

Tactics of Treating Allergic Rhinitis with Chronic Diffuse Diseases of the Liver

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Annotation: *The functional state of the liver was studied in 64 patients. Changes in the functional state of the nose are manifested when accompanied by allergic rhinitis chronic diffuse liver disease. According to the results of biochemical analysis in the blood of patients in the examination, it was found that as the activity of ALT increased, allergic symptoms in patients also increased. Allergic rhinitis in cases accompanied by chronic diffuse diseases of the liver, the clinical course of allergic rhinitis was characteristic, significantly severe and prolonged. After the addition of hepatoprotectors to the standard treatment of allergic rhinitis, dynamic changes were observed, the effectiveness of treatment was improved, the patients' availability in the hospital was reduced.*

Key words: allergic rhinitis, chronic hepatitis, cirrhosis of the liver, chronic diffuse liver disease.

Introduction. Allergic rhinitis is one of the most urgent problems in the health care system today. This disease is widespread around the world, 10-25% of the population is infected with this disease, and this indicator increases day by day. Allergic rhinitis can affect the physical, mental and social functioning of the patient, leading to a decrease in quality of life, sleep disturbance, problems in the professional functioning of the patient in severe cases [1,5,14]. The relevance of this problem is explained by the fact that allergic rhinitis is one of the most serious risk factors leading to the development of bronchial asthma [2, 4,18].

Allergic rhinitis is manifested by the addition of 4 classical symptoms such as nasal itching, sneezing, rhinorrhea, runny nose, and often additional symptoms such as headache, conjunctivitis, decreased sense of smell [3,13,17].

In recent years, there has been an increase in the incidence of combined allergic diseases all over the world. In more than 80% of cases, the combined allergic pathology is associated with damage to the digestive organs, which leads to the absorption of fully decomposed food products, the development of hypersensitivity to food, household, epidermal and dust allergens[9,15]. Chronic damage to the liver, in particular, chemical damage, continues to increase in terms of overall morbidity and mortality. Along with this, the number of allergic diseases has been increasing in the last 20 years. According to who, the level of toxic damage to the liver has increased by 6-8 times worldwide since 1960 [6].

The liver is involved in many pathological processes, and its damage leads to a serious violation of the metabolism, immune response, detoxification and protective force against microbes in the body. The liver is a member of the body that provides energy and plastic needs, and also performs a certain degree of decontamination function, that is, it protects the body from both external and endogenous damage [7, 10].

The variety of pathological changes in liver function significantly complicates the treatment of allergic diseases medicamentous and requires the use of a wide range of pharmacological agents. In addition, in the pathogenesis of various liver diseases, this organ plays a significant role in the immunological reduction[8,10].

Close to 95% of the toxic substances exogenous and endogenous are neutralized in the liver. A large influx of chemicals, a long-term strain of protective biotransformations of the liver, over time, can create favorable conditions for the violation of compensatory processes in the liver and the development of pathological changes in it [12].

Under the influence of chemical factors, constant tension in the liver, changes in the course of liver and other organ and system diseases, can lead to the transition and spread of the disease into a chronic form. Against the background of damage to the liver parenchyma and its functional insufficiency, the activity of microsomal enzymes of liver cells responsible for the processes of neutralization decreases, which can lead to a decrease in the clearance of iodine substances entering the body and a complete loss of metabolism products. Thanks to this, it can lead to the accumulation of compounds that cause a tendency to toxic damage to organs and tissues of the body. Incomplete metabolism of chemical compounds and a number of protein compounds in the liver can lead to general and local allergic reactions in the body and, in turn, the development of immunopathological reactions [11,12].

The liver consists not only of hepatocytes, but also of cells that form stroma and belong to immunism – these are excitable macrophages (Kupfer cells). It should be noted that the Kupfer cells belong to the macrophage group, which is important in the recognition of the antigen. Endothelial cells of the liver are able to develop mediators of inflammation and immunity (IL-1, IL-6). Hepatocytes synthesize and produce certain components of the Complement System (C3, B-factor), also interleukin (IL-6, IL-8) under the influence of external stimuli. Under the influence of cytokines, hepatocytes produce proteins of the acute stage of

inflammation, which are factors of the homeostasis mechanism, aimed at protecting the body from pathogens and various foreign components. The liver plays an important role in regulating the level of antigen, which flows from the intestine or other organs to the systemic bloodstream and from it to the lymphoid organs [7,11].

