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In the first minutes of life, the state of the newborns was assessed with the Apgar scale. As can be seen in Table 3.1.8. the first minute the condition of 23.3% of the newborns was assessed as mild asphyxia, by the 5th minute their condition improved and only 5% of the children were assessed mild asphyxia.

Conclusions. Based on the results of the retrospective study, the following conclusion can be drawn: in the presence of a combination of chronic anemia and pyelonephritis in a pregnant woman, circulatory disturbances in the mother-placenta-fetus system occur in 65% of cases. Almost in equal proportions, there are circulatory disorders in uteroplacental and placental blood flow (28.3% / 26.7%). Violation of blood flow at two levels, not reaching critical values, was detected in 10% of pregnant women, which is 5.5 times less frequent than the incidence of CI 1a and CI 1b in the total. It should also be noted that with the development of CI 2 degree, the incidence of fetal growth restriction syndrome is 16.7%, while among the total number of all detected NDs, only 2.6%. Consequently, anemia in combination with pyelonephritis is one of the factors in the development of preeclampsia and perinatal complications.

Thus, a retrospective analysis of histories has shown that a prolonged impairment of blood circulation in the utero-fertile-placental circulation leads to adverse perinatal outcomes. Particular attention should be paid to the presence of severe complications in full-term newborns. So the development of cerebral ischemia in 5% of cases, the syndrome of respiratory disorders - 5%, asphyxia - 5% cause prolonged care of the newborn in several stages. And in the future it can be a factor in the development of neurological disorders, lagging behind the mental and physical development of the child from peers, which will affect the quality of his life.

REFERENCES:

1. Bagrii E.G. Preparation of women with iron deficiency anemia in order to improve the outcome of gestation for the mother and fetus. Bagrius, A.D. Pashayeva // Natural science and humanism. 2010. - T. 6, No. 1. - P. 3-4.

2. Bear V.I. The main issues of extragenital pathology. Part I Definition, systematization, clinical significance and problems associated with extragenital pathology // Medical aspects of women's health. - 2011. - №6. - P. 5-11.

3. Pyelonephritis and pregnancy. Etiology, pathogenesis, classification, clinical picture, perinatal complications / IGNikolskaya [and others] // Russian bulletin of obstetrics and gynecology. - 2007. - No. 2. - P. 34-36.

4. Sinyakova LA, Kosova IV Infections of the urinary tract in pregnant women: errors in diagnosis and treatment / / Urology. - 2009. - №2. - P.14-20.

THE ROLE OF CLIMATIC FACTORS IN THE PROGRESSION OF RHEUMATOID ARTHRITIS

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Abstract

A retrospective correlation analysis shows that RA indices differ in three zones of Uzbekistan and climatic factors influence the course of the disease. This indicates the presence of regional specificity of the RA in the conditions of the sharply continental climate of Uzbekistan. Based on the data obtained, it is possible to single out: a high-risk territory (I and III zone) for the progression of RA and a low-risk territory (II zone).

Keywords: rheumatoid arthritis, climatogeographic factors.

Rheumatoid arthritis (RA) is a heterogeneous disease in which the interaction of the genetic component and environmental factors causes a pronounced clinical polymorphism [1, 4-5;]. According to the literature data, weighting of diseases occurs under simultaneous influence of many factors, in particular, environmental factors [2, 86]. It is well known that environmental factors have a significant effect on the functional activity of the human body. So when studying the influence of various environmental indices, environmental factors of up to 30% are of primary importance. From them, environmental pollution accounts for 20% and climatic conditions - 10% [3, 156-157]. This means that the problems associated with diseases cannot be considered without taking into account and discussing the characteristics of the environment. Thus, according to the studies [4, 184-185], the clinical and immunological parameters of the rheumatoid arthritis have their own peculiarities depending on the patient's living areas in the conditions of Uzbekistan. Therefore, during the last few years, possible links between the development and features of the subsequent course of rheumatoid arthritis (RA) with adverse environmental factors are discussed.

By now, Uzbekistan is the subject of many works of medical and geographic focus, as the republic is unique in its geographic location and especially in its

climatic conditions. In general, the climate of Uzbekistan is an arid continental type. The average July temperature varies over flatland territory from 26 ° in the north to 30 ° C in the south, the maximum reaches 45-47 ° C. The average January temperature drops to 0 ° C in the south and to -8 ° C in the north, the minimum temperature in some years reaches -38 ° C (Ustyurt plateau). On the territory of Uzbekistan there are five natural ecosystems: desert ecosystems of plains; piedmont semi-deserts and steppes; river and coastal ecosystems; ecosystems of humid areas and deltas; mountain ecosystems. According to climatic indicators, three main climatic zones will be distinguished: a zone of deserts and dry steppes, a foothill zone and a mountain zone. Consequently, the study of correlation of RA morbidity with these or other meteorological factors is an actual problem. The solution of these issues in different climatic and geographic conditions in Uzbekistan is of both scientific and practical interest. According to studies [5, 37], on the background of fluctuations in certain physical parameters of the climate, regular changes occur in the joint syndrome in RA. Therefore, we consider it relevant to study in this area, especially in the issues of the peculiarities of the course of this disease on the background of various conditions of climatic comfort.

