ANALYSIS OF THE RISK FACTORS LEADING TO BLOCKING OF NATURAL OSTIA OF THE PARANASAL SINUSES IN ACUTE RHINOSINUSITIS.

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Abstract. Acute rhinosinusitis is one of the most common diseases among the population, and its incidence has been increasing in recent years.

The functioning of paranasal sinuses largely depends on the state of their natural ostia, so changes in this anatomical structure are considered one of the important factors determining the clinical course of acute rhinosinusitis. Narrowing or complete closure (blocking) of the natural ostia of the paranasal sinuses in acute rhinosinusitis affects the formation, area and duration of the inflammatory process. Literary sources mention various risk factors that affect the functional state of the natural ostia of the paranasal sinuses, but do not provide a classification for these factors.

Background: Selecting the appropriate treatment strategy by determining the degree of patency of the natural pathway in patients with acute rhinosinusitis.

Objective: Between 2022 and 2025, 80 patients aged 36 to 84 with acute maxillary sinusitis were examined at the "Rivojidin Med Service" clinic. Among these, 48 were male and 32 female.

Methods: According to the clinical and radiological examination data, 50 patients had bilateral and 30 had unilateral cases. Of those with unilateral cases, 20 were right-sided and 10 left-sided. According to B.S. Preobrazhensky's classification, 30 cases showed purulent-serous inflammation, 30 cases had purulent inflammation, 16 had serous inflammation, and 4 cases had catarrhal inflammation.

Results: Based on our observations, we divided the risk factors leading to narrowing or complete blocking of the natural ostia of the paranasal sinuses into local and general groups.

Local factors are classified as follows:

- various curvatures of the nasal septum, perforation;
- limited or diffuse, false or true hypertrophy of the nasal turbinates, bullous changes;
- inflammatory or neoplastic processes occurring in the ethmoid air cells, bullous changes, and anatomical variations of the frontal group cells;

- some anatomical variations of the frontal group cells in the ethmoid air cells;
- hypertrophy of the uncinate process;
- ager nasi pathology;
- anatomical abnormalities of the semilunar hiatus;
- congenital or acquired anomalies of paranasal sinuses;
- interaction of the factors mentioned above.

Classification of the common factors:

- pathology of the nasopharynx – adenoid vegetations, adenoiditis, etc.;
- pathology of the mouth and pharynx– hypertrophy of the palatine tonsils, chronic tonsillitis, and others;
- disorders in the immune system – immune deficiency states, changes in cytokine balance, and others;
- changes in the biochemical homeostasis of organism;
- pathological changes in the lower respiratory tract;
- diseases in the major circulatory system with decompensated forms associated with blood stasis;
- interaction of the factors mentioned above.

In patients, a combination of local and general factors can be noted. The significance and role of risk factors leading to narrowing or complete blockage of the natural ostia of the paranasal sinuses is currently under investigation. Future research is expected to expand the list of risk factors that lead to the narrowing or complete blockage of the natural ostia of the paranasal sinuses.

Conclusion: Thus, analyzing the number and origin of the risk factors, leading to narrowing or complete blocking of the natural ostia of the paranasal sinuses in acute rhinosinusitis allows for forecasting their impact on the disease and developing pathogenetic treatment measures based on this.

BIOGRAPHY

Ulmasov Bisyorbek is conducting scientific research on the functional impairments of the natural drainage pathway in acute rhinosinusitis. He has a deep interest in this field and is committed to improving healthcare. His scientific approach focuses on understanding the pathogenesis of the disease and its clinical outcomes.With years of experience in this research field, he has been actively involved in scientific investigations, evaluation, teaching, and working within the healthcare system. His research model adopts a flexible approach to the complexities of the disease, ensuring effective outcomes for all stakeholders.



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