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ЕЖЕМЕСЯЧНЫЙ НАУЧНЫЙ ЖУРНАЛ

Медицинские новости Грузии
საქართველოს სამედიცინო სიახლენი

GEORGIAN MEDICAL NEWS

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GMN: Georgian Medical News is peer-reviewed, published monthly journal committed to promoting the science and art of medicine and the betterment of public health, published by the GMN Editorial Board since 1994. GMN carries original scientific articles on medicine, biology and pharmacy, which are of experimental, theoretical and practical character; publishes original research, reviews, commentaries, editorials, essays, medical news, and correspondence in English and Russian.

GMN is indexed in MEDLINE, SCOPUS, PubMed and VINITI Russian Academy of Sciences. The full text content is available through EBSCO databases.

GMN: Медицинские новости Грузии - ежемесячный рецензируемый научный журнал, издаётся Редакционной коллегией с 1994 года на русском и английском языках в целях поддержки медицинской науки и улучшения здравоохранения. В журнале публикуются оригинальные научные статьи в области медицины, биологии и фармации, статьи обзорного характера, научные сообщения, новости медицины и здравоохранения. Журнал индексируется в MEDLINE, отражён в базе данных SCOPUS, PubMed и ВИНТИ РАН. Полнотекстовые статьи журнала доступны через БД EBSCO.

GMN: Georgian Medical News – საქართველოს სამედიცინო სიახლენი – არის ყოველთვიური სამეცნიერო სამედიცინო რეცენზირებადი ჟურნალი, გამოიცემა 1994 წლიდან, წარმოადგენს სარედაქციო კოლეგიისა და აშშ-ის მეცნიერების, განათლების, ინდუსტრიის, ხელოვნებისა და ბუნებისმეტყველების საერთაშორისო აკადემიის ერთობლივ გამოცემას. GMN-ში რუსულ და ინგლისურ ენებზე ქვეყნდება ექსპერიმენტული, თეორიული და პრაქტიკული ხასიათის ორიგინალური სამეცნიერო სტატიები მედიცინის, ბიოლოგიისა და ფარმაციის სფეროში, მიმოხილვითი ხასიათის სტატიები.

ჟურნალი ინდექსირებულია MEDLINE-ის საერთაშორისო სისტემაში, ასახულია SCOPUS-ის, PubMed-ის და ВИНТИ РАН-ის მონაცემთა ბაზებში. სტატიების სრული ტექსტი ხელმისაწვდომია EBSCO-ს მონაცემთა ბაზებიდან.

WEBSITE

www.geomednews.com

К СВЕДЕНИЮ АВТОРОВ!

При направлении статьи в редакцию необходимо соблюдать следующие правила:

1. Статья должна быть представлена в двух экземплярах, на русском или английском языках, напечатанная через **полтора интервала на одной стороне стандартного листа с шириной левого поля в три сантиметра**. Используемый компьютерный шрифт для текста на русском и английском языках - **Times New Roman (Кириллица)**, для текста на грузинском языке следует использовать **AcadNusx**. Размер шрифта - **12**. К рукописи, напечатанной на компьютере, должен быть приложен CD со статьей.

2. Размер статьи должен быть не менее десяти и не более двадцати страниц машинописи, включая указатель литературы и резюме на английском, русском и грузинском языках.

3. В статье должны быть освещены актуальность данного материала, методы и результаты исследования и их обсуждение.

При представлении в печать научных экспериментальных работ авторы должны указывать вид и количество экспериментальных животных, применявшиеся методы обезболивания и усыпления (в ходе острых опытов).

4. К статье должны быть приложены краткое (на полстраницы) резюме на английском, русском и грузинском языках (включающее следующие разделы: цель исследования, материал и методы, результаты и заключение) и список ключевых слов (key words).

5. Таблицы необходимо представлять в печатной форме. Фотокопии не принимаются. **Все цифровые, итоговые и процентные данные в таблицах должны соответствовать таковым в тексте статьи**. Таблицы и графики должны быть озаглавлены.

6. Фотографии должны быть контрастными, фотокопии с рентгенограмм - в позитивном изображении. Рисунки, чертежи и диаграммы следует озаглавить, пронумеровать и вставить в соответствующее место текста **в tiff формате**.

В подписях к микрофотографиям следует указывать степень увеличения через окуляр или объектив и метод окраски или импрегнации срезов.

7. Фамилии отечественных авторов приводятся в оригинальной транскрипции.

8. При оформлении и направлении статей в журнал МНГ просим авторов соблюдать правила, изложенные в «Единых требованиях к рукописям, представляемым в биомедицинские журналы», принятых Международным комитетом редакторов медицинских журналов - <http://www.spinesurgery.ru/files/publish.pdf> и http://www.nlm.nih.gov/bsd/uniform_requirements.html В конце каждой оригинальной статьи приводится библиографический список. В список литературы включаются все материалы, на которые имеются ссылки в тексте. Список составляется в алфавитном порядке и нумеруется. Литературный источник приводится на языке оригинала. В списке литературы сначала приводятся работы, написанные знаками грузинского алфавита, затем кириллицей и латиницей. Ссылки на цитируемые работы в тексте статьи даются в квадратных скобках в виде номера, соответствующего номеру данной работы в списке литературы. Большинство цитированных источников должны быть за последние 5-7 лет.

9. Для получения права на публикацию статья должна иметь от руководителя работы или учреждения визу и сопроводительное отношение, написанные или напечатанные на бланке и заверенные подписью и печатью.

10. В конце статьи должны быть подписи всех авторов, полностью приведены их фамилии, имена и отчества, указаны служебный и домашний номера телефонов и адреса или иные координаты. Количество авторов (соавторов) не должно превышать пяти человек.

11. Редакция оставляет за собой право сокращать и исправлять статьи. Корректур авторам не высылаются, вся работа и сверка проводится по авторскому оригиналу.

12. Недопустимо направление в редакцию работ, представленных к печати в иных издательствах или опубликованных в других изданиях.

При нарушении указанных правил статьи не рассматриваются.

REQUIREMENTS

Please note, materials submitted to the Editorial Office Staff are supposed to meet the following requirements:

1. Articles must be provided with a double copy, in English or Russian languages and typed or computer-printed on a single side of standard typing paper, with the left margin of 3 centimeters width, and 1.5 spacing between the lines, typeface - **Times New Roman (Cyrillic)**, print size - 12 (referring to Georgian and Russian materials). With computer-printed texts please enclose a CD carrying the same file titled with Latin symbols.

