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# CLINICAL AND EPIDEMIOLOGICAL CHARACTERISTICS OF BRUCELLIOSIS IN WOMEN OF FERTIL AGE

**Ergasheva Munisa Yakubovna**
**Ne'matov Humoyun Abdusalim**
**Ravshanova Lobar Isomiddinovna**
*Samarkand State Medical University*
*Kashkadarya Regional Infectious Diseases Hospital*

***Abstract.*** *The epidemiological situation of brucellosis in Uzbekistan is concerning due to ongoing epizootics among cattle, the main source of infection for humans. Brucellosis remains a prevalent zoonotic disease, with urogenital manifestations in both men and women. This study aimed to investigate the clinical and epidemiological characteristics of brucellosis in women of childbearing age in the Kashkadarya region. Medical records of 110 women with brucellosis treated at the Kashkadarya Regional Infectious Diseases Hospital in 2019 were retrospectively analyzed. The highest morbidity rates were observed in certain districts, with a peak in May-June. The predominant transmission route was through direct contact, followed by ingestion. Acute brucellosis was characterized by fever, joint pain, and positive serological tests, while the subacute form presented with musculoskeletal symptoms. Chronic brucellosis patients exhibited asthenic and articular syndromes, along with reproductive organ involvement. This study provides valuable insights into the epidemiology and clinical presentation of brucellosis in women in the Kashkadarya region, highlighting the importance of effective prevention and control strategies.*

***Keywords:*** *brucellosis, zoonotic disease, epidemiology, urogenital manifestations, childbearing age women, morbidity, acute brucellosis, subacute brucellosis, chronic brucellosis.*

Currently, the epidemiological situation with brucellosis in Uzbekistan remains unfavorable. One of the main reasons for this is the persistence of brucellosis epizootics among cattle, which is the main source for humans. Among the especially dangerous zoonotic diseases, brucellosis remains a widespread infection. With brucellosis, urogenital pathology is observed in both men and women. In women, damage to the genitals is manifested in the form of oophoritis (13.6%), salpingitis (9.1%), salpingo-oophoritis (40.9%), endometritis (4.6%), metritis, specific mastitis, and menstrual irregularities. Abortions, stillbirths, premature births, and congenital brucellosis in children are typical manifestations of the brucellosis process. A common abortion is associated with the septic effect of brucellosis infection on the body, in particular, with its effect on the contraction of the uterine muscles. If pregnancy continues in patients with brucellosis, it is accompanied by complications such as toxicosis, anemia of varying severity, and nephropathy [ 1,17 ] .

**Objective of the study.** To study the clinical and epidemiological characteristics of brucellosis in women of childbearing age (using the example of the Kashkadarya region).

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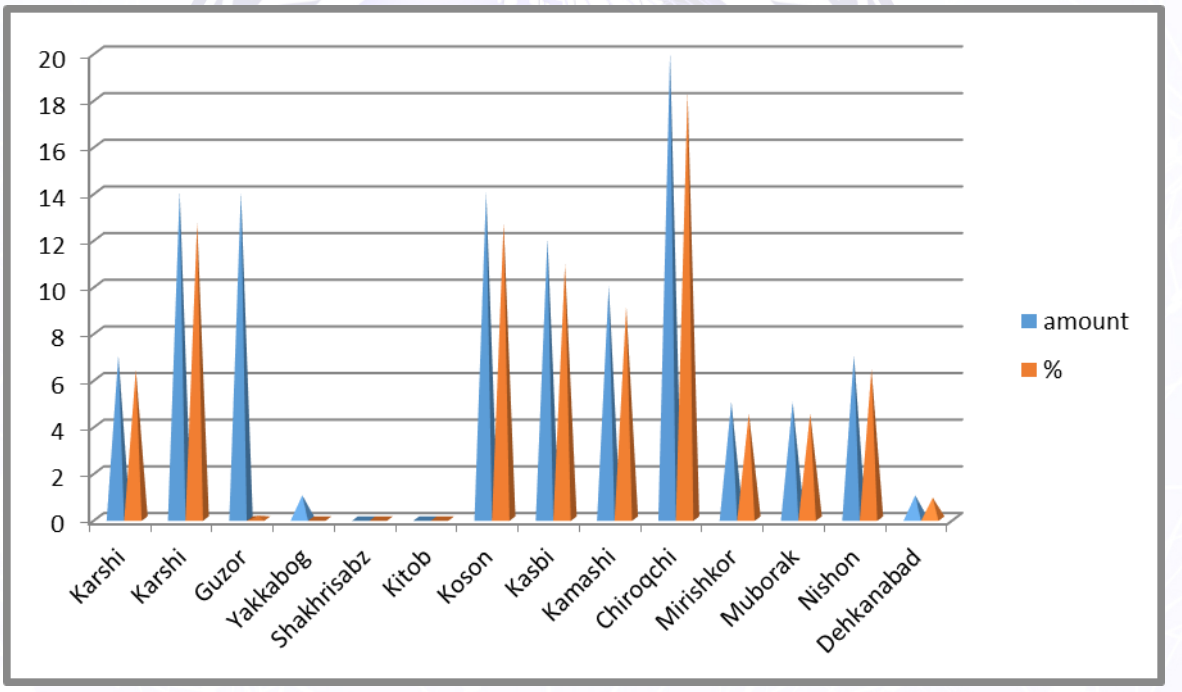
**MATERIALS AND METHODS OF THE STUDY.** The medical records of 110 women with brucellosis aged 17 to 49 years, who were treated at the Kashkadarya Regional Infectious Diseases Hospital during 2019, were retrospectively analyzed. The diagnosis of brucellosis was established on the basis of an epidemiological history, generally accepted clinical and laboratory methods, ultrasound and X-ray diagnostics, as well as special tests to determine the etiology: Wright, Heddelson agglutination reaction, bacteriological examination.

