World Bulletin of Public Health (WBPH)
Available Online at: https://www.scholarexpress.net
Volume-16, December 2022
ISSN: 2749-3644

ADULT PATIENTS WITH CHRONIC PURULENT HAYMORITIS ARE INDICATORS OF CELLULAR IMMUNITY.

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Article history:

Received: October 1st 2022
Accepted: November 1st 2022
Published: December 6th 2022

Abstract:

In today's day, Clinical Immunology shows its potential to "recognize" pathogenic and conditionally pathogenic microorganisms in the formation of an adequate and effective immune response, which is carried out by elamination of the causative agent of the disease and the preservation of immune memory. Pathogens, in turn, try to avoid the effects of the immune system with their high level of variability and flexibility, the properties of being able to multiply quickly and in large quantities. This is due to the fact that in subsequent years, various changes in the relationship between different pathogens and the body's immune system occur, and the number of resistive strains is increasing.

Keywords: haymorites, cell immunity, microorganisms

THE PURPOSE OF SCIENTIFIC WORK.

Development of a method for assessing the diagnostic value of the detection of their causative agents in the dynamics of rejection and treatment of chronic haymorites in adult patients.

MATERIAL AND METHODS.

A total of 107 patients with chronic purulent haymorites were involved in the research to accomplish the goal. They were in the age range of 19-60 years, with 42 of them being women (39.25%) and 65 being men (60.75%). Also, 74 of the patients involved in the research (69.16%) were permanent residents in the city, while 33 (30.84) were rural residents. The diagnosis indicated to all patients was made on the basis of clinical-instrumental and laboratory tests, all diagnoses were confirmed on the basis of the results of bacteriological examination.

Diagnoses for all patients were examined by International Statistical Classification of Diseases and Related Health Problems 10 th Revision Version for (2007) with clinical, instrumental, bacteriological and other laboratory methods.

The collection of biological material (pus from a pathological furnace) and its delivery to a bacteriological laboratory is carried out using traditional methods. Detection and differentiation of pathogens was carried out in accordance with Bergey's systematic bacteriology manual (Bergey's Manual Systematic Bacteriology). Interspecific and interspecific identification of cultures was based on the identification of their main taxonomic signs. Pathogens with etiological axiom are planted in a concentration of more than 10^4-10^5 KHKB/ml.Commercial culture tools of" HiMedia " (India) were used. To study the resistance to antimicrobial drugs, The Disco-diffusion method was used. The essence of the method is based on the quenching of the studied culture flour at a concentration of $1,5x10^8$ KHKB/ml in the zone of the concentration of the antibacterial drug above the minimum quenching concentration by diffusion of the antibacterial drug in the carrier (paper disc) into a dense nutrient medium (Müller-Quinton medium). The vaccine density (suspension of the microorganisms under study) was set to 0.5 mas Farland (according to the turbidity standard)and was used within 15 minutes of preparation. If burned into Petri dishes with a layer of 4 mm (with 20 ml agar in a Petri dish with a diameter of 90 mm) and cinnamon was used. The standard vaccine is pipeted into Petri dishes with a nutrient medium in a volume of 2 ml. We used standardized commercial discs from" HiMedia " (India). Vials with discs were removed from the refrigerator 1 hour before the start of work.

Depending on the diameter of the flour in the food medium, sensitive (S), conditional-resistive (CR) and resistive (R) strains were evaluated.

The interpretation of the results was studied separately for the family Staphylococcus srr, Streptococcus spp, Pseudomonas aegidiposae, Enterobacteriaceae. It was carried out based on the recommendations given, depending on the diameter of the growth zone (mm) suitable for each pathogen for different antibiotics.

In the research work, the degree of resistance to microorganisms of the following antibiotics - impregnated "paper discs", which are now widely used in otorhinolaryngological practice, was studied and evaluated: amoxiclav, ampiox, gentamicin, doxacillin, kanamycin, levomycetin, tetracycline, cefazolin,

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Volume-16, December 2022
ISSN: 2749-3644

ciprofloxacin, ceftriaxone, cephazone erythromycin-a total of 12 units.

When evaluating the results of the study, indicators of normal microflora in the clinical sample were taken into account. The identification of strains that do not belong to the normal microflora of the upper respiratory tract, as well as the identification of microorganisms of an unusual multi-microns of the Har kandai type, was considered etiologically Achaemenid.

It was difficult to interpret the results in chronic haymoritis when the Association of microorganisms was planted. In such cases, a quantitative assessment of the growth of various types of microorganisms from the associas was carried out during the primary planting of pathological material into the nutrient medium. The Dominant species was given a leading place in the etiology of the disease.

Statistical processing of the resulting material was carried out using biomedical research programs by the method of variational statistics on a personal computer based on prosessors "Pentium IV". The principles of evidence-based medicine were used in the organization and conduct of the study.

