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## **OCCURRENCE OF RHINOSINUSITIS, CLINIC COURSE AND INDIVIDUALITY OF TREATMENT**

**Resume.** In this article, special attention is paid to the clinic, diagnosis and treatment of comorbid processes in diseases of the nasal cavity and diseases of the bronchopulmonary system.

The fact that such comorbid pathologies are becoming more common in recent years has raised the question that patients negatively affect their quality of life.

**Key words:** comorbid pathology, rhinosinusitis, chronic obstructive pulmonary disease.

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## **ВОЗНИКНОВЕНИЕ РИНОСИНУСИТА, КЛИНИКА ТЕЧЕНИЯ И ИНДИВИДУАЛЬНОСТЬ ЛЕЧЕНИЯ**

**Резюме.** В данной статье особое внимание уделяется клинике, диагностике и лечению коморбидных процессов при заболеваниях полости носа и заболеваниях бронхолегочной системы.

Тот факт, что в последнее время такие коморбидные патологии становятся все более распространенными, поднял вопрос о том, что пациенты негативно влияют на качество их жизни.

**Ключевые слова:** коморбидная патология, риносинусит, хроническая обструктивная болезни легких.

**Relevance.** Despite numerous reports on the relationship between the pathology of the upper respiratory tract and bronchial asthma, the coverage of the nuances of the combination of COPD and rhinosinusitis began in the medical literature relatively recently [6].

In a very few foreign publications, it was found that from 40 to 88% of COPD patients present some form of nasal complaint [2,8].

Thus, the prevalence of inflammatory pathology of the mucous membrane of the nasal cavity and paranasal sinuses in patients with COPD is practically not studied; there is no information in the literature about X-ray screening examination of the paranasal sinuses in patients with exacerbation of COPD [1,7]. This is surprising, given that the pathogenesis of chronic rhinosinusitis and COPD is based on the phenomenon of the so-called "vicious" circle - a chain of successive, closely related structural changes in the mucous membrane of the respiratory tract, leading to the development of inflammation, impaired mucociliary transport and colonization of the respiratory tract by microflora [3].

It is known that one of the factors contributing to the development of COPD and to a greater extent its exacerbation is a bacterial infection [4,8]. This circumstance dictates the need to obtain convincing evidence of the relationship between the nature of chronic bacterial infection of the upper respiratory tract and the severity, nature, and clinical features of COPD. It is the representatives of conditionally pathogenic microflora that are the most significant causative agents of exacerbation of chronic rhinosinusitis and COPD [5].

However, there have been no published studies on the parallel study of the microflora of the mucous membrane of the nasal cavity and lower respiratory tract in patients with COPD.

Thus, in modern literature, the problem of the relationship between diseases of the nasal cavity, paranasal sinuses and COPD is practically not studied. Two pathological conditions that occur comorbidly, in fact, are a single disease [2].

Of course, inflammation in the upper respiratory tract supports a similar process in the lower respiratory tract and vice versa, stimulating the progression of both diseases and the irreversibility of structural changes in the bronchopulmonary system [3,6].

Apparently, one of the reasons for the low effectiveness of the treatment of exacerbations of COPD is the lack of information about the concomitant pathology of the upper respiratory tract and about the features of the microbial landscape in this category of patients [2].

Therefore, the direct result of the developed schemes for the management of patients with combined pathology of the upper respiratory tract and COPD is the creation of effective and comprehensive treatment methods that take into account all the etio-pathogenetic aspects of these diseases. All of the above emphasizes the relevance of the dissertation topic chosen by the author[4].

**Purpose of the study.** To study the prevalence of nasal cavity pathology in patients with COPD and to determine the role of an integrated approach in the treatment of inflammatory pathology of the nasal cavity, paranasal sinuses and COPD.

**Materials and research methods.** To accomplish this task, we selected and studied 70 patients with comorbidities of rhinosinusitis and chronic obstructive pulmonary disease.

**Research results.** Symptoms of inflammatory diseases of the nasal cavity and paranasal sinuses are present in 64.9% of patients with COPD. According to an objective examination, chronic inflammatory changes in the paranasal sinuses are diagnosed in 32.9% of cases with exacerbation of COPD.

The microbial landscape of sputum and nasal secretion in patients with COPD is almost identical. The main causative agent of exacerbation of chronic rhinosinusitis in patients with COPD (group 1) is *Streptococcus pneumoniae* (29%). *Streptococcus pneumoniae* in 11.1% (n=94) of cases is detected in the nasal secretion of COPD patients during remission or with latent rhinosinusitis (groups 2 and 3), which indicates colonization of the upper respiratory tract by opportunistic flora.

Atypical microflora (*Chlamydia pneumoniae*) was diagnosed in scrapings from the nasal cavity in 5.3% of cases and is not dominant.

The severity of exacerbation-chronic rhinosinusitis is determined by the stage of COPD. This relationship was expressed in the predominance of patients with stages III (29%) and IV (38%) of COPD diseases in the first group in patients with moderate rhinosinusitis compared with the second (III - 26%; IV - 23.3%) and the third group (III - 21.20%; IV - 15.5% respectively)

Antibacterial therapy for exacerbation of chronic rhinosinusitis and COPD should be carried out taking into account the likely pathogens of diseases of the upper and lower respiratory tract (cefixime, moxifloxacin), in combination with intranasal glucocorticosteroids (mometasone furoate) and washing the nasal cavity with sea water.

As a result of a comprehensive examination of patients with COPD, it was determined that inflammatory pathology of the nasal cavity is diagnosed in 64.9% of cases in patients with exacerbation of COPD, i.e., the need to consult an otorhinolaryngologist in the complex of mandatory diagnostic and therapeutic measures in patients with COPD is shown.

An almost identical microbial landscape was found in nasal swabs and sputum in patients with COPD, which may indicate a relationship between inflammation of the upper and lower respiratory tract.

The most topical pathogens of chronic rhinosinusitis in patients with COPD and their sensitivity to modern antibacterial agents have been determined.

An algorithm has been created to help the practitioner navigate the choice of methods for diagnosing and treating inflammatory diseases of the nasal cavity in patients with COPD.

Conclusions: 1. Patients with COPD must be examined by an otorhinolaryngologist.

2. Along with the standard otorhinolaryngological examination, these patients require computed tomography of the paranasal sinuses and microbiological examination of sputum and smear from the nasal mucosa.

3. In case of exacerbation of chronic rhinosinusitis of moderate course in patients with COPD stages 1 and 2, cephalosporins of the latest generations are adequate drugs.

4. In case of exacerbation of chronic rhinosinusitis of moderate and severe course in a patient with comorbid COPD of stages 3-4, respiratory fluoroquinolones are adequate drugs. The empirical choice of an antibacterial drug should be based on the optimal antibacterial spectrum of the drug, convenient dosing regimen, application and stage of COPD.

5. Dynamic monitoring of patients with COPD by an otorhinolaryngologist, treatment with intranasal glucocorticosteroids and washing of the nasal cavity on an ongoing basis serve as an effective prevention of inflammation of the mucous membrane of the nasal cavity and paranasal sinuses.

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