2. Size of the article, including index and resume in English, Russian and Georgian languages must be at least 10 pages and not exceed the limit of 20 pages of typed or computer-printed text.

3. Submitted material must include a coverage of a topical subject, research methods, results, and review.

Authors of the scientific-research works must indicate the number of experimental biological species drawn in, list the employed methods of anesthetization and soporific means used during acute tests.

4. Articles must have a short (half page) abstract in English, Russian and Georgian (including the following sections: aim of study, material and methods, results and conclusions) and a list of key words.

5. Tables must be presented in an original typed or computer-printed form, instead of a photocopied version. **Numbers, totals, percentile data on the tables must coincide with those in the texts of the articles.** Tables and graphs must be headed.

6. Photographs are required to be contrasted and must be submitted with doubles. Please number each photograph with a pencil on its back, indicate author's name, title of the article (short version), and mark out its top and bottom parts. Drawings must be accurate, drafts and diagrams drawn in Indian ink (or black ink). Photocopies of the X-ray photographs must be presented in a positive image in **tiff format**.

Accurately numbered subtitles for each illustration must be listed on a separate sheet of paper. In the subtitles for the microphotographs please indicate the ocular and objective lens magnification power, method of coloring or impregnation of the microscopic sections (preparations).

7. Please indicate last names, first and middle initials of the native authors, present names and initials of the foreign authors in the transcription of the original language, enclose in parenthesis corresponding number under which the author is listed in the reference materials.

8. Please follow guidance offered to authors by The International Committee of Medical Journal Editors guidance in its Uniform Requirements for Manuscripts Submitted to Biomedical Journals publication available online at: http://www.nlm.nih.gov/bsd/uniform_requirements.html
http://www.icmje.org/urm_full.pdf

In GMN style for each work cited in the text, a bibliographic reference is given, and this is located at the end of the article under the title "References". All references cited in the text must be listed. The list of references should be arranged alphabetically and then numbered. References are numbered in the text [numbers in square brackets] and in the reference list and numbers are repeated throughout the text as needed. The bibliographic description is given in the language of publication (citations in Georgian script are followed by Cyrillic and Latin).

9. To obtain the rights of publication articles must be accompanied by a visa from the project instructor or the establishment, where the work has been performed, and a reference letter, both written or typed on a special signed form, certified by a stamp or a seal.

10. Articles must be signed by all of the authors at the end, and they must be provided with a list of full names, office and home phone numbers and addresses or other non-office locations where the authors could be reached. The number of the authors (co-authors) must not exceed the limit of 5 people.

11. Editorial Staff reserves the rights to cut down in size and correct the articles. Proof-sheets are not sent out to the authors. The entire editorial and collation work is performed according to the author's original text.

12. Sending in the works that have already been assigned to the press by other Editorial Staffs or have been printed by other publishers is not permissible.

**Articles that Fail to Meet the Aforementioned
Requirements are not Assigned to be Reviewed.**

ავტორთა საქურაღებოლ!

რედაქციაში სტატიის წარმოდგენისას საჭიროა დაიცვათ შემდეგი წესები:

1. სტატია უნდა წარმოადგინოთ 2 ცალად, რუსულ ან ინგლისურ ენებზე დაბეჭდილი სტანდარტული ფურცლის 1 გვერდზე, 3 სმ სიგანის მარცხენა ველისა და სტრიქონებს შორის 1,5 ინტერვალის დაცვით. გამოყენებული კომპიუტერული შრიფტი რუსულ და ინგლისურენოვან ტექსტებში - **Times New Roman (Кириллица)**, ხოლო ქართულენოვან ტექსტში საჭიროა გამოვიყენოთ **AcadNusx**. შრიფტის ზომა – 12. სტატიას თან უნდა ახლდეს CD სტატიით.

2. სტატიის მოცულობა არ უნდა შეადგენდეს 10 გვერდზე ნაკლებს და 20 გვერდზე მეტს ლიტერატურის სიის და რეზიუმეების (ინგლისურ, რუსულ და ქართულ ენებზე) ჩათვლით.

3. სტატიაში საჭიროა გაშუქდეს: საკითხის აქტუალობა; კვლევის მიზანი; საკვლევი მასალა და გამოყენებული მეთოდები; მიღებული შედეგები და მათი განსჯა. ექსპერიმენტული ხასიათის სტატიების წარმოდგენისას ავტორებმა უნდა მიუთითონ საექსპერიმენტო ცხოველების სახეობა და რაოდენობა; გაუტკივარებისა და დაძინების მეთოდები (მწვავე ცდების პირობებში).

4. სტატიას თან უნდა ახლდეს რეზიუმე ინგლისურ, რუსულ და ქართულ ენებზე არანაკლებ ნახევარი გვერდის მოცულობისა (სათაურის, ავტორების, დაწესებულების მითითებით და უნდა შეიცავდეს შემდეგ განყოფილებებს: მიზანი, მასალა და მეთოდები, შედეგები და დასკვნები; ტექსტუალური ნაწილი არ უნდა იყოს 15 სტრიქონზე ნაკლები) და საკვანძო სიტყვების ჩამონათვალი (key words).

5. ცხრილები საჭიროა წარმოადგინოთ ნაბეჭდი სახით. ყველა ციფრული, შემაჯამებელი და პროცენტული მონაცემები უნდა შეესაბამებოდეს ტექსტში მოყვანილს.

6. ფოტოსურათები უნდა იყოს კონტრასტული; სურათები, ნახაზები, დიაგრამები - დასათაურებული, დანომრილი და სათანადო ადგილას ჩასმული. რენტგენოგრამების ფოტოასლები წარმოადგინეთ პოზიტიური გამოსახულებით **tiff** ფორმატში. მიკროფოტოსურათების წარწერებში საჭიროა მიუთითოთ ოკულარის ან ობიექტივის საშუალებით გადიდების ხარისხი, ანათალების შედეგების ან იმპრეგნაციის მეთოდი და აღნიშნოთ სურათის ზედა და ქვედა ნაწილები.

