CLINICAL AND EPIDEMIOLOGICAL CHARACTERISTICS AND LABORATORY MARKERS OF ACUTE BRUCELLOSIS IN THE KASHKADARYA REGION, UZBEKISTAN

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Abstract

Background: Brucellosis remains a significant public health challenge in Central Asia, particularly in regions with high livestock density like the Kashkadarya region of Uzbekistan. This study aims to analyze the clinical manifestations, transmission routes, and laboratory markers of acute brucellosis within this specific geographical context.

Materials and Methods: A total of 120 patients (average age 35.9±2.8 years) with confirmed acute brucellosis (symptom duration <3 months) were studied. Diagnosis was established using ELISA for IgM and IgG antibodies (NovaLisa, Germany). A control group of 30 healthy individuals was included for comparative analysis. Statistical processing was performed using SPSS 20.0 and STATISTICA 6.0.

Results:

- **Epidemiology:** 71.67% of patients resided in rural areas. A significant male predominance was observed (75.00%). The primary transmission route for men was direct contact (45.00%), whereas the alimentary route was 4.8 times more prevalent in women than the contact route.
- **Clinical Presentation:** Dominant symptoms included general weakness (87.50%), fever (86.67%), diaphoresis (70.00%), and arthralgia (64.17%). Distinct gender differences were identified: women developed

sacroiliitis 15.8 times and peripheral arthritis 12 times more frequently than men.

- **Laboratory Findings:** Key markers included an increased erythrocyte sedimentation rate (ESR) in 72.50% of cases and anemia in 53.33%. Elevated transaminase levels (ALT 35.83%, AST 40.00%) were also significant laboratory features.

Conclusion: Acute brucellosis in the Kashkadarya region primarily affects the working-age population involved in agriculture. The study highlights a high polymorphism of symptoms and notable gender-specific clinical manifestations, particularly the higher incidence of joint involvement in women. Early identification of specific laboratory markers and detailed epidemiological history are essential for preventing long-term disability.

Keywords: acute brucellosis, zoonotic infection, transmission routes, sacroiliitis, laboratory markers, Uzbekistan.