Thus, the liver cells are associated with an association of biologically active molecules that play an important role in inflammatory and immune processes.

Purpose of research. Taking into account the effect of allergic rhinitis on the body as a whole, we set ourselves the goal of assessing the functional state of the liver in these patients.

Research material and methods. Research was carried out on 64 patients who were treated in the Otorhinolaryngology, Allergology and gastroenterology departments of the Bukhara regional Multidisciplinary Medical Center.

We wrapped all patients into 3 groups. In Group 1, 24 patients (37.5%) diagnosed with chronic hepatitis (ChH) from AR and chronic diffuse liver disease (ChDLD), 20 patients (31.25%) diagnosed with liver cirrhosis (LC) from AR in Group 2 and 20 (31.25%) diagnosed with AR only in Group 3 were included.

The diagnosis of allergic rhinitis was based on the patient's complaints, clinical signs, results of rhinoscopic and endoscopic examination, data on allergological anamnesis, the amount of eosinophils in the peripheral blood and nasal cleavage, the results of X-ray examination of the nasal lateral cavities. The state of the liver was assessed based on the biochemical analysis of blood, the amount of blood pigments (total, bound and unbound bilirubin) and enzymes (ALT-AST).

The results of the study were carried out using statistical ishlanshi general statistical techniques. The information obtained was carried out on a personal computer, Intel(R) Core(TM)2 Quad CPU and OS Windows7 software. In the study, STATISTICA 6,0 software was used.

Results and discussion. The severity of allergic rhinitis recurrence was assessed based on the results of a survey of patients during the examination process. Patients with moderate to severe rhinitis of the main part of the population were patients and have an average figure of 62.5%. If allergic rhinitis is severe in at least 6-8% of cases encountered with CHDLD, allergic rhinitis CHDLD has been found to be severe in 3% of cases when you are late (Table №1).

Table № 1. Distribution of patients in the control group according to the severity of allergic rhinitis

Allergic rhinitis severity score expression	1-group		2-group		3-group		Total	
	№	%%	аbc	%%	№	%%	№	%%
Light (1-4 points)	5	7.8	2	3.12	8	12.5	15	20.3
Medium-heavy (5-8 points)	15	23.4	12	18.8	10	15.6	37	62.5
Heavy (9-12 points)	4	6.25	6	9.4	2	3.12	12	17.2
Total	24	37.5	20	31.3	20	31,2	64	100

Note: difference in terms of indicators obtained from the control group ($p < 0.05$, $p > 0.001$).

This, in our opinion, is a chronic diffuse lesion of the liver, associated with the weakening of the immune system in organism, with the property of causing profound changes in metabolism.

When the functional state of the nasal cavity of all patients was examined, changes in a specific area of the nose were detected. When analyzing the pH index of nasal cleavage ($7,6 \pm 0,05$ - $7,7 \pm 0,05$), siljinity was observed on the alkaline side. When examining nasal breathing activity with Glatzel mirror, patients in Group 1 consisted of 4.59 ± 0.4 - 5.0 ± 0.42 sm², group 2 consisted of 4.3 ± 0.4 sm² - 4.5 ± 0.36 , Group 3 consisted of 5.5 ± 0.4 - 6.0 ± 0.42 sm². And when the activity of smell cognition is checked, in patients of the 1 group $9,76 \pm 0,42$ - $14,6 \pm 0,58$, 2- in a group $11,0 \pm 0,71$ - $16,5 \pm 0,56$, 3-it was $8,7 \pm 0,42$ - $13,6 \pm 0,58$ in the group. This means that when allergic rhinitis is accompanied by ChDLD, changes in the functional state of the nose are manifested (Table №2).

