

($p < 0.01$), especially when non-allergic and mixed forms of asthma ($r = 0,72$, $p < 0.01$), the presence of chronic diseases of otolaryngology organs ($r = 0,54$, $p < 0.05$).

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SOME ASPECTS OF CLINICAL COURSE AND TREATMENT OF PNEUMONIA AT THE CURRENT STAGE

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Abstract Respiratory pathology now has the leading role in morbidity structure of adult population. Despite the success of pharmacotherapy, the development of more and more new generations of antimicrobial drugs, pneumonia occupies a significant position in the human structure of morbidity. In Russia, more than 1.5 million people are observed by doctors in connection with this disease each year, 20% of them – are admitted to hospital in a severe condition. During the study it was found that a diagnosis of pneumonia and the using of antibacterial therapy during the first day of the onset of the disease was observed in 19% of cases, within 7 days from the onset of the disease - in 76.6% of cases, 14 days or more - 4 2%. The presence of comorbidities that exacerbate pneumonia was seen in 80.9% of patients. SARS preceded the development of pneumonia in 61.9% of patients.

Key words: pneumonia, clinical course, antibiotic therapy

Pneumonia is one of the serious problems of clinical medicine in modern society. The incidence of com-

munity-acquired pneumonia (CAP) in the developed countries ranges from 2 to 15 cases per 1,000 people per year, and mortality among hospitalized patients is 5-15%. As for Russia, the average annual incidence of CAP in recent years is 14-15 ‰ [1]. Timely diagnosis and treatment of pneumonia is one of the urgent problems of modern pulmonology. It is known that every year more than 1500 000 people in Russia suffer pneumonia and the number of patients diagnosed with pneumonia that hospitalized to the therapeutic type hospitals, exceeded 600 000 people (2013).

Community-acquired pneumonia is defined as "an acute disease that emerged in the community, i.e. outside the hospital or within 4 weeks after discharge from it, or diagnosed in the first 48 hours from the time of admission, or occurred in a patient, who are not in the homes of nursing / prolonged medical observation departments ≥ 14 days, accompanied by symptoms of lower respiratory tract infection (fever, cough, sputum production, possibly purulent, chest pain, shortness of breath) and radiological signs of "fresh" focal-infiltrative changes in the lungs in the absence of clear diagnostic alternatives "[2,3].

The incidence of pneumonia in the Amur region is an average of 574.1 cases per 100 thousand citizens, which is higher than the all-Russian level by 31% (396.8 per 100 thousand.). In connection with this there is an interest in studying of the clinical characteristics of the course and approaches to the treatment of pneumonia at the current stage.

Purpose of the research: To study the clinical features of pneumonia and approaches to antibiotic therapy according to the data of pulmonology department of SAHI "Amur Regional Clinical Hospital" in 2014.

Material and methods. We analyzed 163 case histories of patients for the period of 2014. The clinical and radiological features of CAP flow, distribution of patients by sex, age, preceding pneumonia SARS, the severity of the pneumonia, the presence of co-morbidities (chronic obstructive pulmonary disease, congestive heart failure, diabetes, liver cirrhosis, alcoholism, renal failure, etc.) outcome of the disease, presence of complications, terms of the initiation of antibiotic therapy, the clinical efficacy of the initial antibiotic and antiviral therapy were studied.

It was revealed that there were 96 men (58.8%) and 67 women (41.1%) among the patients with pneumonia. The age structure was as follows: at the age of 18-40 years - 32 patients (19.6%), 41-60 years - 59 (36.1%), 61-80 years - 51 (31.2%), 81 or older - 21 (15.4%). The diagnosis of pneumonia and the using of antibacterial therapy during the first day of onset noted in 31 cases (19%) within 7 days of onset - in 125 cases (76.6% men), for 14 days or more - 7 cases (4.2%)

The frequency of SARS that preceding pneumonia was analyzed. SARS had preceded pneumonia in 101 patients (61.9%). In the overwhelming majority of cases - in 131 patients (80.3%) pneumonia was community-acquired, in 32 patients (19.6%) - nosocomial. Comorbidity was observed in 132 patients (80.9%), chronic obstructive pulmonary disease, diabetes, heart failure, cancer, chronic kidney disease, chronic liver disease, smoking, alcoholism, drug addiction, i.e. patients with immunodeficiency that was aggravating clinical pneumonia, also promoting the development of complications and worsening the prognosis of the disease.

By the degree of severity of pneumonia patients were distributed as follows: in 97 cases (59%) - to moderate in 68 (41.7%) - heavy.

The empirical choice of antibiotics based on national recommendations about CAP [2, 3]. From the first day of treatment in hospital patients received antibiotics following pharmacological groups: aminopenicillins advantageously inhibitors-protected, cephalosporins basically III generation, modern macrolides, respiratory fluoroquinolones, carbapenems. 78.5% of patients (128) were on combination therapy: antibacterial and antiviral (Ingavirin, oseltamivir).