The purpose of this study was to assess the features of the clinical course of RA on the effects of climatic factors, depending on the different conditions of climatic comfort in Uzbekistan.

Material and Methods

The materials of the studies was a retrospective analysis of 900 outpatient cards and extracts from the patient's case histories from the RA among residents of the following regions of Uzbekistan: I zone, western region of Khorezm (n = 300); II zone, the eastern Namangan region (n = 300) and the III zone, the southern region (n = 300) over a 10-year period.

The actual levels of meteorological parameters were obtained from the regional Hydrometeorological Centers. On the basis of these data, a bank of information on meteorological factors of the first order atmospheric pressure (in mb), air temperature (in C0), relative humidity (in%) and duration of sunshine (in hours) have been accumulated.

The retrospective analysis included questions reflecting cases with positive clinical dynamics; duration of remission of the disease (more than 6 months); need for hospitalization; the frequency of contact with a doctor about problems (2 times or more per month during the year); comorbid conditions and extraarticular manifestations of RA.

The obtained results were subjected to static processing with the help of the computer program EXXEL and STATISTICA 6.0, with the calculation of the arithmetic mean and deviation errors (M ± m). The reliability of the differences was calculated using the Wilcoxon method. Correlation analysis between the indicators was carried out using Spearman's (r) coefficient.

Results and discussion

Among the studied patients, women predominated - 810 (90%). The duration of the disease ranged from 8 months to 35 years (an average of 9.5 ± 7.8 years). The retrospective studies show that the clinical course of RA in three different climatic and geographical zones have a certain difference. So in I zone prevailed such indicators as the tendency to the progression of the disease for the last 3 years - 83.4%; frequency of cases with the need for inpatient treatment for one year - 62.4%; high rates of seropositive results - 65% of cases. In this zone, cases with clinically pronounced variants (visceral form) of the course - 51.7% and necessity for high doses of aggressive methods of treatment (methotrexate - 25-30 mg / week) prevailed in this zone - in 83.4% of cases. In the third zone, the manifestation of the disease in most patients was noted at an earlier age - 55.4% of cases; changes in the reproductive system, i.e. women with RA during the year most often treated with problems associated with violations of the menstrual cycle - 50%, in the II zone and this figure was only 12% ($p < 0.01$), and in the III zone - 24% ($p < 0,05$). According to the record in outpatient cards, spontaneous abortion was noted in the 1st zone in 36.4% of women, secondary amenorrhea was registered in 30% of patients, and in 66.4% of cases, various types of menstrual cycle irregularities. In turn, the II zone was distinguished by relatively low (positive) indices in comparison with other zones ($p < 0.05$). Studying the indicators, it was found (Table 1) that among the patients of the I and III zones the indices compared to the II zone were high in the frequency of cases with the need for inpatient treatment for one year ($p < 0.05$), the frequency of medical attention, in the time in these zones with a long-term remission compared with others was low ($p < 0.05$).

Table 1

Comparative data of RA patients in different zones

Indicators	I zone (n=300)	II zone (n=300)	III zone (n=300)
The percentage of patients with long-term remission	20,4	66,7	33
The percentage of patients needing hospitalization	67,4	20	53,7
The percentage of patients who often visit doctor	72,7	40,7	68,5
The percentage of patients with comorbid conditions	69	54,4	67,4

However, in these zones, cases with a tendency to progression of the disease over the last 3 years prevailed, as well as manifestation of the disease at an earlier age. It should be noted that zone II differed with relatively low (positive) indicators in comparison with other zones. However, in all zones ($p > 0.05$) in most patients, the manifestation of the disease was characterized by a gradual deterioration of the state on the background of comorbid conditions.

As the results of the analysis show, RA patients have meteosensitive reactions depending on climatic factors and certain regularities were revealed by us when comparing the month and the season of the year.

The correlation analysis showed a significant role and influence of climatic factors on the clinical course of RA and that the most significant indicators were the weather stiffness index (r = 0.57), the frequency of wet and cloudy weather (r = 0.68), the number of days with fluctuations in the atomospheric pressure (r = 0.53) and the duration of the discomfort period (r = 0.7). It should be noted that the duration of hot and dry summers from a high temperature above 40 ° C (r = -0.71) with low humidity f <80% (r = -0.77), as well as the intensity of solar radiation (r = -0.67) favorably influenced the course of RA.

When comparing the average annual characteristics over the past three years, there was a correlation between the climatic factors and the clinical parameters of the RA. Thus, as can be seen from Fig. 1, in the zone of high atmospheric pressure (I and III zones - 971-975 mb, respectively), there is an increase in the frequency of patients' access to the doctor (r = 0.6, r = 0.72, p <0.05) and indications for hospitalization r = 0.84, r = 0.88, p <0.05). In the first and third zones, an inverse correlation is observed (r = -0.9, r = -0.7, respectively) with the indices of patients with long-term remission.

