

The Role of Endogenous Factors in The Pathogenesis of Bilateral Interstitial Pneumonia Outside the Hospital

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Annotation: This article presents information about interstitial lung diseases, their classification, specific aspects of interstitial lung diseases, the role of age, concomitant diseases, background diseases, and compensatory mechanisms in the pathogenesis of bilateral interstitial pneumonia outside the hospital.

Key words: ischemic heart diseases, diabetes, extrasystole, shortness of breath, related diseases

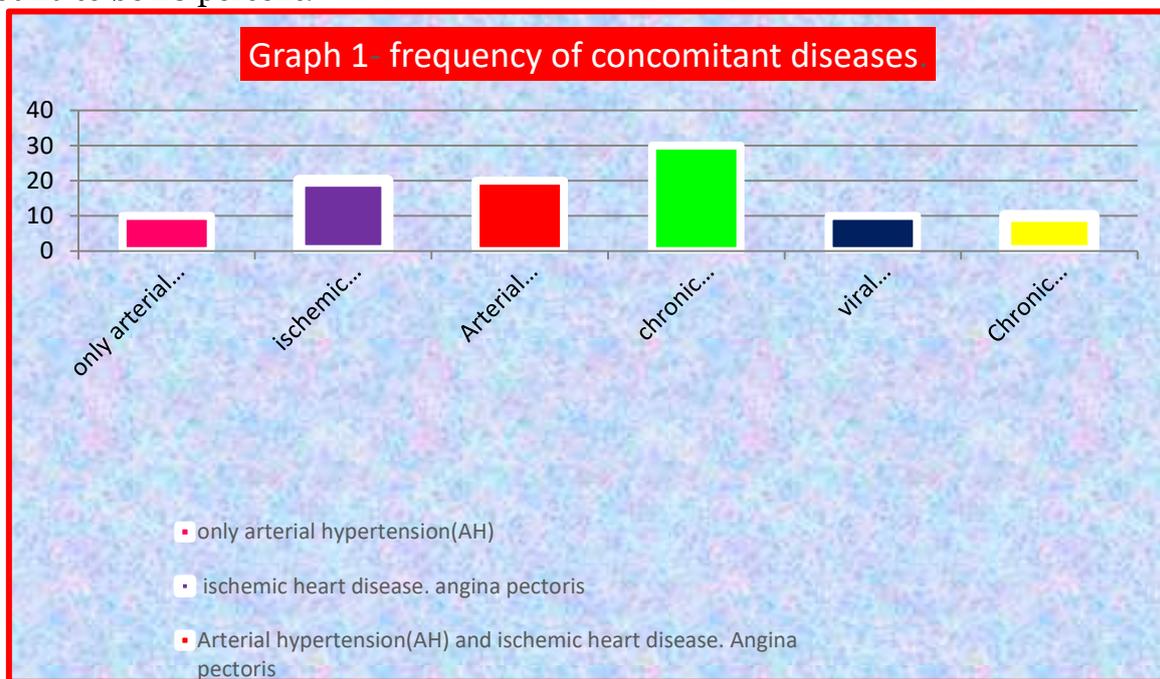
Relevance of the topic: Among all types of pneumonia, interstitial pneumonia is one of the most discussed diseases nowadays. Often, doctors cannot determine where it originates from, what are its real causes. But the disease proceeds aggressively and damages the lungs seriously [1,2]. Interstitial pneumonia is a specific type of inflammation in which the probability of the pathology becoming chronic is very high, and although the disease is rare, it is very dangerous. In classic pneumonia, inflammation occurs in the alveoli. Because of this, the gas exchange in lungs between blood and the environment deteriorates [5,6]. The main difference between interstitial pneumonia is the inflammation of the tissue that surrounds the alveoli and forms the framework of the organ (interstitial or connective tissue) [3,4]. The process can be acute or chronic, the tissue around the alveoli swells, as a result of which the lungs do not expand well when breathing, they become "stiff". As a result, a scar (fibrosis) begins to form in the lungs, which causes them to be unable to fully perform their tasks. Scientists still do not know the exact cause of this pneumonia. There are theories that the cause may be a disorder of the immune system. But some external provocateurs are needed for immune system disorders. Among them:

- some types of infections - mycoplasma, chlamydia, herpes virus, legionella, pneumocystis;
- bad habits (especially smoking);
- HIV and AIDS;
- autoimmune processes in the body (Shagreen syndrome);
- immune disorders (changes in the level of immunoglobulins in the blood).

