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FEATURES OF CLINICAL AND LABORATORY ASPECTS AND INDICATORS OF CENTRAL HEMODYNAMICS IN PATIENTS WITH CHRONIC BRUCELLOSIS

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СУРУНКАЛИ БРУЦЕЛЛЁЗ КАСАЛЛИГИ БЕМОРЛАРДА МАРКАЗИЙ ГЕМОДИНАМИКА КЎРСАТКИЧЛАРИНИНГ КЛИНИК ВА ЛАБОРАТОР ЎЗИГА ХОС ХУСУСИЯТЛАРИ

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ОСОБЕННОСТИ КЛИНИКО-ЛАБОРАТОРНЫХ АСПЕКТОВ И ПОКАЗАТЕЛЕЙ ЦЕНТРАЛЬНОЙ ГЕМОДИНАМИКИ У БОЛЬНЫХ ХРОНИЧЕСКИМ БРУЦЕЛЛЁЗОМ

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Аннотация. Бруцеллёз касаллигини кечилиши ва оқибатлари орган ва тизимларнинг зарарланишига боғлиқ бўлиб, улар орасида тез-тез учрайдиган патологиялардан бири юрак-қон томир тизими ҳисобланади. РСГСЕН маълумотларига кўра, Ўзбекистон Республикаси ҳудуди бруцеллёз тарқалиши жиҳатидан юқори ўринларда туради. Тадқиқот мақсади: Самарқанд вилоятида бруцеллёзнинг сурункали шакли бўлган беморларда ЮҚТ ҳолатини баҳолаш. Тадқиқот учун материаллар: Самарқанд шаҳар вилоят юқумли касалликлар клиник шифохонасига сўнги 10 йил ичида мурोजаат қилган беморларнинг касаллик тарихи тадқиқот учун материал бўлди. Тадқиқот усуллари: Бруцеллёз инфекцияси таъхисини қўйишида кенг қамровли клиник, лаборатор (Хедделсон ва Райтнинг серологик текширувлари) ва инструментал (ЕКГ, ЭхоЭКГ) текширишлардан фойдаланилди. Хулоса: Бруцеллёз билан касалланиш кўпинча аҳоли чорвачилик билан кўпроқ шугулланадиган жойларда қайд этилади. Беморларнинг ёш тўзилиши таҳлил қилинганда меҳнатга лаёқатли ёшдаги одамларнинг асосий зарарланишини кузатилади.

Калит сўзлар: бруцеллёз; эхокардиография; миокардит.

Abstract. The lesion of organs and systems to a large extent determines the course and outcome of brucellosis, while one of the most often involved in the pathological process in brucellosis infection is the cardiovascular system. According to the RCSES the territory of, The Republic of Uzbekistan is contrasting in the level of brucellosis prevalence. The aim of the research: to assess the condition of CVS in patients with chronic forms of brucellosis in the Samarkand region. Material for the study: the material for the study was the medical history of patients who applied to the regional clinical infectious diseases hospital of Samarkand city of over the past 10 years. Conclusion: The incidence of brucellosis is more often recorded in areas where the population is more involved in animal husbandry. Analysis of the age structure of patients showed a predominant lesion of people of working age (25 - 40 years old - 43.5%).

Key words: brucellosis; echocardiography; myocarditis.

Relevance. Brucellosis as a widespread zoonotic infection causes significant economic and social damage in many countries of the world where livestock breeding is highly popular and developed [2]. In the Republic of Uzbekistan with its agricultural and livestock economic orientation, brucellosis has become a widespread disease not only among farm animals, but also among people [Atakhodzhaev D.R. 2013]. The information available in the modern literature on the frequency, nature and mechanisms of cardiovascular system (CVS) damage in patients with brucellosis is contradictory and ambiguous [3].

The aim of the research: to assess the condition of CVS in patients with chronic forms of brucellosis in the Samarkand region.

Material for the study: the material for the study was the medical history of patients who applied to the regional clinical infectious diseases hospital of Samarkand city of over the past 10 years.

Research methods: The diagnosis of brucellosis infection was made on the basis of a comprehensive clinical, laboratory (serological Hedderson and Wright reactions) and instrumental (ECG, EchoCG) examination.

Results of the study: Analysis of the incidence of brucellosis was carried out in the period from 2008 to 2018. Due to the fact that brucella is excreted by sick animals through all excretory systems, the ways of brucellosis distribution are diverse. Contamination of people occurs by contact, alimentary and rarer aerogenous way, combined transmission routes are also possible.