**RESULTS OF THE STUDY.** When studying the dynamics of morbidity of patients, the highest morbidity rates were recorded in the Chirakchi district. A comparative analysis of brucellosis morbidity in the examined patients clearly showed a tendency for morbidity to increase in such districts as Kosonsky, Guzorsky, Karshi (Table 1).

Morbidity rate by district.




In the Kashkadarya region, when studying the absolute incidence rates for the entire period, it was found that January - 12.7%, February - 5.45%, March - 9.09%, April - 11.80%, May - 13.60%, June - 13. In December, 60% were infected, July - 9.10%, August - 10.0%, September - 5.45%, October - 4.68%, November - 1.81%, and in December - 2.72% of patients. The highest level corresponded to 27.2% in May-June, and in December - 2.72%. The lowest rate was recorded in November at 1.8%.

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According to the literature, the increase in the incidence of brucellosis begins in May, and a decrease in the incidence is observed from September, which means that it is most likely associated with the biological cycle of animals (calving) and some agricultural activities.

Among the transmission routes, the contact route was predominant (71.8%), the alimentary route of infection was 20.9%, and the route of infection was not determined in 7.27% of patients.

Analysis of the age structure of patients showed that persons of working age: from 15 to 25 years old - 20.0%, 26-35 years old - 45.4%, 36-45 years old - 34.6%.

The study included 19 (17.3%) women with acute brucellosis whose epidemiological history showed that they received raw milk and dairy products and worked in enterprises with sheep with stillbirths and miscarriages.

All patients in the acute form of the disease had fever (from 37.8 to 39.5°C) and other symptoms of intoxication (chills, weakness) for 1-1.5 months, profuse sweating, arthralgia mainly in large joints, polylymphadenopathy, hepatosplenic syndromes. The diagnosis of "acute brucellosis" was established on the basis of a sharp positive reaction of Gedelson agglutination, Wright agglutination reaction from 1/100 to 1/400. All patients underwent bacteriological blood analysis. However, bacteriological blood analysis was negative in all patients.

Relapsing course is typical for the subacute form. The subacute form was observed in 10 (9%) patients. It was noted that the patients' complaints varied: diffuse pain in muscles (80%), bones and joints (90%), paresthesia (60%), low mood (40%). The diagnosis was "subacute brucellosis". Hedelson's agglutination reaction was strictly positive, Wright believed that the agglutination reaction was from 1/100 to 1/600.

We observed 81 (73.7%) women with chronic brucellosis, who were treated in the hospital and were under dispensary observation in the consultative and diagnostic department. Clinically, 96.2% of patients had asthenovegetative syndrome, 62.9% - mild intoxication with subfebrile fever, 98.7% - articular syndrome, 46.9% - fibrocytes with a diameter of 0.5-1.5 cm, which were predominantly located in the lumbar region and moderately painful, lesions in the genital area are manifested by oophoritis (19.7%), salpingitis (9.8%), salpingo-oophoritis (11.1%), endometritis (41.9%). A characteristic symptom of brucellosis is abortion (miscarriage), which was observed in 11.1% of women.

The clinical and laboratory diagnosis was confirmed by serological methods. In 96.3% of patients, the titer of the Wright agglutination reaction increased depending

on the severity of the disease, and in 89.9% of patients, the Heddelson agglutination reaction was positive.

The following changes were observed in the peripheral blood: 11.8% - leukocytosis, 18.1% - leukopenia, 32.7% - increased ECT, 34% - lymphocytosis, 30% - mild anemia, 40.9% - moderate anemia, 20.0% - severe anemia, in the biochemical analysis 26.3% - an increase in the amount of CRP, 17.2% - an increase in the activity of the thymol test, alanine aminotransferase indicators.

Thus, chronic brucellosis in women of childbearing age in the Kashkadarya region is characterized by abortions (11.1%) and oophoritis of the genitourinary system, salpingitis, salpingo-oophoritis, endometritis (71.6%). Also in the Kashkadarya region, the incidence of brucellosis among women of childbearing age in livestock areas is high. Therefore, it is necessary to regularly conduct dispensary examinations among this segment of the population.

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