IJACT, Volume 3, Issue 1, 2025 ISSN: 2995-5378
http://medicaljournals.eu/index.php/IJACT

INTERNATIONAL JOURNAL OF ALTERNATIVE AND CONTEMPORARY THERAPY

Specific Features of Hereditary Predisposition in Rheumatoid Arthritis

Islamova Kamola Akramovna

Acting Associate Professor, Department of Internal Medicine No.1, Samarkad State Medical University, Samarkand, Uzbekistan.

Abstract: Objective. The purpose of the work is to study the heredity of rheumatoid arthritis.

Material and methods. 100 patients were studied: 88 women and 12 men with RA, with the help of this special questionnaire, the functional state of the joint and the genetic character were determined.

Results and discussion. One or more systemic rheumatic diseases were detected in 37% of patients among first- and second-line relatives using the developed program. This allowed us to divide the patients into 2 subgroups: the first group - patients with RA without rheumatic diseases among the relatives (n=63), the second group - patients with hereditary burdened RA (n=37).

Conclusion. Thus, in patients with burdened heredity by systemic rheumatic diseases, RA debuted earlier, more often subacutely, with oligoarticular lesions of large joints, but with a tendency to rapidly spread joint syndrome, with a large number of painful and swollen joints, prolonged morning stiffness, which significantly affects the quality of life of these patients. Patients with burdened heredity are more sensitive to emotional, physical overload and hormonal fluctuations.

Keywords: rheumatoid arthritis, joint syndrome, hereditary premorbide.

INTRODUCTION

Rheumatoid arthritis (RA) is a disease with chronic progressive erosive polyarthritis and systemic visceral lesions. The social significance of the disease is determined by high disability rates and high "cost" of treatment [1;3;5;7;8;12;15].

The risk factors and causes of RA have not been identified, and the pathogenetic mechanisms remain hypothetical in many respects. Many inaccuracies and opposite data are available in the analysis of clinical polymorphism of RA depending on the causes of the disease [2;4;6;9;10;13;14].

According to the literature, the disease develops as a result of complex and largely probable interaction of genetic factors and environmental factors. The search for the causes of clinical polymorphism among genetic factors, which has been carried out in recent years, also seems reasonable [11;14;16;20;22;24]. In recent years, research on genetic predisposition to rheumatic diseases has intensified. Numerous studies are aimed at revealing molecular genetic markers [17;18;19;21;23;25], but convincing results do not yet exist.

The purpose of our work was to study the peculiarities of the RA current depending on the presence of hereditary burdens in the investigated patients with systemic rheumatic diseases.

RESEARCH MATERIAL AND METHODS

There were 100 (12 men, 88 women) RA patients under observation. Diagnosis of RA was established by the criteria of the American Rheumatological Association (1997). Patients were examined according to a unified program established in accordance with the purpose of this work.

The average age of those included in the study was 47.2 ± 1.1 years (46.8±1.2 for women and 50.4±2.9 for men). The average duration of the disease was 8.07 ± 0.71 years. 11% of patients had RA duration of up to 2 years, 31% had 2-5 years. 35% of patients suffered from 6 to 10 years of RA, 16% from 11

to 20 years, and the duration of more than 21 years was registered in 7% of patients..

Slow progression of RA was in 81 (81%) patients and rapid progression was in 19 (19%) patients. High disease activity was recorded in 25 (25%) patients, moderate and low activity - in 75 (75%) patients. Radiological stages of RA were distributed among the patients as follows: Stage II - 67 (67%), stage III - 23 (23%) and stage IV - 11 (11%) patients.

14 patients (14%) had I degree of functional failure (FF), 71 (71%) - II degree of FF, 15 (15%) - III degree of FF. Depending on the presence of rheumatoid factor in blood serum patients were distributed as follows: seropositive - 83 (83%) and seronegative -17 (17%). The index of functional index Lee was 19,24±1,47 points, HAQ - 38,64±3,21 points.

In connection with the set goal, the heredity of patients was investigated by N.P. Bochkova's clinical and genealogical method (2004). For definition of risk degree of development of rheumatic diseases by hereditary connections the program for definition of risk degree of development of rheumatic diseases by hereditary connections (№ DGU 06989 from 08.10.2019) has been developed. The program is calculated, according to a ballistic assessment, the risk of RH development according to the pedigree of the study (proband). For the accuracy of the results, the presence of RH in first- and second-line relatives was taken into account.