Clinical-instrumental and laboratory methods are widely used methods in Otorhinolaryngology and Clinical Immunology, and are widely used today in scientific and practical medicine.In the case of microbiological and statistical methods are traditional, sufficient to obtain reliable results and make well-founded conclusions.

STUDY RESULTS AND DISCUSSIONS.

From the biological material (pus) obtained from patients, the following pathogens were collected: P.aerugenosa (29,3), E.shrub (19.6%), S.aureus (11,4), Klebsiella spp (11,4), S.viridans (10,2), S.epidermidis (10,2). It is understood that Gram-negative bacteria have been produced much more than gram-positive cocci, while the associations of microorganisms have been identified much more than monocultures. According to our other results, we observed exactly the opposite in acute haymorites.

Patients diagnosed with chronic purulent haymorites the results obtained in the assessment of immune status showed that they were found to have convincingly increased the quantitative indicator of leukocytes in the peripheral blood from the indicators of the control group by 1.23 times (R<0.001) – Table 1.1

Table 1.1
Adult patients with chronic purulent haymoritis cell immunity indicators

Indicators	Unit of measurement	Research groups	
		Control group, n=15	Main group, n =107
Leukocytes	10^9/l	6400±85	7840±123* ↑
Total number of lymphocytes	%	30,86±0,97	23,51±1,08* ↓
	1 ml in the blood	1975±62	1843±85 ↔
CD3+- lymphocytes	%	60,31±1,20	55,49±1,05* ↓
	1 ml in the blood	1191±24	1023±19* ↓
CD4+- lymphocytes	%	30,69±0,80	26,48±0,99* ↓
	1 ml in the blood	606±16	488±18* ↓
CD8+- lymphocytes	%	21,12±0,68	25,30±1,18* ↑
	1 ml in the blood	417±13	485±22* ↑
IRI	unit	1,45±0,01	1,05±0,02* ↓
CD23+- lymphocytes	%	18,73±0,50	30,83±0,94* ↑
	1 ml in the blood	370±10	568±17* ↑
CD38+- lymphocytes	%	15,84±0,55	29,92±1,12* ↑
	1 ml in the blood	313±11	551±21* ↑

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CD71+- lymphocytes	%	29,16±0,90	28,90±0,96 ↔
	1 ml in the blood	576±18	533±18* ↓

Note: * - a convincing difference sign in relation to the control group; ↑, ↓ - directions of changes; ↔ - no convincing difference.

A convincing difference in absolute quantities was not detected if the relative indication of total lymphocytes in the blood of patients was convincingly reduced by 1.31 times compared to the control group (R<0.05). (P>0.05), this condition has shown that changes in absolute numbers do not occur quickly.

The T-lymphocyte system is the most cap-forming among the lymphocyte, consisting of many subnoculations, among which the most significant Are T-chelpers/inducers, and T-suppressors/cytotoxic lymphocytes. T lymphocytes are known to carry out immunological control over cellular immune reactions and antigen homeostasis in the body.

With this in mind, SD3+-Marky-catching T-lymphocytes (SD3+ - lymphocytes) SD4+ and SD8+ - marky-catching SD4+ and SD8+ lymphocytes respectively relative and absolute quantities were determined. The results obtained showed that the relative and absolute amounts of SD3+-cells in patients were convincingly reduced from the control group parameters by 1.09 and 1.16 times, respectively (R<0.05).

It is known that when SD4+ - cells are able to detect an antigen that has entered the body, interleukines (il-2 and il-4) begin to synthesize interferon, transmit ahborot about antigens to V-lymphocytes, in other words, occupy an important place in the functioning of the immune system, which is why the study of their pointers is of great importance. In the course of the study, the study of SD4+- cells they recorded a decrease in the relative and absolute amount, which would be absolute-like if the relative indication was convincingly reduced by 1.16 times compared to the parameters of healthy people in patients, that is, the reduction is 1.24 times (R<0.05). SD4+ - a quantitative decrease in cells is a sign of a decrease in the activity of the immune system (fig.1.1)