7. სამამულო ავტორების გვარები სტატიაში აღინიშნება ინიციალების თანდართვით, უცხოურისა – უცხოური ტრანსკრიპციით.

8. სტატიას თან უნდა ახლდეს ავტორის მიერ გამოყენებული სამამულო და უცხოური შრომების ბიბლიოგრაფიული სია (ბოლო 5-8 წლის სიღრმით). ანბანური წყობით წარმოდგენილ ბიბლიოგრაფიულ სიაში მიუთითეთ ჯერ სამამულო, შემდეგ უცხოელი ავტორები (გვარი, ინიციალები, სტატიის სათაური, ჟურნალის დასახელება, გამოცემის ადგილი, წელი, ჟურნალის №, პირველი და ბოლო გვერდები). მონოგრაფიის შემთხვევაში მიუთითეთ გამოცემის წელი, ადგილი და გვერდების საერთო რაოდენობა. ტექსტში კვადრატულ ფხიხლებში უნდა მიუთითოთ ავტორის შესაბამისი N ლიტერატურის სიის მიხედვით. მიზანშეწონილია, რომ ციტირებული წყაროების უმეტესი ნაწილი იყოს 5-6 წლის სიღრმის.

9. სტატიას თან უნდა ახლდეს: ა) დაწესებულების ან სამეცნიერო ხელმძღვანელის წარდგინება, დამოწმებული ხელმოწერითა და ბეჭდით; ბ) დარგის სპეციალისტის დამოწმებული რეცენზია, რომელშიც მითითებული იქნება საკითხის აქტუალობა, მასალის საკმაობა, მეთოდის სანდოობა, შედეგების სამეცნიერო-პრაქტიკული მნიშვნელობა.

10. სტატიის ბოლოს საჭიროა ყველა ავტორის ხელმოწერა, რომელთა რაოდენობა არ უნდა აღემატებოდეს 5-ს.

11. რედაქცია იტოვებს უფლებას შეასწოროს სტატია. ტექსტზე მუშაობა და შეჯერება ხდება საავტორო ორიგინალის მიხედვით.

12. დაუშვებელია რედაქციაში ისეთი სტატიის წარდგენა, რომელიც დასაბეჭდად წარდგენილი იყო სხვა რედაქციაში ან გამოქვეყნებული იყო სხვა გამოცემებში.

აღნიშნული წესების დარღვევის შემთხვევაში სტატიები არ განიხილება.

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CLINICAL, IMMUNOLOGICAL AND THESIOGRAPHIC CHARACTERISTICS RHEUMATOID ARTHRITIS AND CHRONIC RHEUMATIC HEART DISEASE

Shuasheva Y.A¹, Buleshov M.A¹, Kemelbekov K.S².

¹Akhmet Yassawi International Kazakh-Turkish University, Turkestan, Kazakhstan.

²South Kazakhstan Medical Academy, Shymkent, Kazakhstan.

Abstract.

Introduction: Rheumatism and rheumatic diseases have not yet lost their problematic and relevance for medicine and society. In terms of their prevalence, they occupy the third place after diseases of the cardiovascular system and digestive organs. In this regard, it is relevant to study the clinical and pathogenetic aspects of rheumatism and rheumatoid arthritis associated with persistent nasopharyngeal infection, as well as to search for new effective approaches to the treatment of these diseases, making the most significant contribution to the formation of irreversible changes in the heart and musculoskeletal system.

Materials and methods: Archival medical records of inpatient and outpatient patients of city and region-al clinical hospitals, city polyclinics of Shymkent were studied, and the current situation in Shymkent was studied based on morbidity indicators. The sample was solid.

Results: We evaluated some clinical, laboratory and radiological parameters in patients with seropositive and seronegative RA course. The slow-progressive type of onset of the disease was more often observed in patients with seronegative RA- 71.4% versus 52.8%. The two subgroups were dominated by patients with II degree of activity 57.1%-61.1%. II and III radiological stages were observed in the majority of patients with seronegative and seropositive variants of the course: 92.9% and 83.3%, respectively.

Conclusion: The physico-chemical properties of the blood plasma of patients with chronic rheumatic heart disease and rheumatoid arthritis deteriorated significantly: systemic and subsystem structural disorders in thesiographic patterns were noted, having distinctive features for rheumatic heart disease and rheumatoid arthritis.

Key words. Rheumatoid arthritis, chronic rheumatic heart disease, chronic clinical and immunological features, physico-chemical properties of blood plasma, thesiographic characteristics.

Introduction.

A special place among progressive severe lesions belongs to rheumatoid arthritis (RA) [1,2]. Scientists believe that the real number of patients with rheumatoid arthritis is much higher than what has been revealed at the moment. Globally, rheumatoid arthritis is also a serious problem faced by more than 20 million patients from different countries [3].

The chronic nature of the course of rheumatic heart disease (HRBS), rheumatoid arthritis (RA) does not give the slightest chance of a complete recovery of the lost ability to work [4-7]. In the absence of generally recognized specific laboratory and instrumental methods for confirming the diagnosis of these diseases, their clinical originality is often a determining factor in the diagnosis and further management of patients [8-12].

In this regard, it is relevant to study the clinical and pathogenetic aspects of rheumatism and rheumatoid arthritis associated with persistent nasopharyngeal infection, as well as to search for new effective approaches to the treatment of these diseases, making the most significant contribution to the formation of irreversible changes in the heart and musculoskeletal system.

Materials and Methods.

To study the prevalence of rheumatic diseases, including ARL and HRBS, characteristic trends in the development of morbidity and dynamics, an analysis of static reporting on rheumatism, as well as a number of other diffuse connective tissue diseases (systemic lupus erythematosus, systemic scleroderma, dermatomyositis, nodular periartthritis, ankylosing spondylitis) was carried out from 2014 to 2022.

Archival medical records of inpatient and outpatient patients of city and regional clinical hospitals, city polyclinics of Shymkent were studied, and the current situation in Shymkent was studied based on morbidity indicators. The sample was solid. All newly registered cases of rheumatism, rheumatic attack, acquired heart defects were taken into account, which was included in the terminological definition of "chronic rheumatic heart disease". Based on the results of processing static data, an assessment of the overall incidence of rheumatism and other DBST is given. An increase in the incidence of rheumatism and rheumatoid arthritis during the study period was revealed.