When statistically processing the material we calculated the arithmetic mean (M), standard deviation (σ), arithmetic mean error (m), confidence interval. Pearson correlation coefficient and its significance were calculated to determine the dependence between the calculated indicators.

RESULTS AND DISCUSSION

One or more systemic rheumatic diseases were detected in 37% of patients among first- and second-line relatives using the developed program. This allowed us to divide the patients into 2 subgroups: the first group - patients with RA without rheumatic diseases among the relatives (n=63), the second group - patients with hereditary burdened RA (n=37).

Among the patients of Group II, the diseases encountered in their families were distributed as follows: RA was noted in relatives 48.5%, chronic rheumatic heart disease 16.6%, systemic vasculitis 8.3%, systemic diseases of connective tissue 19.4% and psoriatic arthritis 2.8% of the studied. As for the degree of kinship, it was registered the presence of systemic rheumatic diseases in 22% of mothers of patients in group II, 3% of fathers, 4% of grandmothers, 6% of aunts, 3% of brothers and sisters and 2% of cousins, which demonstrates the well-known fact of preferential inheritance of systemic rheumatic diseases in the female line.

Comparable groups practically did not differ in terms of gender. There were 11.1% male patients in Group I and 13.5% female patients in Group II, and 88.5% female patients in Group I and 86.5% female patients in Group II.

In the group of patients with burdened heredity an earlier beginning of RA was found. The average age in Group I was 37,1±1,5 years, which was statistically more than in Group II (26,4±1,6 years, P<002). The mean age indicator at the moment of the disease beginning in the first group (28,9±1,6 years) was also higher than in the patients of the II group (22,2±1,3 years, P<001).

The predisposing factors for Group II patients were more often psycho-emotional overloads (24.32% vs. 17.46% of Group I patients), physical overloads (18.92% and 14.29% of Group I patients), induced termination of pregnancy (8.11% vs. 4.76% of Group I patients) and the period of premenopause (5.41% and 1.59%, respectively). It means that patients with hereditary burdens by systemic rheumatic diseases are more sensitive to such predisposing factors as emotional and physical overloads, hormonal fluctuations.

The initial joint syndrome was considered as monoarthritis in 1.58% of Group I patients and 5.4% of Group II patients, as oligoarthritis in 11.1% of Group I patients and 32.4% of Group II patients ($p < 0.05$) and made its debut as polyarthritis in 87.3% of Group I patients and 62.2% of Group II patients.

The localization of primary joint lesions also differed in the compared groups. Thus, for the patients of the first group RA started with the lesions of small joints of the hand (34,9% of the patients of the first group and 13,5% of the patients of the second group, $p<0.05$), and for the patients of the second group - with the lesions of shoulder joints (21,6% of the cases in the second group and 3,2% of the cases in the first group, $p<0.05$).

Despite the prevalence of oligoarticular debut in Group II patients, the complete clinical picture of RA was developed in short terms - during 1 month in 27,1% of patients (in Group I - 14,3%) and during 3 months in 37,8% of patients (in comparison with 20,6% of Group I patients). In the extended stage of the disease polyarthritis was registered in 73,02% of Group I and 94,59% of Group II patients ($p<0,05$). This is an evidence of more aggressive joint syndrome in patients of Group II. The same peculiarity is confirmed by average values of positive morning stiffness, number of swollen joints, Ritchie's index in patients of the II group which is higher than in patients of the I group. Severe functional joint lesions also prevailed in patients included in the second group.

The performed analysis of the laboratory research data revealed significant statistical differences between the compared groups in terms of SCE indicators (29.4±3.3 mm/hour in Group I and 35.0±2), 7 mm/hour in Group II), C- reactive protein (21.9± 5.0 mg/ml in Group I and 27.9±4.6 mg/ml in Group II) and rheumatoid factor (187.0±47.5 units/l in Group I patients and 297.1± 54.1 units/l in Group II patients, $p<0.01$).