Table №2. Indications for the functional state of the nasal cavity

Nose functions	AR+CHH	AR+LC	AR	Healthy
Respiratory activity sm ²	4,59±0,4 5,0±0,42	4,3 ±0,4 4,5 ± 0,36	5.5±0,4 6,0±0,42	9,0±0,35
Smell cognition activity	a)9,76±0,42 b)14,6±0,58	a)11,0±0,71 b)16,5±0,56	a)8,7±0,42 b)13,6±0,58	a) 7,4±0,22 b)12,3±0,24
Nasal cleavage pH indicator	7,7±0,05	7,7 ±0,05	7,6±0,05	7,2±0,13

Note: difference in terms of indicators obtained from the control group ($p < 0.05$, $p > 0.001$).

Also, when the total IgE content in the serum was checked every 3 groups, it was found to be significantly higher than the age-related physiologic norm (166,4±7,5 me/ml) (445,3±28,7 me/ml).

According to the results of biochemical analyzes in the blood of patients on examination, an increase in ALT activity can also be seen in the following table (Table №3), in which allergic symptoms are observed in patients.

Table №3. Duration of clinical signs of allergic rhinitis by ALT activity level (until treatment)

Patients	ALT indicators	Duration of clinical symptoms
AR	45±3.4 ED/L	7-11 day
AR+CHG	105± 4.1 ED/L	9-15 day
AR+CL	95± 3.1 ED/L	11-15 day

Note: difference in terms of indicators obtained from the control group ($p < 0.05$, $p > 0.001$).

ALT activity level and dynamic indicators of clinical signs of allergic rhinitis(after treatment), dynamic changes were observed after the addition of hepatoproteins to the standard treatment of allergic rhinitis, that is, in allergic rhinitis, ALT indicators were equal to 34±2.3 ED/L, the duration of clinical signs was 5-7 days. In the evening with AR+CHH, ALT indicators were 98±2.6 ED/L, the duration of clinical symptoms was 10-12 days. In the evening with AR+CHDLD, the ALT indicators were equal to 86± 2.1 ED/L, the duration of clinical symptoms was 8-13 days, the effectiveness of treatment was improved, the patients stay at the hospital was reduced to 2 days (Table №4).

Table №4. ALT activity level and dynamic indicators of clinical signs of allergic rhinitis (after treatment)

Patients	ALT indicators	Duration of clinical symptoms
AR	34±2.3 ED/L	5-7 day
AR+CHG	98±2.6 ED/L	10-12 day
AR+CL	86± 2.1 ED/L	8-13 day

Note: difference in terms of indicators obtained from the control group ($p < 0.05$, $p > 0.001$).

Based on the above, we can say that in the pathogenetic treatment of allergic diseases, the treatment of concomitant liver diseases is important. When the pathological Ring of the allergic process develops and prevents the development of various local clinical signs, the recommendation of hepatoprotectors and enzyme preparations is considered basic. Hepatoprotector prevent damage to the cell membrane and, by stimulating the regeneration of hepatocytes, increase the resistance of liver cells to pathological influences, by activating the activity of the enzyme system (cytochrome P450 and other microsomal enzymes), improve its detoxification function, as well as help restore the liver's functions in various pathological conditions [16,19,20].

Conclusion. 1. In 25% of patients hospitalized with allergic rhinitis, chronic diffuse diseases of the liver were detected, and in 31% of patients treated with chronic diffuse diseases of the liver, allergic rhinitis was detected

2. Allergic rhinitis in 33% of cases accompanied by chronic diffuse diseases of the liver, the clinical course of allergic rhinitis in patients was characteristic, significantly severe and prolonged.

3. After the addition of hepatoprotector to the standard treatment of allergic rhinitis, dynamic changes were observed, that is, in allergic rhinitis, Alt indicators were equal to 34±2.3 ED/L, the duration of clinical signs was 5-7 days. In the evening with AR+CHG, ALT indicators were 98±2.6 ED/L, the duration of clinical symptoms was 10-12 days. In the evening with AR+CHDLD, the ALT indicators were equal to 86± 2.1 ED/L, the duration of clinical symptoms was 8-13 days, the effectiveness of treatment was improved, the patients stay at the hospital was reduced to 2 days

Thus, assessing the functional state of the liver, if necessary, its correction is an important stage in the diagnosis and treatment of allergic rhinitis.

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