Currently, one of the main factors causing the most dangerous interstitial pneumonia is coronavirus infection [2,3].

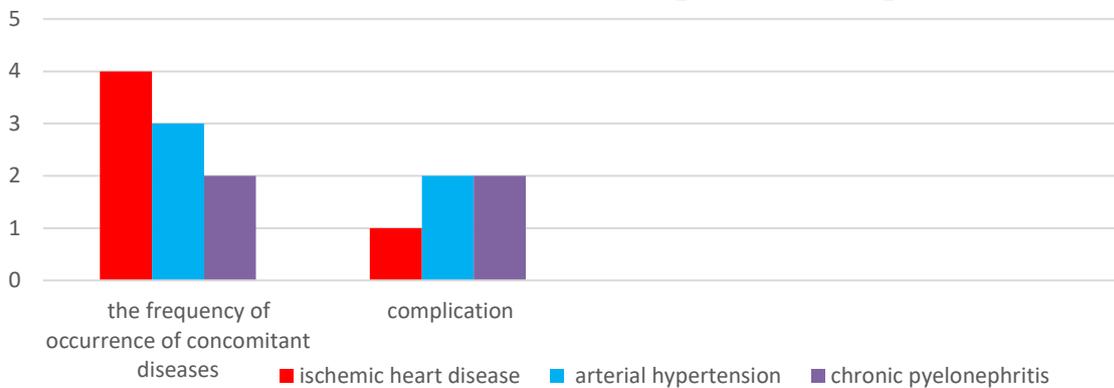
As we all know, the current global problem is the disease caused by the coronavirus infection. It shows a negative result in laboratory diagnostics, and the clinical form is similar to the disease caused by the coronavirus infection. It is more dangerous than other diseases in terms of its rapid spread among the population, pathologies in various organs at the same time, and complications [1].

Purpose: To study the role of endogenous factors involved in the pathogenesis of bilateral interstitial pneumonia outside the hospital. **Result:** Out-of-hospital diagnosis of bilateral interstitial pneumonia was carried out in 60 patients treated in the Therapy Department of the Urganch city hospital. In 50% of patients (30), diseases of the cardiovascular system were identified as concomitant diseases: ischemic heart disease (I 20) and arterial hypertension (I10)). 20% of the people were identified to have ischemic heart disease as a secondary medical condition. Functional class II (I 20); 20 percent (12 people) have ischemic heart disease. Functional class III (I 20); 30 percent of patients (18) were found to have arterial hypertension (I 10). Chronic hepatitis C (B 18.2) was also found in 30% (18) cases. Chronic pyelonephritis (N11) was 20 percent (in 12 patients). Anemia (decreased amount of erythrocytes and hemoglobin per volume unit of blood), which is considered a common disease, was found to be 20 percent.