Effect of receiving treatment was assessed by clinical and radiographic dynamics of the disease: a positive trend within 7 days from the start of treatment was observed in 125 patients (76.6%), for 14 days - in 34 (20.8%). The dynamics of X-ray pictures of patients receiving antiviral therapy was studied: a positive trend - in 115 cases (89.8%), for 14 days or more - in 13 (10.1%). In a satisfactory condition were discharged: 144 patients (88.3%), with the formation of morphological defects - 14 (8.5%), death - 4 (2.4%). In one patient outcome could not be traced - refuse of further treatment (0.6%).

According to the analyzed data, sequential approach to the appointment of antibacterial therapy is carrying out which is assuming a two-stage application of antibiotics: the beginning of treatment with parenteral administration of drugs with a subsequent transition to their oral intake immediately after the stabilization of the patient's clinical condition. The main idea of sequential therapy is to reduce the parenteral antibiotic therapy, which provides a significant reduction in the cost of treatment and reduce of patient's length of stay in the hospital while maintaining high clinical efficacy. The most frequent combination of antibacterial drugs was a combination of cephalosporins, and macrolides.

Conclusions. Thus, problem of the diagnosis and treatment of the of pneumonia today determines the necessity for a flexible approach, accounting of the federal and regional data on the changes of the sensitivity of the microbial flora, the emergence of new antimicrobial agents with the clarifying of their potential, tolerability and safety data defining the location of new therapeutic approaches in the therapeutic complex of

patients with various forms of pneumonia, including, if indicated - the timely appointment of adequate levels of antiviral therapy.

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ANTI-INFECTIVE ACTIVITY OF PLANT FLAVONOIDS: RESEARCH PROSPECTS

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Abstract A brief overview of the history of the study of non-trivial properties of plant flavonoids against microorganisms - causative agents of human infectious diseases. Antibacterial and antiviral properties are considered. Attention is paid to the ability of flavonoids to inhibit bacterial adhesion ability. The prospects of such research are discussed.

Key words: plant flavonoid; antioxidants; bacterial adhesion; antibacterial, anti-viral properties.

The search for new abilities that can oppose to pathogens of infectious diseases has not lost its relevance. Along with conventional pharmacological agents, substances such as flavonoids, also have antibacterial and antiviral properties. The study of flavonoids anti-infective properties began three decades ago [7]. It was found that the antiviral ability of flavonoids is correlated with the inhibition of histamine release from competent cells, such as basophils [12].

Scientist's interest to the antioxidant properties of flavonoids [3] is growing up, by its ability to identify their fungistatic by restoring lymphocytic reaction, reducing the deficit of CD4+ lymphocytes, B-cells stimulation to provide by basic classes of immunoglobulins and increase the efficiency of phagocytic reactions [1]. It was found that the antioxidant effect of the flavonoids made by different mechanisms. Flavonoids may act as classic phenolic radical inhibitors interacting with the lipid radicals; or reacting with reactive oxygen forms [8]. Another way is related to the inhibition of lipoxygenase, or linking Fe³⁺ ions, which activates free radical oxidation [4].

There are catechins have antimicrobial activity against a broad spectrum of microorganism from known flavonoids. Particularly, their polymerized form — tannins can inhibit the growth of *Candida mycoderma* a concentration of 2 g/L. Catechins at concentrations of 0.25 g/L inhibit the growth of cariogenic bacteria streptococcal, thus inhibit the synthesis of bacterial peptidoglycan promoting destruction of tooth enamel. By themselves, flavonoids, binding with bacterial cell wall proteins, promote subsequent lysis of the bacterial cell [6].

All these properties are attributed big interest of flavonoids on the adhesiveness of microorganisms [5]. It is known that negatively affect the bacterial protein, reducing their adhesive properties, phenol carbonic acids. It is natural to assume a similar action in flavonoids as plant phenolic compounds are flavonoids — polyphenols. Thus, fairly well-known flavonoid naringenin is the plant growth retardant phenol [2].

The practical application of knowledge about these properties, such as reflected in clinical trials such as the causative agents of *Candida albicans* [14], *Helicobacter pylori* [13], *Streptococcus mutans* [9], *Staphylococcus aureus* [11], *Salmonella enterica* [15], *Escherichia coli* [10] etc. Everywhere took place ability of different plant flavonoids (such as procyanidins, Humulin, Morin, Quercetin, and others) to suppress microbial adhesion.

The work in this area there is a clear positive outlook. Scientific search for antibacterial, antiviral and anti-adhesive properties of the flavonoids appropriate to continue.

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