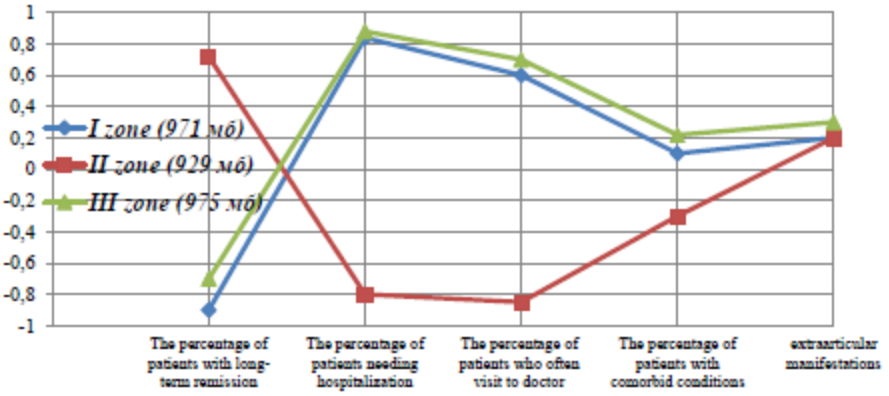

Figure 1. Correlation between atmospheric pressure levels and indicators.

In turn, with a decrease in atmospheric pressure (zone II - 945-929 mb), cases in the need for hospitalization decrease (r = -0.8, p <0.05, respectively) and patients' recourse to problems (r = -0, 85; p <0.05, respectively).

The results of the analysis showed that the clinical course of RA depends on the temperature fluctuation of the external medium. Thus, the frequency of various types of disturbances in the reproductive system increased in direct proportion to the level and temperature fluctuation of the external environment. At low ambient temperature levels of -8.30 and below (I zone), the incidence of spontaneous abortion (r = 0.70, p <0.05) and various types of menstrual cycle disorders (r = 0.73, p <0.05).

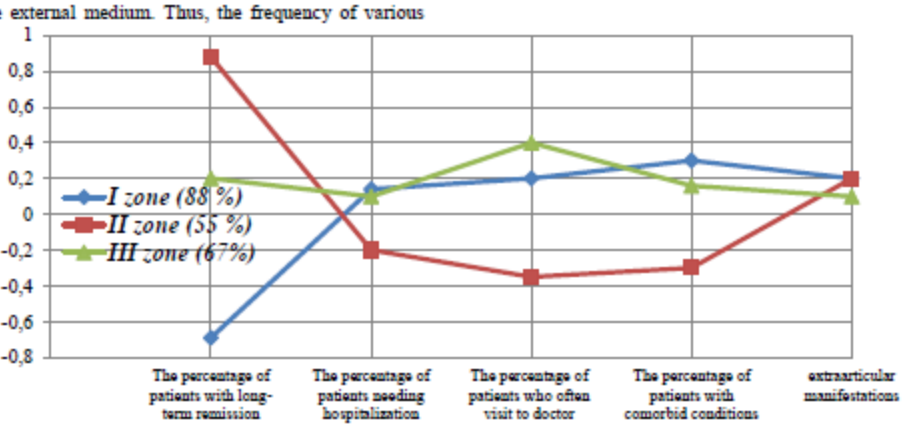

Figure 2. Correlation between humidity levels of atmospheric air and indicators.

When analyzing the influence of the sunshine time on the course of the disease, it was found that there were no reliable correlation relationships between the indices. It should be pointed out that the complex of elements installed during the period of high relative humidity in certain zones is unfavorable. Thus, a regular variation was observed with the incidence of cases with

long-term remission. As can be seen from Fig. 2, with decreasing in humidity levels (zone II, r = 0.88, $p<0.05$), cases with long-term remission of RA are increasing.

Thus, the retrospective-correlation analysis shows that RA indicators differ in three zones of Uzbekistan and climatic factors influence the course of the disease. This indicates the existence of a regional specificity of the clinical course of RA in the conditions of the sharply continental climate of Uzbekistan. Based on the data obtained, it is possible to allocate: high-risk territory (I and III zone) for RA progression and low-risk territory (II zone).

REFERENCES:

1. Chashchin VP Gudkov AB Popov ON Characteristics of the main risk factors for disorders of public health, active living in wildlife areas in the Arctic. - Human Ecology. 2014. S.3-10.

2. Yanbaeva H.I. Sketches of the hot climate of Cardiology II // Clinical and environmental aspects. - Tashkent: Publishing. Abu Ali ibn Sino. -86 2003 p.

3. Kelina N.Yu., Bezruchko N.V., Rubtsov G.K. Assessment of the impact of chemical pollution of the environment as a risk factor for human health: an analytical review. - Bulletin of TSPU, 2010. №3 (93). P.156-161.

4. Akhmedov Kh. S. Features of the state of the immune status in rheumatoid arthritis depending on climatic-geographical and ecological zones of Uzbekistan // scientific and practical rheumatology. - 2016. - T. 54. - No.. 2. - P. 183-186.

5. Akhmedov Kh. S., Abdurakhmanova N.M., Khalmetova F.I. Influence of various physical climate factors on the course of rheumatoid arthritis // Universum: medicine and pharmacology. - 2017. - No. 3 (37).