According to the order of the Republic of Uzbekistan, No. 37, the diagnosis of Brucellosis was confirmed serologically in 86.6% and bacteriologically in 57.3% of cases. The analysis of the patients' place of residence showed predominant treatment from areas of the Samarkand region (87.3%) (Figure 1). Themorbidity was more often recorded in areas where the population is more involved in animal husbandry - Nurabad district (19.5%), Kushrabad (14.2%), Bulungur (12.3%), Urgut (11.3%), Pastdargam (10, 4%), Narpay (5.2%), Jambay (4.5%). In other districts of the region, the incidence did not exceed 4% of the total number of patients.

Along with this, the peak of registration of patients is observed in the spring months, which is associated with the greatest contact of the population with animals in these periods of the year (lambing, calving, etc.). In the analysis of patient is visits reversal in the context of fluctuations in the annual dynamics of the incidence of brucellosis, it was found that the patient appealability is reversibility has increased sharply over the past 10 years from 5.5% (2008) to 13.8 (2018). So in 2008, 5.5% of patients were identified, in 2009 - 6.9%, in 2010 - 6.6%, in 2011 - 6.9%, in 2012 - 7.8%, in 2013 - 8.9%, in 2014 - 9.8%, in 2015 - 10.8%, in 2016 - 11.1%, in 2017 - 11.9%, in 2018 - 13.8%. Analysis of the age structure of patients showed predominant treatment of people of working age from 17 to 40 years (17 - 25 years (25.4%), 25 - 40 years (43.5%), 40 - 50 years (11.3%), older 50 years (10.1%).

Clinical classifications of brucellosis proposed by N.I. Ragosa (1941, 1952), A.F. Bilibin (1947), G.P. Rudnev (1955), N.D. Beklemishev (1957), N.N. Ostrovsky (1987), K. Dzhalilov (1987), V.I. Pokrovsky (2004) are well known in medical literature.

In the Republic of Uzbekistan the most commonly used classification is that of N.I. Ragosa, supplemented by V.M. Majidov or the classification of K. Dzhalilov. All of these classifications are well described in guides and textbooks on infectious diseases. At the same time, foreign authors of endemic for brucellosis countries, as well as WHO and CDC, use a simplified classification according to which brucellosis is divided only by the duration of the course into asymptomatic, acute, protracted, and chronic forms (Papagos, 2005). However, for a more detailed description of the clinic, we resorted to classification according to Rudnev G.P. (1955). In patients with a chronic form of brucellosis, organ damage to the or-

gans was recorded at different frequencies, since changes in the visceral organs as a whole were observed in 27% of cases, of which changes in the cardiovascular system accounted for 24.7% of cases; musculoskeletal system in 76.7% of cases, nervous system in 13.3%, urogenital system in 4.6% of cases. In some cases, combined lesions of organs and systems of 28.6% were noted.

Among the patients examined by us, such concomitant diseases as arterial hypertension (32.8%) were established, of which 1) stage I - 15.2%, stage II 12.4%, stage III - 5.2%; pyelonephritis (7.5%), anemia (47.4%), atherosclerosis (4.1%), ischemic heart disease (8.2%) (Figure No. 5).

All patients underwent a comprehensive clinical and laboratory examination using bacteriological and serological diagnostic methods. Serodiagnostics for the detection of antibodies to brucella antigens was carried out using methods: Wright and Hedlson reactions. In the general blood test, mainly lymphocytosis and ESR fluctuations up to 60 mm / s were observed in 57.8% of patients. Biochemical parameters were characterized by an increase in the level of the hepatic enzyme alanine aminotransferase in the blood (up to 1.5 norms) in 11.5%; concentration of C-reactive protein - in 27.0%; rheumatoid factor - in 7.7% of patients. The clinical and epidemiological diagnosis was confirmed by the results of a positive Hedlson agglutination reaction in 47.7% of patients, and in 86.6% by a positive Wright agglutination reaction in titers from 1/200 to 1/800. 57.3% of patients showed positive results of bacteriological blood culture. Of the functional methods, all patients underwent electrocardiography (ECG), echocardiography (EchoCG). Our analysis of the results of electrocardiographic studies of patients with brucellosis showed that ECG changes of a different nature were recorded in 24.7% of patients. The frequency and severity of ECG changes to a certain extent depended on the severity of the disease of brucellosis infection.