Groups of patients with chronic rheumatic heart disease (n=58) and rheumatoid arthritis (n=50) were formed for the clinical study. A total of 108 people, including 45 men and 63 women aged 16 to 65 years.

A comparison group was also formed, consisting of 29 patients with chronic tonsillitis, including 13 men and 16 women aged 19 to 57 years. In patients of this group, the etiological factor of tonsillitis was BGSA. However, no symptoms of rheumatic attack, reactive arthropathy, myocarditis, or CRHD were detected.

Clinical manifestations of rheumatism, rheumatoid arthritis have been studied. The whole range of traditional studies was implemented in relation to each of the patients: general examination, methods of the main (auscultation, percussion, palpation) and additional (laboratory tests of urine, blood; ECG, ultra-sound of the abdominal cavity, joint radiography, echocardiography) studies. All patients underwent a bacteriological examination of the separated nasopharynx, in the first three days from the onset of the disease. The second bacteriological study was conducted 2-3 weeks after the end of treatment. The study of morphotypes of thesiograms, IR plasma spectra of these patients was carried out. As a control, thesiograms obtained by examining the blood plasma of healthy individuals (donors) by wedge-shaped dehydration were used.

Results and Discussion.

In the course of the study, medical-statistical, clinical-laboratory, immunological and biochemical methods were used. We carried out a retrospective analysis of medical outpatient and inpatient records of patients of medical and preventive institutions in Shymkent for the period 2014-2022. The frequency and structure of rheumatic diseases according to the analysis of archival material for the period 2014-2022. Rheumatism and rheumatoid arthritis occupy a leading place among the most common rheumatic diseases. RA patients 18.6% (n=644); of them 74 men (11.5%); 570 women (88.5%); the average age is 38.7±1.6, the average duration of the disease is 8.3±1.42.

In the subgroup of patients with rheumatism (n=1996), 1000 men (50.1%); 996 women (49.9%); the average age is 39.6±1.1 and the average duration of the disease is 16.3±1.81 years.

The number of patients with DBST and systemic vasculitis is small and amounted to 17.6% of the total number of patients. There were 152 patients with ankylosing spondylitis (4.4%), the average age was 28.1±1.0 with a disease duration of 7.1±1.21 years.

Thus, the analysis of the medical documentation of the medical institution of Shymkent for 2014-2022 showed that out of the total number of patients with RS, more than 76% are patients with RA and HRBS. It should be noted that among patients with RA and HRBS, young people predominate (38.7±1.6 and 39.6±1.1 years, respectively). Female sex prevails among RA patients, which confirms the well-known sexual dimorphism in this pathology.

In addition, the incidence of acute respiratory infections in the city of Shymkent of 10,000 population was studied.

As we have found, the incidence of rheumatism does not tend to decrease, remaining the highest among other diseases (Table

1). Moreover, in comparison with 2014, the incidence in 2022 increased by 3.9%. There is a trend of a steady increase in the incidence of this pathology, starting in 2020. At the same time, a slight decrease in the number of cases of diagnosed rheumatism in 2021 does not change the general trend. The same should be said about rheumatoid arthritis, which is consistently often detected in successive years. The most significant increase in RA cases occurs in the period from 2021 to 2022. The remaining DBSTS presented in our study do not change the dynamics of morbidity indicators, which are generally characterized as positive. Thus, for systemic lupus erythematosus, systemic scleroderma, dermatomyositis, the indicators of the number of cases per 10,000 people in the general population change in waves both upward and downward, deviating approximately equally from the average value. As for nodular periarteritis, the incidence of it is clearly decreasing from 2014 to 2022.

The analysis of the general incidence of rheumatism showed that it increases in all age groups. We have studied the indicator of primary rheumatism incidence in the population of Shymkent. Analysis of the primary incidence of rheumatism showed its increase in children and adolescents. Thus, among the children's population in 2022, compared with 2014, the incidence increased by 9.4%, among adolescents - by 20.7%. In the adult population, there was a decrease in the incidence rate until 2021 and an increase by 2022.

Thus, rheumatism is characterized by a high level of both primary and general morbidity of the population of Shymkent. The greatest upward trend is shown by the incidence rate among children and adolescents.

The examined patients were divided into 2 groups according to the severity of rheumatic activity. Group 1 included patients with HRBS (n=58), who during the year had from one to two times an increase in the activity of the rheumatic process, with the phenomena of rheumatic fever.

Table 1. Incidence of RB in the population of the city of Shymkent with (per 10,000 people).

Name of the disease	Morbidity rate (per 10,000 population) by year								
	2014	2015	2016	2017	2008	2019	2020	2021	2022
Rheumatism	3,07	3,12	3,10	3,12	3,14	3,18	3,24	3,16	3,19
Rheumatoid arthritis	0,99	0,98	1,01	0,99	0,98	0,97	0,99	0,98	1,11
Systemic lupus erythematosus	0,10	0,09	0,11	0,12	0,10	0,08	0,09	0,10	0,11
Systemic scleroderma	0,08	0,06	0,07	0,09	0,07	0,08	0,06	0,08	0,09
Dermatomyositis	0,006	0,005	0,007	0,007	0,05	0,008	0,006	0,007	0,007
Nodular periarteritis	0,005	0,005	0,006	0,003	0,004	0,005	0,004	0,004	0,003
Ankylosing spondylitis	0,10	0,10	0,11	0,09	0,11	0,10	0,10	0,11	0,09

Table 2. Frequency and nature of clinical manifestations of patients with Chronic Rheumatoid Heart Disease (CRHD).

Signs	CRHD, (n = 58)				P
	CRHD with rheumatic attacks during the year of follow-up (n = 34)		CRHD without rheumatic attacks for more than three years (n = 24)		
	абс.	%	абс.	%	
Fever	15	44,1±8,5	-	-	-
General weakness	19	55,9±8,5	8	33,3±9,6	
Sweating	14	41,2±8,4	4	16,7±7,6	<0,05 Б
Weight loss	26	76,5±7,3	11	45,8±10,2	<0,05 0,05
Joint pain	34	100,0			

Group 2 consisted of 24 patients with HRBS, in whom the last rheumatic attack was observed 3 or more years before the start of our study.

In the 1st group of patients, young people aged 16 to 36 years prevailed (89%), in the second group, people aged over 40 years (80%) prevailed.

