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**COMORBIDITY IN CHRONIC OBSTRUCTIVE PULMONARY
DISEASE AND RHINOSINUSITIS: CLINIC AND TREATMENT
FEATURES**

Resume: The comorbid background of patients with chronic obstructive pulmonary disease (COPD) is burdened by no less than the somatic status of "vascular" patients, while it is obvious that COPD, in turn, aggravates the clinical course of the absolute majority of diseases known today according to a number of clinical and laboratory indicators.

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.

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

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**КОМОРБИДНОСТЬ ПРИ ХРОНИЧЕСКОЙ ОБСТРУКТИВНОЙ
БОЛЕЗНИ ЛЕГКИХ И РИНОСИНУСИТЕ: КЛИНИКА И
ОСОБЕННОСТИ ЛЕЧЕНИЯ**

Резюме: Коморбидный фон пациентов с хронической обструктивной болезнью легких (ХОБЛ) отягощен отнюдь не меньше соматического статуса «сосудистых» больных, при этом очевидно, что ХОБЛ в свою очередь по ряду клинических и лабораторных показателей усугубляет

клиническое течение абсолютного большинства известных сегодня заболеваний.

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

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

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

In very few foreign publications, it was revealed that from 40 to 88% of COPD patients present some kind of complaints from the nose[2,8].

Thus, the prevalence of inflammatory pathology of the nasal mucosa and paranasal sinuses in patients suffering from COPD has not been practically 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 sequential, closely related structural changes in the mucous membrane of the respiratory tract, leading to the development of inflammation, disruption of mucociliary transport and colonization of the respiratory tract by microflora [3].

It is known that bacterial infection is one of the factors contributing to the development of COPD and to a greater extent its exacerbation [4,8]. This circumstance dictates the need to obtain convincing evidence about 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 nasal mucosa and lower respiratory tract in patients with COPD.

Thus, in the modern literature, the problem of the relationship between diseases of the nasal cavity, paranasal sinuses and COPD is practically not studied. Two pathological conditions occurring comorbidally, 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 irreversible structural changes in the respiratory system[3,6].

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

Therefore, the immediate result of the developed management schemes for 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 highlights the relevance of the dissertation topic chosen by the author[4].

The 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 methods of research. To accomplish this task, we selected and studied 70 patients with concomitant diseases of rhinosinusitis and chronic obstructive pulmonary disease.

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

The microbial landscape of sputum and nasal secretions in COPD patients is almost identical. The main causative agent of exacerbation of chronic rhinosinusitis in COPD patients (group 1) is *Streptococcus pneumoniae* (29%). *Streptococcus pneumoniae* in 11.1% (n-94) of cases is detected in nasal secretions in 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 the nasal cavity scraping 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 of stage III (29%) and IV (38%) of COPD diseases in the first group of 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 probable 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 a complex of mandatory diagnostic and therapeutic measures in patients with COPD is shown.

An almost identical microbial landscape was revealed in smears from the nasal cavity and sputum in patients with COPD, which may indicate the relationship of inflammation of the upper and lower respiratory tract.

The most • relevant pathogens of chronic rhinosinusitis in patients with COPD' and their sensitivity to modern antibacterial agents have been identified.

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

Conclusions: Patients with COPD must necessarily be examined by an otorhinolaryngologist. Along with the standard otorhinolaryngological examination, these patients need computed tomography of the paranasal sinuses and microbiological examination of sputum and smear from the nasal mucosa.

With the exacerbation of chronic rhinosinusitis of the middle stage in patients with COPD stages 1 and 2, cephalosporins of the latest generations are adequate drugs.

In case of exacerbation of chronic rhinosinusitis of moderate and severe course in a patient with comorbid COPD of stage 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, a convenient dosage regimen, use and stage of COPD.

Dynamic monitoring of patients with COPD by an otorhinolaryngologist, conducting courses of treatment with intranasal glucocorticosteroids and rinsing the nasal cavity, on an ongoing basis serve as an effective prevention of inflammatory processes of the nasal mucosa and paranasal sinuses.

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