CLINICAL MANIFESTATIONS OF VASOMOTOR RHINITIS

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ABSTRACT

Vasomotor rhinitis is a chronic rhinitis characterized by episodes of sneezing and nasal congestion, as well as profuse watery nasal discharge. The underlying cause is excessive dilation of mucous membrane blood vessels in response to environmental irritants. The nature of vasomotor rhinitis remains unclear. It is believed that impaired vascular tone occurs due to dysfunction of the sympathetic and parasympathetic divisions of the nervous system. In vasomotor rhinitis, the parasympathetic division, which is responsible for vasodilation, predominates. It is estimated that approximately 10% of the population experiences this condition to varying degrees. It is worth noting that vasomotor rhinitis is a hypersensitive reaction to any environmental irritant, unlike allergic rhinitis, which is caused by an immune response to proteins, pollen, pet dander, mold, etc...

Relevance. The cause of non-allergic vasomotor rhinitis remains a topic of medical research and debate. It is believed that the neurovegetative mechanism regulating vascular tone is disrupted in vasomotor rhinitis. Nerve endings in the nasal mucosa overreact to stimuli. As a result, the vessels lining the nasal mucosa dilate, blood flow increases, and the mucosa becomes edematous.

Irritating factors include:

- dry, cold air;
- changes in atmospheric pressure and temperature;
- strong odors, perfumes;
- inhalation of irritants (food, chemicals, cigarette smoke, smog);
- stress (emotional and physical);
- spicy foods;
- concomitant chronic diseases;
- certain medications (hypertension medications).

Clinical manifestations of vasomotor rhinitis often lead to a decrease in quality of life, sleep disturbances and work capacity.

Reviews of otolaryngology centers in Uzbekistan note an increase in the number of patients with vasomotor rhinitis in clinical practice, although registration and analytical

reports on rhinitis more often discuss allergic rhinitis, which, according to the Ministry of Health of the Republic of Uzbekistan, affects 12-24% of the population of Uzbekistan. Regional reviews document an increase in clinical cases of unexplained chronic rhinitis.

Despite its widespread prevalence, there is insufficient data in the domestic and regional literature on the clinical and functional characteristics of vasoactive rhinitis in young patients, which necessitates research.

Purpose of the study. To study clinical symptoms, functional changes and their relationship in young patients with vasomotor rhinitis in the Fergana Valley.

Materials and methods. A prospective clinical study was conducted at the otolaryngology department of the private clinic Meridian in the Fergana region from January 2023 to December 2025.

During the clinical examination, the following materials were collected: a detailed anamnesis, rhinoscopy and endoscopy of the nasal cavity, measurement of nasal breathing using the rhinomanometry method, assessment of subjective symptoms using a visual analogue scale (VAS).

Statistical analysis utilized descriptive statistics, the χ^2 test for comparing categorical data, and correlation analysis (Pearson r) to assess the relationship between clinical and functional parameters. Statistical significance was considered at $p < 0.05$.

Results. The study collected demographic data. A total of 382 patients with confirmed vasomotor rhinitis were examined. The average age was 27.8 ± 4.5 years. The male-to-female ratio was 1:1.2.

When studying the main clinical manifestations, the most common symptoms were: difficulty breathing through the nose - 93% of patients, periodic rhinorrhea - 76%, a feeling of nasal congestion - 68%, sneezing attacks without an allergic component - 41%.

When determining functional indicators, rhinomanometry revealed a decrease in the minimum volume of nasal breathing in 84% of patients, the average air resistance index was 0.71±0.12 cm H_2O/l/s (reference values <0.40).

Subjective assessment using VAS confirmed the severity of symptoms: average score for difficulty breathing was 6.9 ± 1.8; average score for rhinorrhea was 5.2 ± 1.5.

When conducting a correlation analysis, a significant positive correlation was established between the severity of subjective symptoms according to VAS and the degree of functional impairment according to rhinomanometry ($r = 0.62$; $p < 0.01$), which indicates a relationship between clinical manifestations and objective parameters of nasal breathing.

The data obtained confirm that vasomotor rhinitis in young patients is characterized by pronounced clinical symptoms and significant functional impairment of nasal breathing. The ratio of subjective and objective indicators revealed a significant correlation, emphasizing the importance of a comprehensive patient assessment during clinical diagnosis. In the Fergana Valley, environmental and climatic factors (dust, temperature fluctuations) may exacerbate the severity of symptoms.

Conclusions. Vasomotor rhinitis in young patients in the Fergana Valley is associated with a high incidence of nasal obstruction and objectively confirmed functional impairment. There is a reliable correlation between subjective complaints and objective parameters of

nasal resistance. A comprehensive clinical and functional assessment is necessary for optimal treatment decisions.

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