In the 1st group, two subgroups were distinguished: In the 1a subgroup (n=18), the age of patients was from 16 to 23 years. They were first diagnosed with rheumatic fever a year before the start of our study. In subgroup 1b (n=16), patients were diagnosed with recurrent rheumocarditis during exacerbations, although it was not possible to establish anamnestic information about primary rheumatic fever in the anamnesis.

We have provided (Table 2) information on the frequency and nature of clinical manifestations identified in both groups. Signs such as asthenization (general weakness, sweating, weight loss) were equally observed in two subgroups. Symptoms of high activity of the rheumatic process – fever and joint damage, were observed more often in patients of the first group: 44.1% and 100%, respectively.

We found it expedient to analyse in detail the clinical, instrumental and laboratory changes in two subgroups of group 1 of patients with CRBS with rheumatic attacks during the year of follow-up (n=34). The most striking clinical manifestations in the form of fever, articular syndrome, cough, shortness of breath (pneumonitis) and the connection with angina were observed in the first subgroup of patients. In subgroup 1a (n=18), the bronchopulmonary apparatus (72.2%) and the heart (55.6%) were most often affected from visceral manifestations, and only 4 patients (22.2%) had nephropathy. The above-mentioned visceral manifestations (pneumonia, carditis, nephritis) were confirmed in addition to clinical manifestations and laboratory and instrumental changes: X-ray, ECG and Echo-cardio-scopic parameters.

The activity of the rheumatic process was evidenced by such laboratory indicators as acceleration of ESR (72.2%), the presence of C-reactive protein (100%) and high titers of ASL-O (88.9%).

In subgroup 1b (n=16), in 10 patients, the exacerbation was preceded by a rheumatic anamnesis (connection with angina, joint syndrome) and the diagnosis of HRBS was recorded earlier. Heart damage in patients of this subgroup was manifested in the form of cardialgia (68.7%) of various types, shortness of breath (70%). The displacement of the boundaries of the heart to the right was observed in 25% of patients, which we considered as a reflection of pulmonary hypertension against the background of an active inflammatory process in the myocardium and possibly diffuse pneumonitis of rheumatic etiology.

Instrumental (ECG and Echo-KG) changes in patients of subgroup 1b, the most frequent ECG changes were diffuse myocardial lesion (100%), hypertrophy of the right heart (50%), intraventricular blockages (43.8%) and ventricular extrasystoles (31.2%). Echo-cardio-scopic changes in the ejection fraction and hypertrophy of the LVL were observed in 11 (68.7%) and 5 (31.2%) patients of this subgroup, respectively. The completeness of the data provided gave the right to a preliminary diagnosis of high activity carditis. The results of laboratory tests

helped to make it into a clinical diagnosis. General blood tests were performed: ESR in patients of subgroup 2 exceeded 29-35 mm/hour, averaging 32 ± 3 mm/hour. C-reactive protein was detected in blood plasma in all patients of this subgroup, antistreptolysin "0" was significantly higher than normal - in 56.2% of patients. 2 группа (n=24)

HRBS aged from 24 to 65 years. The age of patients is over 40 years (79.3%). At the same time, the majority of patients were aged from 50 to 60 years. There were only four persons from 30 to 40 (16.6%). One patient was aged 24. Thus, we can state in our study the trend of increasing the life expectancy of patients suffering from rheumatic heart defects.

22 patients in this group (92% of the total number of patients in group 2), according to discharge epicrisis, were diagnosed with rheumatism at one time and the length of the disease by the time our study began was on average 16 ± 7.5 years. The onset of the disease was marked by fever, arthralgia, polyarthritis in 11 of them (50%), which was regarded in combination with other survey data as an acute primary rheumatic attack. The rest of the patients with a history of rheumatism were diagnosed for the first time on the basis of the identified rheumocarditis, which was regarded as recurrent (according to epicrisis). Two patients of group 2 had no rheumatic history. During the examination, decompensated heart defects were detected, and a diagnosis of HRBS was made.

The absolute majority of patients in groups 1 and 2 had combined aortic and mitral or aortic and tri-cuspid defects in 87.9% (n=51). Combined defects were noted in 8.6% of patients (n=5): mitral or aortic. Only two representatives of both groups (3.4% of the total number of patients) were diagnosed with isolated mitral valve insufficiency, while the remaining patients suffered from combined and combined heart valve defects. Almost a third (29%) of the patients underwent heart surgery, five of these operations were reconstructive: by the time of our study, they had mitral and aortic valve prostheses installed. Two other operations were performed by closed commissurotomy 25 and 18 years before the start of our study. They were found to have restenosis of the left atrioventricular foramen. It should be noted the trend of the last 10-15 years in the region: the number of patients undergoing reconstructive heart surgery is increasing. At the same time, the percentage of decompensation of cardiac activity in these patients is high, possibly as-associated with the untimely replacement of expired implants. Commissurotomy is still a palliative operation, restenosis after which is quite expected.

Thus, the analysis of the clinical picture of rheumatism in the patients examined by us allowed us to conclude that rheumatic fever did not always have typical manifestations. In our observations, we were more often faced with an erased clinical picture: the absence of volatile joint pain, the absence of ring-shaped erythema, a rare increase in temperature. In 72% of cases, the onset of rheumatic activity was manifested in the form of an injury to the bronchopulmonary apparatus. As a rule, patients complained of de-compensated heart, which indicated and was confirmed (by Echo-ECG studies) by the presence of formed heart defects in patients.

Table 3. General characteristics of the examined patients with rheumatoid arthritis (n=50).

Group of patients	Quantity (n=50)		Sexy		Middle age	Duration of illness
	Absol	%	men	women		
Seronegative RA	14	28,0±6,3	1	13	37,1±1,44	7,9±0,48
Seropositive RA	36	72,0±6,3	7	29	39,2±1,68	8,3±0,62

50 patients with established and verified diagnosis of rheumatoid arthritis were examined according to the criteria of the American College of Rheumatologists (ACR), aged 20 to 64 years, men - 8, women – 42. Seropositive variant of the disease was diagnosed in 36 patients (men -7, women - 29), seronegative - in 14 (men -1, women - 13). Table 3 presents the general characteristics of the examined patients with rheumatoid arthritis (n = 50).