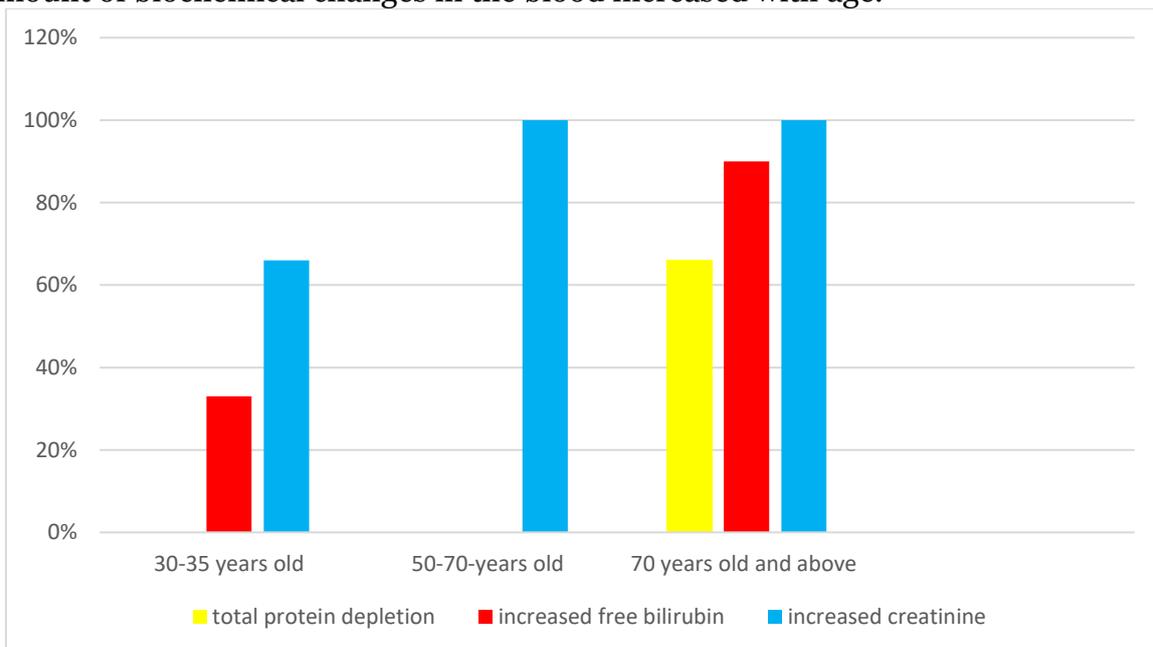


According to the conclusions of computer tomography, it was found that patients with the highest 60 percent damage of lung tissue had AH (I 10) and kidney stone disease. It is observed that the patient with the lowest damage (20-30 percent damage) had diabetes and anemia. When the average damage accounted for 25-45 percent of the cases, concomitant diseases were identified. The elderly people (70 or older) were identified to have 72 pulses 22 breathes per minute, respectively. The youngest patient (31 years old) had 95 pulses and 25 breaths per minute, respectively. Complications of the disease are shortness of breath and extrasystole, shortness of breath II degree in 20 patients (in 12 patients) - in patients with chronic pyelonephritis (N 11); shortness of breath I degree in 10% of cases (in 6 patients) in patients with cholecystitis (K 81) and an ovarian cyst; ventricular extrasystole (I 49.4) in 10% of cases (in 6 patients) - AH and steno cardia. Functional class III was found in patients with concomitant diseases.

Graph 2. The frequency of occurrence of concomitant diseases in out- of- hospital bilateral interstitial pneumonia and the role of concomitant diseases in the development of complications



Biochemical changes in their blood also showed that there is a connection between secondary diseases and the pathogenesis of this disease. The total protein, creatinine, glucose, total bilirubin, bound bilirubin, free bilirubin, C-reactive protein in the blood of the patients were examined and the following results were obtained: It was found that the amount total protein decreased below 65 g /l in 40% of the patients, i.e. 65g/l. In 30% of patients, it was found that the amount of glucose in the blood was higher than the normal level, which is 6.66 mmol/l. We observed an increase in creatinine in 90% of patients. Total bilirubin increased to 20.5 mmol/L in 20% of cases. Free bilirubin was found to be increased in 10% cases, bound bilirubin was found to be increased in 20% of cases, and its decrease was found to be 0% in 60% of cases. We divided patients into three groups based on age. Patients who are aged between 30 and 50 belong to group I, the second group included patients aged 50 to 70 years, and the third group included patients aged 70 years and older. It was found that the amount of biochemical changes in the blood increased with age.



