological practice:

The level of specific immunoglobulin A (IgA) in saliva can be considered an informative and reliable biomarker reflecting the state of local immunity in the oral cavity of patients with cervical cancer.

Assessment of the dynamics of specific IgA levels enables effective dental monitoring, including evaluation of the severity of oral mucositis and control of the effectiveness of anticancer therapy.

In patients with a significant decrease in specific IgA levels, early implementation of preventive dental measures is advisable, including oral hygiene maintenance, the use of antiseptic agents, and local immunocorrective therapy.

An individual approach to planning dental examinations and monitoring in patients undergoing anticancer treatment helps reduce the risk of oral mucositis and associated infectious complications.

Thus, the obtained results confirm the scientific and practical significance of implementing a comprehensive approach to dental management of cancer patients, taking into account indicators of local immunity, particularly specific IgA levels.

Conclusions

In patients with cervical cancer, a significant decrease in lysozyme levels was observed, which is an important marker of local nonspecific immunity. The most pronounced immunosuppression was noted in patients undergoing chemotherapy, followed by those receiving radiotherapy. A decrease in lysozyme levels in untreated patients also confirms the immunopathogenetic effect of the tumor process.

A comprehensive assessment of lysozyme together with sIgA is important for a deeper understanding of the state of local immunity in cervical cancer and for the prevention of oncostomatological complications.



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