As can be seen from the table, the duration of the disease in patients with seronegative and seropositive RA was 7.9±0.48 and 8.3±0.62, respectively. The long experience of RA in some patients contradicted the well-known statements about the formation of a persistent antibody response by the end of the first 12 months of RA development. Nevertheless, laboratory tests for rheumatoid factors turned out to be negative in these patients.

The average age of patients with seropositive RA was higher than in patients with seronegative RA - 39.2±1.68 and 37.1±1.44, respectively.

We evaluated some clinical, laboratory and X-ray indicators in patients with seropositive and sero-negative RA course. The slow-progressive type of onset of the disease was often observed in patients with seronegative RA- 71.4% versus 52.8%. The two subgroups were dominated by patients with II degree of activity 57.1%- 61.1%. II and III radiological stages were observed in most patients with seronegative and seropositive course: 92.9% and 83.3%, respectively. It is necessary to answer that non-articular manifestations were significantly more often observed with the seropositive variant of RA 86.1% versus the seronegative variant of RA 57.1%. The onset of the disease in 88% of patients out of the total number (n=50) of RA patients was characterized by polyarthralgia, mainly in the interphalangeal and wrist joints. Morning stiffness in the onset of the disease was noted by more than 87% of patients. In 90% of patients with cancer, the onset of articular syndrome was preceded by purulent-necrotic processes of the nasopharynx (sore throats, pharyngitis, laryngitis, sinusitis), stomatitis and gingivitis.

The patients were treated in accordance with the standards of RA therapy. Basic methotrexate therapy was received by 32% of patients at home and more than 65% of patients under the constant supervision of a rheumatologist or therapist (outpatient or inpatient treatment). All patients received nonsteroidal anti-inflammatory drugs. At different stages, the combinations of drugs were different, during the period of our study, RA patients performed doctors' prescriptions for complex therapy of RA, including anti-inflammatory, metabolic agents. Hormone dependence was noted in 20% of patients (n=36) with seropositive RA. The rehabilitation of foci of infection in the nasopharynx was carried out using local therapy with ozone/ NO ultrasound treatment.

The study of morphotypes of tesigrams, IR plasma spectra of patients with chronic nosologies: rheumatic heart disease, rheumatoid arthritis, a group of patients with chronic tonsillitis of streptococcal etiology, without complications in the form of myocarditis, rheumatic attack, reactive arthropathy.

Thermograms obtained by studying the blood plasma of healthy individuals (donors) by the method of wedge-shaped dehydration were used as a control. Figure 1 shows a typical thermogram of a healthy donor.

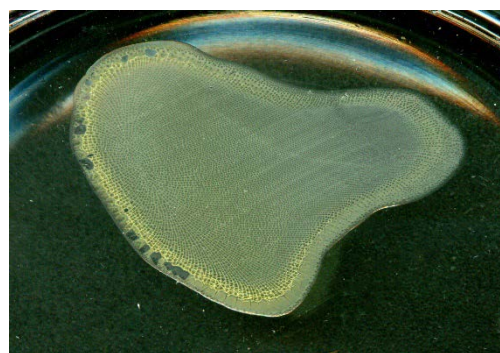


Figure 1. Typical tesigram of blood plasma of a healthy donor.

The presented thesiogram is characterized by the presence of marginal and central zones in the facies (Figure 1). The picture of the marginal zone is represented by a uniform radial-arcadian cracking. The central zone is characterized by uniform radial cracking, the overall facies pattern is symmetrical. The tesigram in patients with CT are characterized by the following: the picture of the central zone is characterized by the characteristic disappearance of the normal radial cracking with its replacement by chaotic cracking. The overall symmetry of the picture has disappeared. A decrease in crack density is characteristic. The increase in the number of nodules in comparison with the control is noteworthy. In the marginal zone of the facies, the number of nodules is increased compared to the control, while in the central zone it is less. In all examined patients with chronic tonsillitis, pathological structures of the "wrinkles" type appeared in facies.

A typical plasma tesigram of a patient with chronic rheumatic heart disease before treatment is presented (Figure 2).

In three zonal tesigrams, there is no clear structural boundary between the intermediate and central zones. Most facies are characterized by high cracking density and lack of symmetry in the structure, due to the prevailing chaotic cracking of the central zone.

In the presence of small nodules observed in the marginal zone, the formation of their large analogues in the same zone may indicate a violation of the composition of proteins in the blood plasma of patients of this group. Single facies with white inclusions localized in the central zones, which may indicate violations of lipid metabolism.

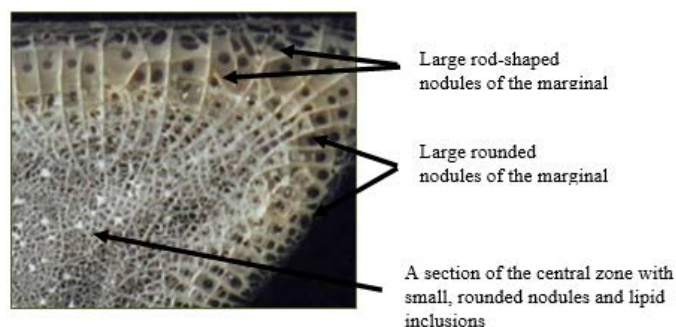


Figure 2. Types of nodules in facies of plasma thesiograms of a patient with rheumatic heart disease before treatment.

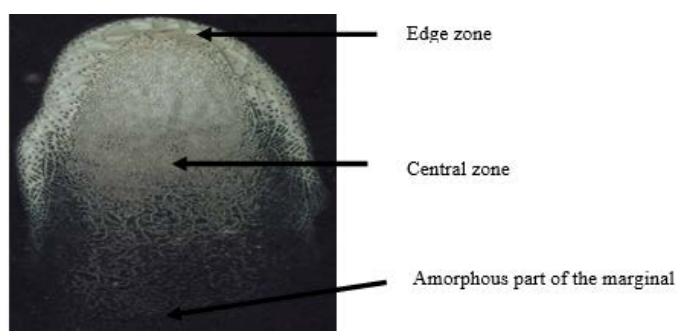


Figure 3. Typical plasma thesiogram of a patient with rheumatoid arthritis before treatment.