General manifestations of the disease in patients of the compared groups were found in the following ratios: an increase in body temperature was observed in 19.1% of patients in Group I and 21.6% in Group II. Rapid fatigue rate was shown by 74,6% of patients of I group, 89,2% - II group. Decrease in body weight (more than 5 kg) was registered in 9.5% of Group I patients and 18.9% of Group II patients. Elevated sweating was found in 34.9% of Group I patients and 48.7% of Group II patients, sleep disturbances were observed in 42.9% of Group I patients and 40.5% of Group II patients.

CONCLUSION

Thus, in patients with burdened heredity by systemic rheumatic diseases, RA debuted earlier, more often subacutely, with oligoarticular lesions of large joints, but with a tendency to rapidly spread joint syndrome, with a large number of painful and swollen joints, prolonged morning stiffness, which significantly affects the quality of life of these patients. Patients with burdened heredity are more sensitive to emotional, physical overload and hormonal fluctuations.

In patients with burdened heredity the laboratory indicators of inflammatory activity - the level of SEE, C-reactive protein and rheumatoid factor in all periods of RA are higher than in patients without hereditary premorbide.

Along with severe functional lesions of joints and in patients with hereditary premorbide the frequency of common RA features prevails, which confirms the fact that timely diagnosis of RA and early start of basic treatment can prevent disability of patients with hereditary burdens.

REFERENCES

1. Ibrat A. et al. FEATURES OF THE SYNDROMES OF OSTEOPOROSIS AND SARCOPENIA IN RHEUMATOID ARTHRITIS WITH MUSCLE WEAKNESS //Spectrum Journal of Innovation, Reforms and Development. – 2023. – Т. 13. – С. 95-103.
2. Akramovna I. K., Sanatovich T. E. Functional evaluation of the effectiveness of intraarticular chondro hyaluronic injection in early knee osteoarthritis //Journal of Critical Reviews. – 2020. – Т. 7. – №. 7. – С. 410-413.
3. Islamova K. A., Sh K. F., Toirov E. S. Efficiency Of Intra-Articular Administration In Early Osteoarthrosis //The American Journal of Medical Sciences and Pharmaceutical Research. – 2020. – Т. 2. – №. 11. – С. 22-27.

