

RHINOSINUSITIS: CLASSIFICATION, EPIDEMIOLOGY, ETIOLOGY AND TREATMENT

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Abstract : *All over the world, an increase in the prevalence of acute and chronic forms of rhinosinusitis among adults and children is recorded. The article reflects the results of modern studies on the prevalence of rhinosinusitis, presents classifications, etiological aspects, and outlines the main tactical principles for the management and antibiotic therapy of this disease.*

Key words: *rhinosinusitis, acute and chronic forms, antibiotic therapy.*

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Introduction. The term "rhinosinusitis" is relatively young; it was introduced into scientific circulation in the mid-1990s specialists from the American Academy of Otolaryngology Head and Neck Surgery (American Academy of Surgical Otolaryngology of the Head and Neck); they also proposed a definition, a list of main and secondary symptoms, as well as a classification. In the future, the definitions of rhinosinusitis, as well as their classifications, were refined and expanded by multidisciplinary expert groups, including from the European Academy of Allergy and Clinical Immunology (EAACI - European Academy of Allergy and Clinical Immunology) and the Infectious Disease Society of America (IDSA - American Society for infectious diseases). The collective experience of clinicians and investigators has been summarized in numerous consensus documents and practice guidelines.

Main body. Currently, adult rhinosinusitis in EPOS-2012 is defined as inflammation of the mucous membrane lining the nasal passages and paranasal sinuses, characterized by two or more features. These include: nasal congestion due to edema of the mucous membrane and obstruction of the nasal passages, as well as discharge from the anterior and posterior parts of the nasal cavity (main symptoms). Among the secondary symptoms, there are: pain or a feeling of pressure (bursting) in the face, decrease or loss of smell, the presence of nasal polyps, purulent-mucous discharge, especially from the middle nasal passage, obstruction of the nasal passages (primarily the middle one) due to mucosal edema, as well as changes in the mucous membrane detected on CT within the ostiomeatal complex and / or sinuses. In children, a cough is added to the listed secondary symptoms.

Specialists from IDSA proposed a similar definition of rhinosinusitis, but their list of its main and secondary signs is wider. The main signs include purulent discharge from the nasal cavity, purulent discharge along the back of the throat, nasal congestion, pain in the face, a

feeling of fullness (pressure), a decrease or loss of smell, and fever. Among the secondary - headache, earache, bad breath, toothache, cough, fatigue.

Assess the severity of the course of rhinosinusitis L.S. Strachunsky et al. proposed according to the following criteria:

- mild degree is characterized by nasal congestion, mucous or mucopurulent discharge from the nose and / or into the oropharynx, body temperature up to 37.5 ° C, headache, weakness, hyposmia; thickness of the mucous membrane less than 6 mm, detected on the radiograph of the paranasal sinuses;

- moderate severity - nasal congestion, purulent discharge from the nose and / or into the oropharynx, body temperature above 37.5 ° C, pain and tenderness on palpation in the projection of the sinus, headache, hyposmia, there may be irradiation of pain in the teeth, ears, general malaise, the thickness of the mucous membrane is more than 6 mm; complete blackout or fluid level in 1 or 2 sinuses on the radiograph of the paranasal sinuses;

- severe - nasal congestion, often profuse purulent discharge from the nose and / or into the oropharynx (but may be absent), body temperature above 38 ° C, severe pain on palpation in the projection of the sinus, headache, anosmia, severe weakness, complete blackout or fluid level more than 2 sinuses on the radiograph of the paranasal sinuses; in the general blood test - increased leukocytosis, shift of the formula to the left, acceleration of ESR; orbital, intracranial complications or suspicion of them. Moreover, in each specific case, the severity of the clinical course should be assessed by the totality of the most pronounced symptoms. For example, if orbital or intracranial complications are suspected, the course of the disease should be regarded as severe, regardless of the severity of other symptoms.

EPOS-2012 contains a recommendation to determine the severity of the course of rhinosinusitis based on a subjective assessment of the condition by the patient himself, using the visual analog scale VAS (visual analog scale). The scale is a 10-cm ruler, where 0 cm corresponds to the absence of complaints, and 10 cm - their maximum severity. After being instructed by a medical worker, the patient marks a point on the ruler that corresponds to a subjective assessment of his well-being or the severity of a particular symptom. Divisions from 0 to 3 cm correspond to a mild degree, from 3 to 7 cm - to an average degree, and from 7 to 10 cm - to a severe degree of the disease.

According to IDSA, typical features suggestive of acute bacterial rhinosinusitis are:

- the onset of the disease with the appearance of persistent symptoms of acute rhinosinusitis, which persist for at least 10 days without visible signs of clinical improvement;
- clinical manifestation: either a sudden increase in body temperature up to 39 ° C, the appearance of purulent discharge from the nose and / or pain in the face, which persist for 3-4 days, or “double sickening” (the appearance of the listed symptoms after a viral rhinosinusitis, which lasted 5-6 days).

According to the IDSA clinical and practical recommendations, the complex of examinations for acute rhinosinusitis should include mandatory rhinoscopy / rhinoscopy, X-ray of the paranasal sinuses in 3 projections, CT / MRI of the nasal cavity, paranasal sinuses, orbits, brain - at the slightest suspicion of development, complications and to control treatment.

Conclusion. The prognosis for mild and moderate forms of acute rhinosinusitis is relatively favorable. In severe and complicated forms, the timeliness of emergency specialized care is of great importance in the outcome of the disease. Of great importance is the patient's age, comorbid background, the presence of diseases and conditions that significantly reduce the protective and adaptive capabilities of the body. One of the most important aspects of the prevention of acute rhinosinusitis is the prevention and timely treatment of acute and recurrent respiratory viral infections. With the existing pathology of the nasal cavity, nasopharynx, surgical treatment, restoration of nasal breathing, the protective function of the nasal cavity and paranasal sinuses is of paramount importance in the prevention of acute and recurrent forms of rhinosinusitis.

References

1. Hadley J.A., Schaefer S.D. Clinical evaluation of rhinosinusitis: history and physical examination. *Otolaryngology - Head Neck Surgery*. 1997;117(3)pt 2:S8-S11. doi:10.1016/S0194-5998(97)70002-0.
2. Lanza D., Kennedy D.W. Adult rhinosinusitis defined. *Otolaryngology - Head Neck Surgery*. 1997; 117(3)pt 2:S1-S7. doi:10.1016/s0194-5998(97)70001-9.
3. Meltzer E.O., Hamilos D.L., Hadley J.A., Lanza D., Marple B., Nicklas R., Bachert C., Baraniuk J., Baroody F., Benninger M. Rhinosinusitis: establishing definitions for clinical research and patient care. *Otolaryngology - Head Neck Surgery*. 2004; 114(suppl.6):155-212. doi:10.1016/j.jaci.2004.09.029.
4. Meltzer E.O. Hamilos D.L. Rhinosinusitis diagnosis and management for the clinician: a synopsis of recent consensus guidelines. *Mayo Clinic Proceedings*. 2011;86(5): 427-443. doi:10.4065/mcp.2010.0392.
5. Thomas M., Yawn B., Price D., Lund V., Mullol J., Fokkens W. EPOS Primary Care Guidelines: European Position Paper on the Primary Care Diagnosis and Management of Rhinosinusitis and Nasal Polyps 2007 - a summary. *Primary Care Respiratory Journal*. 2008; 17(2):79-89. doi:10.3132/pcrj.2008.00029.
6. Narbaevna, S. D. (2022). Scientific medical text in the medical paradigm linguistics.