Plasma thesiograms of patients with rheumatoid arthritis (Figure 3) before the start of treatment are characterized by a two-zone structure, the presence of marginal and central facies zones. The marginal de- lineation of most facies is clearly expressed only for one-half of the marginal zone, while the other one-half of the marginal zone is represented by an amorphous region. The amorphous region is characterized by the absence of any ordered structural pattern of the phase. The marginal zone is more often formed by individuals of different sizes (small, large ones) and shapes (oblong, diamond-shaped, triangular), which is why the same thickness of the marginal zone is not observed throughout its entire length.

The central zone is quite clearly structurally separated from the marginal zone, since it is formed by smaller, or vice versa, larger separations than the marginal zone and more often has a chaotic type of cracking, which is characterized by the absence of a common radial center and a disorderly arrangement of the formed separations of different sizes and shapes, may indicate the presence of protein molecules, differing in their physico-chemical properties, which is naturally reflected in the structural portrait of the thesiogram in the form of a chaotic arrangement of the biome.

The IR spectra of the blood plasma of patients with CRBS before treatment differed from the spectra of the control group by the presence of a pronounced absorption band in the shortwave region (3200-3600 cm^{-1}), the absence of clear absorption peaks in the Amide 2 regions and in the 1100-1350 cm^{-1} region.

Such changes in the nature of absorption may indicate, first of all, an increase in the destabilization of the protein component in the blood plasma of these patients. These results suggest an

increase in the blood plasma of patients with rheumatic heart disease of peroxide-modified lipids.

The IR spectra of RA patients before treatment differed from the spectra of the control group by a change in the absorption pattern in the Amide 1 and Amide 2 regions and the presence of a pronounced asymmetric absorption band of 1320-1420 cm^{-1} with a maximum absorption intensity at a frequency of 1400 cm^{-1} .

Also, the nature of absorption indicates a violation of the degree of protein-lipid interactions. A shift in the absorption bands of nitrogen-containing components of the blood plasma of RA patients was recorded. These data suggest that the protein component of the blood plasma of patients is mainly affected, which may be due to the intensification of oxidative modification of proteins with the formation of pathologically altered molecules.

The treatment of patients with HRBS, RA, suffering from chronic tonsillitis was carried out. For treatment by low-frequency ultrasound ozone/NO therapy, patients with recurrent inflammatory process in the pharyngeal mucosa and palatine tonsils during 3-6 months of our observation, as well as with a positive response of bacteriological examination of the nasopharynx, were selected. At the same time, these patients repeatedly received pharmacotherapeutic and physiotherapeutic means of traditional therapy for the course treatment of chronic tonsillitis during at least a six-month period of our observation. Despite this, symptoms of inflammation of the palatine tonsils occurred at least once every 2-3 months, a bacteriological response to the study of the nasopharynx. In total, 70 patients with HRBS were treated, including 31 (53.4%) patients with chronic rheumatic heart disease and 39 (78%) patients with rheumatoid arthritis with concomitant chronic tonsillitis and 12 (41.3%) patients suffering from chronic tonsillitis, but without rheumatic pathology.

We conducted microbiological studies in aerobic conditions before treatment, on days 5 and 10. We studied the long-term results of treatment after 1 year in patients receiving ozone/NO ultrasound therapy, all of them had no exacerbations, relapses.

It has been established that the bacterial microflora is preserved qualitatively, but its quantitative decrease is underway. Ozone/NO ultrasonic treatment method has not only an antibacterial effect, but also a pronounced fungicidal effect.

The study of the thesiographic characteristics of the blood plasma of patients who received traditional therapy, as well as the treatment of palatine tonsils with ozone/NO ultrasound method was carried out. Tesiograms of patients were photographed, described in detail, and tesiograms were compared by groups, respectively, in patients with CT, HRBS and RA. The general irregularities of changes in crystal structures in various groups of patients were established.

As illustrations, typical thesiograms of patients with isolated chronic tonsillitis, chronic rheumatic heart disease and rheumatoid arthritis after the treatment of pharynx with ozone/NO ultrasound were selected.

Asymmetric uniform radial-arcadian cracking was noted in blood plasma thesiograms of patients with chronic tonsillitis after treatment. The number of nodules is very much reduced, or they are absent altogether. In general, we can note a weak

tendency to facies structuring in patients of this group compared with those of patients before treatment.

Thus, the study of the thesiographic patterns of blood plasma of patients with HRBS and RA against the background of traditional treatment shows. That medicamentous therapy, carried out in accordance with the program principles of treatment of these diseases, does not restore the lost structure of tesigrams, whereas against the background of rehabilitation of the tonsils of the palatine, using the method of ozone / net-low-frequency ultrasound therapy, there is a clear tendency to restore the structurality of patterns. The IR spectra of the blood plasma of patients with rheumatoid arthritis after treatment differed from the plasma spectra of patients of the same group before treatment with less clarity of the formation of bands and absorption peaks. In general, the spectrum was a set of small, poorly structured bands and peaks in the main areas characteristic of blood plasma.

Such features of IR radiation absorption in the blood plasma of patients with rheumatoid arthritis can be explained by the following reason. On the one hand, the rehabilitation of the focus of inflammation does not lead to the rapid elimination of peroxide-modified products from the blood, which explains the formation of pathologically altered molecules. On the other hand, it is known that peroxide-modified products are considered as endotoxins and are involved in the formation of endotoxemia.

Changes in the nature of infrared radiation absorption in the blood plasma of patients with CRBS and RA indicated the destabilization of the phospholipid component of cytomembranes with the release of compounds containing the P-OH and P-O-R groups into the blood plasma.

Conclusion.

The physico-chemical properties of the blood plasma of patients with chronic rheumatic heart disease and rheumatoid arthritis deteriorated significantly: systemic and subsystem structural disorders in thesiographic patterns were noted, having distinctive features for rheumatic heart disease and rheumatoid arthritis. Changes in the nature of the absorption of infrared radiation in the blood plasma of patients with HRBS and RA indicated the destabilization of the phospholipid component of cytomembranes with the release of compounds containing the P-OH and P-O-R groups into the blood plasma. Treatment of the nasopharynx and purposefully palatine veins with ozone/NO infusions and applications contributed to the stabilization of the physiological and chemical properties of the blood plasma of patients: the tesigrams acquired a clearer structural composition, indicating the stabilization of cytomembranes and the protein component of blood plasma.