So, ECG changes in most patients with chronic brucellosis were revealed in the form of cardiac arrhythmias (sinus tachycardia, sinus bradycardia and sinus arrhythmia), which were usually transient in nature, rhythm normalization was observed two days after the start of treatment with adequate etiologic and anti-inflammatory therapy. Disturbances of the processes of repolarization in the form of diffuse changes in the myocardium in patients with brucellosis were found even with a short prescription of the disease and were clearly marked and persistent (table No. 1). Thus, in the vast majority of cases, the symptoms of CVS were a manifestation of intoxication syndrome and affection of the ANS, that is, they were extracardiac in nature. Cardiac manifestations – i.e., lesions of the myocardium itself (often in the form of focal myocarditis), were the manifestation characterized by conductivity disturbance in the form of com-

plete and incomplete blockade of the legs of His bundle.

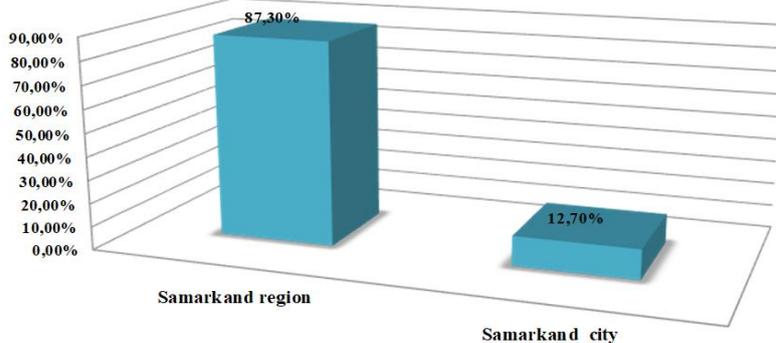


Figure 1. Distribution of patients by place of residence.

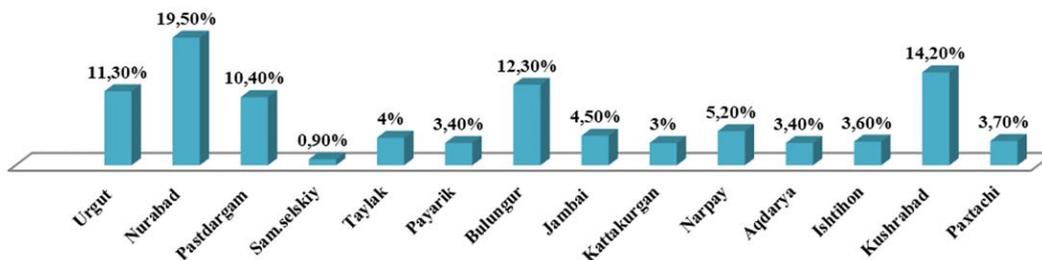


Figure 2. Distribution of patients by districts.