Graph 3

Analysis of results. From the above cases, it can be seen that the majority (50%) of patients with bilateral interstitial pneumonia outside the hospital have diseases of the circulatory system. Complications of the disease were observed in patients with arterial hypertension. The reason for this is the damage of blood vessels in the microcirculation. Complications of the disease occur in connection with pre-existing secondary or background diseases in the patient, Therefore, patients who suffered from functional class III also had ischemic heart disease, steno cardia and extrasystole. During the disease, further damage to the lung tissue and organs with secondary diseases is observed, and if we take its dependence on age into account, the damage is relatively greater in young people, and also in patients with a strong reactivity of the body, therefore, immunopathology may be the cause of the disease. The total protein in the blood is 6.5-8.5g% or 65-85g/l according to the SI unit, of which

I albumins: 4-5g% or 40-50g/l;

II. globulins: 2-3g% or 20-30g/l; from that

1) a₁: 0.45g% or 4.5g/l

2) a₂: 0.56 g% or 5.6 g/l

3) b: 0.76g% or 7.6g/l

4) γ: 1.39g% or 13.9g/l

III. fibrinogen: 0.2-0.4g% or 2-4g/l.

If we pay attention to the accompanying diseases of patients with decreased total protein content, glomerulonephritis or chronic hepatitis C was found in them. We all know that proteinuria is observed in glomerulonephritis, which causes a decrease in the amount of protein. In chronic hepatitis C, the protein in the blood decreases due to the breakdown of protein synthesis.

Glucose is normally 4.44-6.66 mmol/l. An increase in the amount of glucose was observed in patients suffering from hepatitis or type II diabetes. It is known that the amount of glucose in plasma increases in patients with diabetes.

An increase in the amount of urea and creatinine was found in patients with chronic pyelonephritis or hepatitis C. Creatinine is the last product of nitrogen metabolism. It is formed from phosphocreatine in muscle tissue. An increase in C-reactive protein was observed in patients with hepatitis C, type II diabetes, and chronic pyelonephritis. C-reactive protein belongs to the group of acute phase proteins that increase during inflammation in the body. It has the property of attaching the polysaccharide part of pneumococci to itself. It opsonizes microbes.

Summary. Out-of-hospital bilateral interstitial pneumonia mainly affects patients with diseases of the cardiovascular system. Among the diseases of the cardiovascular system, the main place is occupied by those affected by ischemic heart diseases. There is a connection between the damage of the lung tissue and age. The younger the patient, the less lung is damaged due to compensatory mechanisms (increase in the number of pulses and respirations). Due to the fact that lung tissue damage is high in patients with AH and pyelonephritis, damage is associated with increased pressure in pulmonary blood vessels. Complications of the disease also depend on concomitant diseases. As a complication of the disease, the probability of developing respiratory failure is high in patients with AH and pyelonephritis. As a complication of the disease, the formation of shortness of breath is associated with high arterial pressure, and the higher the arterial blood pressure, the greater the risk of complications. As a complication of the disease, the development of ventricular extrasystole is high in

patients with ischemic heart disease and AH. As a complication of the disease, the shortness of breath is associated with high arterial pressure, and the higher the arterial blood pressure, the greater the risk of complications. As a complication of the disease, the development of ventricular extrasystole is high in patients with ischemic heart diseases and AG. The younger the patient's age, the greater the risk of complications of the disease. Out-of-hospital bilateral interstitial pneumonia shortens the period of remission of chronic diseases in the body and causes the period of exacerbation. In the pathogenesis of the disease, based on this, both the latent and concomitant diseases in patient play the main role. The basis of the observed biochemical changes in this disease is a decrease in the body's resistance and reactivity. So, endogenous factors play an important role in the pathogenesis of this disease. Therefore, in the treatment of the disease and the organization of preventive measures, the treatment measures against the accompanying and background diseases can significantly increase the efficiency.

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