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РЕЗЮМЕ

КЛИНИЧЕСКИЕ, ИММУНОЛОГИЧЕСКИЕ И ТЕЗИОГРАФИЧЕСКИЕ ХАРАКТЕРИСТИКИ РЕВМАТОИДНОГО АРТРИТА И ХРОНИЧЕСКОЙ РЕВМАТИЧЕСКОЙ БОЛЕЗНИ СЕРДЦА

Шуашева Э.А¹, Булешов М.А¹, Кемельбеков К.С².

¹Международный казахско-турецкий университет имени Ахмет Ясави, Казахстан, Туркестан

²Южно-казахстанская медицинская академия, Казахстан, Шымкент

Ревматизм и ревматические болезни до сих пор не утратили своей проблематичности и актуальности для медицины и общества. По своей распространенности они занимают третье место после заболеваний сердечно-сосудистой системы и органов пищеварения. В связи с этим актуальным является изучение клинических и патогенетических аспектов ревматизма и ревматоидного артрита, связанных с персистирующей инфекцией носоглотки, а также поиск новых эффективных подходов к лечению этих заболеваний, вносящих наиболее существенный вклад в формирование необратимых изменений в сердце и опорно-двигательный аппарат.

Материалы и методы: Были изучены архивные медицинские карты стационарных и амбулаторных пациентов городских и областных клинических больниц, городских поликлиник Шымкента, а также текущая ситуация в Шымкенте на основе показателей заболеваемости. Выборка была солидной.

Результаты: мы оценили некоторые клинические, лабораторные и рентгенологические показатели у

пациентов с серопозитивным и серонегативным течением РА. Медленно прогрессирующий тип течения заболевания чаще наблюдался у пациентов с серонегативным РА - 71,4% против 52,8%. В обеих подгруппах преобладали пациенты со II степенью активности - 57,1%- 61,1%. II и III рентгенологические стадии наблюдались у большинства пациентов с серонегативным и серопозитивным вариантами течения: 92,9% и 83,3% соответственно.

Вывод: Физико-химические свойства плазмы крови пациентов с хронической ревматической болезнью сердца и ревматоидным артритом значительно ухудшились: были отмечены системные и подсистемные структурные нарушения в морфологических картинах, имеющие отличительные признаки для ревматической болезни сердца и ревматоидного артрита.

Ключевые слова: ревматоидный артрит, хроническая ревмокардитическая болезнь сердца, хронические клинико-иммунологические особенности, физико-химические свойства плазмы крови, тешиографические характеристики

რეზიუმე

კლინიკური, იმუნოლოგიური და თეზიოგრაფიული მახასიათებლები რევმატოიდული ართრიტი და გულის ქრონიკული რევმატიული დაავადება

Shuasheva Y.A¹, Buleshov M.A¹, Kemelbekov K.S².

¹ახმეტ იასავის საერთაშორისო ყაზახურ-თურქული უნივერსიტეტი, თურქეთი, ყაზახეთი.

²სამხრეთ ყაზახეთის სამედიცინო აკადემია, შიმკენტი, ყაზახეთი.

რევმატიზმსა და რევმატიულ დაავადებებს ჯერ კიდევ არ დაუკარგავთ პრობლემატიკა-ic და აქტუალობა მედიცინისა და საზოგადოებისთვის. მათი პრევალენტობის თვალსაზრისით, ისინი მესამე ადგილს იკავებენ გულ-სისხლძარღვთა სისტემის და საჭმლის მომნელებელი ორგანოების დაავადებების შემდეგ. ამ მხრივ, მნიშვნელოვანია რევმატიზმისა

და რევმატოიდული ar-thritis-ის კლინიკური და პათოგენეტიკური ასპექტების შესწავლა, რომლებიც დაკავშირებულია მუდმივ ნაზოფარინგეალურ ინფექციასთან, ასევე ამ dis-eases-ის მკურნალობის ახალი ეფექტური მიდგომების ძიება, რაც ყველაზე მნიშვნელოვან წვლილს შეიტანს გულისა და კუნთოვანი სისტემის შეუქცევადი ცვლილებების ფორმირებაში.

მასალები და მეთოდები: შეისწავლეს საქალაქო და რეგიონალური კლინიკური საავადმყოფოების სტაციონარული და ამბულატორიული პაციენტების საარქივო სამედიცინო ჩანაწერები, შიმკენტის საქალაქო პოლი-კლინიკები, ხოლო შიმკენტში არსებული მდგომარეობა შეისწავლეს ავადობის ინდიკატორების საფუძველზე. ნიმუში მყარი იყო.

შედეგები: შევადგინეთ ზოგიერთი კლინიკური, ლაბორატორიული და რადიოლოგიური პარამეტრი სეროპოზიტიური და სერონეგატიური RA კურსის მქონე პაციენტებში. დაავადების დაწყების წელი პროგრესული ტიპი უფრო ხშირად იყო ob-მსახურობდა პაციენტებში seronegative RA - 71.4% წინააღმდეგ 52.8%. ორ ქვეჯგუფში დომინირებდნენ II ხარისხის აქტივობის მქონე პაციენტები 57.1% - 61.1%. II და III რადიოლოგიური სტადიები აღინიშნებოდა კურსის სერონეგატიური და სეროპოზიტიური ვარიანტების მქონე პაციენტების მა-ჯგორობაში: შესაბამისად 92.9% და 83.3%.

დასკვნა: გულის ქრონიკული რევმატიული დაავადების და რევმატოიდული ართრიტის მქონე პაციენტების სისხლის პლაზმის ფიზიკურ-ქიმიური თვისებები მნიშვნელოვნად გაუარესდა: აღინიშნა სისტემური და ქვესისტემური სტრუქტურული დისორ-დერები თეზიოგრაფიულ ნიმუშებში, რომლებსაც აქვთ გამორჩეული თვისებები გულის რევმატიული დაავადებისა და რევმატოიდული ართრიტის დროს.

საკვანძო სიტყვები: რევმატოიდული ართრიტი, გულის ქრონიკული რევმატიული დაავადება, ქრონიკული კლინიკური და იმუნოლოგიური თავისებურებები, სისხლის პლაზმის ფიზიკურ-ქიმიური სწორ-კავშირები, ესოგრაფიული მახასიათებლები