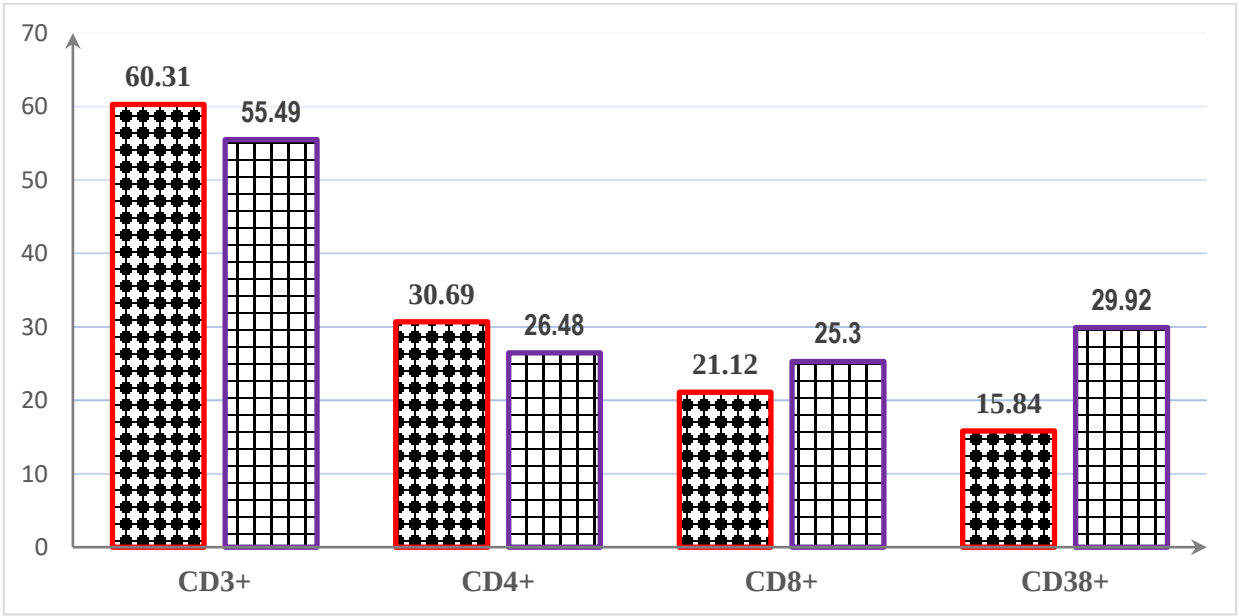

Figure 1.1. Patients with chronic purulent haymoritis immune system T-link indicators, %

Another of the subpopulations of T - lymphocytes (SD3+-cells) are T-suppressors/cytotoxic lymphocytes (SD8+-lymphocytes).While the relative amount was 21.12±0.68% on average in healthy people (control group), the average in the studied patients increased to 25.30±1.18% (convincing difference 1.20 times, (R<0.05).If we take into account the fact that sd8+- cells inhibit the process of formation of antibodies to quench the immune response that the body's immune system undergoes, then an even more negative effect on the functioning of the developing organism of immunodeficiency is manifested.

The immunoregulatory index iri SD4 + is relative to the SD8+-cells of the cells, and in healthy people it is 1 unit or more units. A decrease in the indicator of this index is a sign of a serious deterioration in the functioning of the immune system. The Iri immune

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system indicates a decrease in the state of the protective cells. Although the decline and proliferation of SD4+- and SD8+-cells do not provide information with great axiom, they provide accurate information about the ratio immune status, especially since the study of this pointer in dynamics Provides information about the level of development of secondary immunodeficiency.

In our case, in healthy people, IRI was 1.45±0.01 units, while in patients there was a convincing decrease of 1.38 times (R<0.001), to 1.05±0.02 units. Patients diagnosed with IRI chronic purulent haymoritis made it possible to determine the level of immunodeficiency in the immune system.

It is known that SD38+ - cells increase quantitatively in chronic inflammatory processes, since they, as T-killers, have the property of fighting foreign antigens in the body. As a representative of the T-lymphocytes system, both their relative and absolute quantities are studied. It was found that the relative and absolute amounts they had increased cross - sectional compared to the pointer control group in patients studied-29.92±1.12, (R<0.001) against 1.89 times (15.84±0.55%), and 1.76 times (313±11mkl versus 551±21mkl, (R<0.001), respectively. An increase in such an amount is a sign that a chronic inflammatory process is in progress, remission is not observed. The use of this lymphocyte in the determination of isdikbol of the end of the chronic inflammatory process plays an important clinical-immunological significance.

CONCLUSION.

Adult patients with chronic purulent haymorites the results of a study of the T-joint of the immune system showed that T-lymphocytes and their regulatory subpopulations were dysbalance in relative and absolute amounts. This dysbalance was expressed in a decrease in SD3+-cells by 1.09 times compared to the control group in the main group, a decrease in SD4+-cells by 1.16 times, an increase in SD8+-cells by 1.20 times, a decrease in IRI by 1.38 times, and a convincing increase in SD38+ - cells by 1.89 times. Characterized by the development of secondary immunodeficiency. This dysbalance is characteristic of purulent-inflammatory diseases, and for chronic purulent haymorites, the main aspect is a sharp decrease in IRI by 1.38 times, and a confident increase in SD38+-cells by 1.89 times. Based on this, considering it necessary to determine the parameters of iri and SD38+-cells in this pathology, they are recommended as immunological criteria for determining the prospect of the end of chronic purulent haymoritis RET. SD71+ - indicates that there is no convincing discrepancy between the main and control groups by cells.

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Volume-16, December 2022
ISSN: 2749-3644

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