4. Shamsiev E. A., Islamova K. A., Ziyadullayev Sh X. ARTERIAL HYPERTENSION IN PATIENTS WITH COVID-19 //Scholastic: Journal of Natural and Medical Education. – 2023. – Т. 2. – №. 11. – С. 13-18.
5. Абдушукурова К. Р. и др. Суставной Синдром При Хронических Воспалительных И Дистрофических Заболеваниях Суставов //Miasto Przyszłości. – 2023. – Т. 33. – С. 209-214.
6. Абдушукурова К., Исламова К. ВЗАИМОСВЯЗЬ НЕРВНО-ЭНДОКРИННЫХ НАРУШЕНИЙ У БОЛЬНЫХ РЕВМАТОИДНЫМ АРТРИТОМ //International Bulletin of Medical Sciences and Clinical Research. – 2023. – Т. 3. – №. 11. – С. 16-20.
7. Amrillaevich A. I. et al. EFFECTIVENESS OF LASER PHYSIOTHERAPY METHOD IN TREATMENT OF PRIMARY KNEE JOINT OSTEOARTHRITIS //International Conference on Medicine and Life Sciences. – 2023. – С. 76-82.
8. Исламова К. А. и др. ЭФФЕКТИВНОСТЬ ВНУТРИСУСТАВНОГО ВВЕДЕНИЯ ГИАЛУРОМ ХОНДРО ПРИ РАННЕМ ОСТЕОАРТРОЗЕ //IQRO. – 2023. – Т. 2. – №. 2. – С. 186-193.
9. Тоиров Э., Исломова К., Уралов Р. Эффективность комплексного лечения раннего остеоартроза //Журнал вестник врача. – 2019. – Т. 1. – №. 3. – С. 99-103.
10. Исломова К. А., Тоиров Э. С. Эффективность внутрисуставного введения хондропротекторов при раннем остеоартрозе //Вестник науки и образования. – 2020. – №. 9-3 (87). – С. 92-97.
11. Hamrayev B. E. et al. SYSTEMIC LUPUS ERYTHEMATOSUS AND RENAL LESIONS: CLINICOPATHOGENETIC ASPECTS //American Journal of Pediatric Medicine and Health Sciences (2993-2149). – 2023. – Т. 1. – №. 9. – С. 482-489.
12. Akramovna I. K., Rafikovna U. K., Ergashevna E. N. Current Perceptions of Chronic Pancreatitis //International Journal of Alternative and Contemporary Therapy. – 2024. – Т. 2. – №. 1. – С. 12-16.
13. Akramovna I. K., Alisherovna K. M. CAUSES OF ARRHYTHMIA DURING PREGNANCY //Journal of new century innovations. – 2024. – Т. 45. – №. 3. – С. 34-41.
14. Akramovna I. K., Zaynobiddin o'g'li F. J. RISK FACTORS OF EARLY DEVELOPED OSTEOARTHRITIS //BEST SCIENTIFIC RESEARCH-2023. – 2023. – Т. 2. – №. 1. – С. 28-35.
15. Zoxidjonovna R. M., Amrullayevich A. I. METHODS OF REHABILITATION OF TRAUMATIC INJURIES OF THE ANKLE JOINT IN FOOTBALL PLAYERS //JOURNAL OF BIOMEDICINE AND PRACTICE. – 2023. – Т. 8. – №. 3.
16. Хамраева Н. А. COURSE OF SYSTEMIC LUPUS ERYTHEMATOSUS DEPENDING ON CLIMATE AND GEOGRAPHICAL CHARACTERISTICS //УЗБЕКСКИЙ МЕДИЦИНСКИЙ ЖУРНАЛ. – 2022. – Т. 3. – №. 5.
17. Alisherovna K. M. et al. QUALITY OF LIFE IN THE PATHOLOGY OF THE CARDIOVASCULAR SYSTEM //World Bulletin of Public Health. – 2023. – Т. 25. – С. 35-40.
18. IBRAGIMOV K. et al. The Risk of Cardiovascular Disease in Patients with Rheumatoid Arthritis Treated with Conventional DMARDs: a Clinic Based Case Control Study. – 2022.
19. Исламова К. А., Тоиров Э. С. EATURES OF CLINICAL CHARACTERISTICS OF OSTEOARTHROSIS ON THE BACKGROUND OF OBESITY //Новый день в медицине. – 2019. – №. 2. – С. 167-170.
20. Hamraeva N. A., Sultonov I. I., Hasanov F. S. Systemic lupus erythematosus treatment strategy //Journal of Critical Reviews. – 2020. – Т. 7. – №. 9. – С. 269-270.

21. Abdurasulovna H. N. et al. Inflammatory Activity And Renal Pathology In Lupus Nephritis //Spectrum Journal of Innovation, Reforms and Development. – 2023. – T. 13. – C. 89-94.
22. Alisherovna K. M., Akramovna I. K., Baxtiyorovna O. K. THE COURSE OF CHRONIC ISCHEMIC PANCREATITIS IN PATIENTS WITH CORONARY HEART DISEASE //Ta'lim innovatsiyasi va integratsiyasi. – 2024. – T. 18. – №. 5. – C. 231-239.
23. Alisherovna K. M., Akramovna I. K., Yorkinovna E. N. CLINICAL AND MORPHOLOGICAL CRITERIA OF COLITIS IN PATIENTS WITH CHRONIC ISCHEMIC DISEASE OF THE DIGESTIVE SYSTEM //Ta'lim innovatsiyasi va integratsiyasi. – 2024. – T. 18. – №. 6. – C. 6-13.
24. Alisherovna K. M., Akramovna I. K., Kairatovna R. A. THE EFFECTIVENESS OF TREATMENT OF PATIENTS WITH OSTEOARTHRITIS WITH CARDIOVASCULAR DISORDERS IN METABOLIC SYNDROME //Ta'lim innovatsiyasi va integratsiyasi. – 2024. – T. 18. – №. 5. – C. 223-230.
25. Akramovna I. K., Rustamovna A. K. ULTRATOVUSH TEKHIRUV USULINING ERTA RIVOZHLANGAN OSTEOARTHROSIS KASALLIGIDAGI DIAGNOSTIC AHAMIYATI //International Conference on Medicine and Life Sciences. – 2023. – C. 72-75.