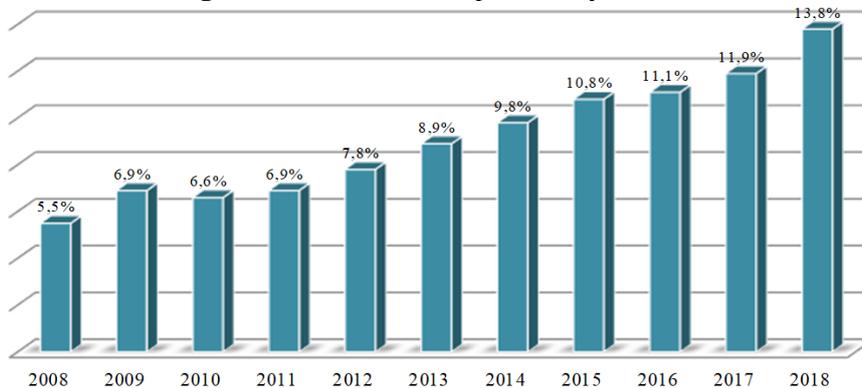


Figure 3: Circulation of patients from 2008 to 2018

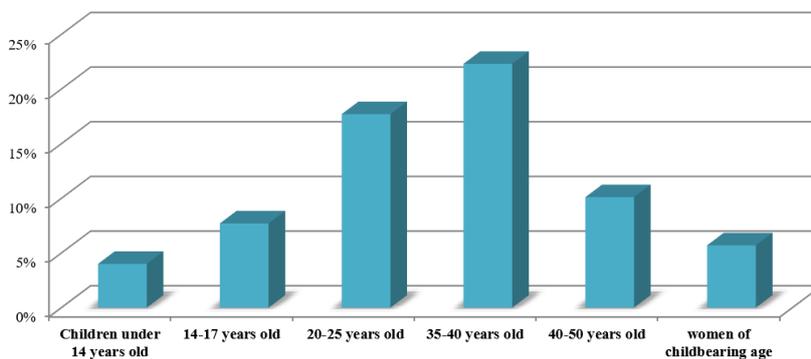


Figure 4. Distribution of patients by age.

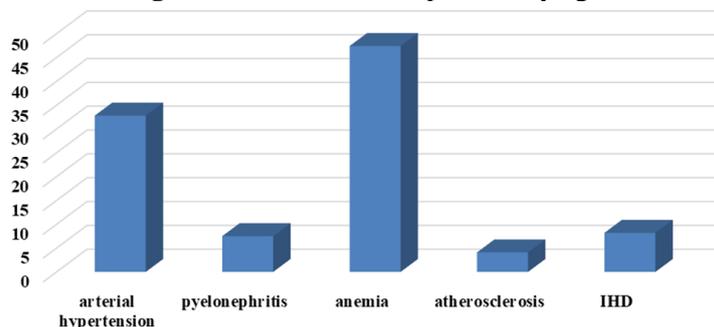


Figure 5. Distribution of patients by identified concomitant diseases.

Table 2. ECG changes in chronic brucellosis.

Electrocardiogram indicators		Abs.	%
Rhythm disturbances	Sinus Arrhythmia	17	8.4
	Sinus tachycardia	128	63.3
	Sinus bradycardia	57	2.8
Excitability disorders	Single ventricular extrasystoles	35	17.3
Disturbances of conductivity	AV Block degree I	23	11.4
	Incomplete blockade of PNPG	4	1.9
	Complete blockade of PNPG	2	0.9
	Incomplete blockade of LDL	6	2.9
Disturbances of repolarization	Early repolarization syndrome	3	1.5
	Diffuse changes in the myocardium	22	1.4
	Left ventricular hypertrophy	136	67.3

Conclusion: 1. The incidence of brucellosis is more often recorded in areas where the population is more involved in animal husbandry. Analysis of the age structure of patients showed a predominant lesion of people of working age (25 - 40 years old - 43.5%).

2. In the analysis of functional changes in the cardiovascular system, cardialgia, expansion of the borders of the heart to the left, systolic murmur, hypotension, and tachycardia were noted.

3. ECG changes in patients with chronic brucellosis were revealed in the form of cardiac arrhythmias (sinus tachycardia, sinus bradycardia and sinus arrhythmia), which were usually transient in nature, rhythm normalization was observed two days after the start of treatment with adequate etiologic and anti-inflammatory therapy.

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ОСОБЕННОСТИ КЛИНИКО-ЛАБОРАТОРНЫХ АСПЕКТОВ И ПОКАЗАТЕЛЕЙ ЦЕНТРАЛЬНОЙ ГЕМОДИНАМИКИ У БОЛЬНЫХ ХРОНИЧЕСКИМ БРУЦЕЛЛЕЗОМ

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Поражение органов и систем в значительной мере определяет течение и исход бруцеллеза, при этом одной из наиболее часто вовлекаемых в патологический процесс при бруцеллезной инфекции является сердечно-сосудистая система. Согласно данным РЦГСЭН территория Республики Узбекистан контрастна по уровню распространенности бруцеллеза. Цель исследования: оценить состояние ССС у больных с хроническими формами бруцеллеза по Самаркандской области. Материалы для исследования: материалом для исследования послужили истории болезни больных, обратившихся в областную клиническую инфекционную больницу города Самарканда за последние 10 лет. Методы исследования: Диагноз бруцеллезной инфекции был выставлен на основании комплексного клинического, лабораторного (серологические реакции Хеддельсона и Райта) и инструментального (ЭКГ, ЭхоКГ) обследования. Вывод: Заболеваемость бруцеллезом чаще регистрируется в районах где население в большей мере занимается животноводством. Анализ возрастной структуры больных показал преимущественное поражение лиц трудоспособного возраста.

Ключевые слова: бруцеллез; эхокардиография; миокардит.