THE COURSE OF PREGNANCY IN WOMEN WITH BRUCELLOSIS

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Abstract*. Brucellosis is an infection caused by bacteria of the genus Brucella. A person can get sick if they drink unpasteurized milk, eat poorly fried meat, or simply pet an infected animal. At an early stage, brucellosis is easy to cure, without treatment, the disease leads to the destruction of internal organs. Brucellosis (Bang's disease, Maltese fever, Gibraltar fever, Cyprus fever, undulating fever) is an acute bacterial infection that is transmitted to humans from infected animals.*

Keywords*: brucellosis, abortion, miscarriage, fetal malformations.*

Brucellosis can occur acutely, subacutely and chronically. Some infected people recover even without treatment, while in others the disease can turn into a chronic form, gradually destroying the heart, liver, kidneys and other organs. Those who have been ill form unstable immunity, which lasts from 8 to 10 months. The presence of antibodies does not prevent re-infection and the formation of bacterial carrier, but contributes to a lighter course of the disease. The causative agent of brucellosis is a small spherical bacterium of the genus brucellosis from the class of alpha-proteobacteria. The genus is named after the Scottish military doctor David Bruce, who was the first to isolate and describe microorganisms in Malta in 1887. All brucellosis are able to survive for a long time outside the host organism. So, they persist in soil or water for more than 2 months, in raw meat for 3 months, in cheese for more than 2 months, in salted meat for a month. In raw milk at refrigerator temperature, the causative agent of brucellosis persists for up to 10 days, in butter for more than 4 weeks, in internal organs, bones, muscles and lymph nodes of infected carcasses for 1 month or more. In frozen infected meat and dairy products, brucellosis remains viable throughout the shelf life. If a woman has contracted brucellosis while carrying a child, the prognosis for the fetus may be extremely unfavorable. If a woman is diagnosed with brucellosis at any stage of pregnancy, this is a great threat to the fetus. Brucellosis can provoke arbitrary miscarriages, fetal malformations and other complications. The probability of infection of the fetus is 20-25%. But the side effects of drugs that are used to treat this disease are more dangerous. Those who have had brucellosis may show residual signs: increased sweating, increased irritability, pain and deformities in the joints, which may require surgical intervention to correct. The segment of the population that is in close contact with animals is most susceptible to it. Men and women predominate among those infected with the infection, but even children often get sick. Among the likely negative consequences of brucellosis are: Endocarditis is one of the main factors that leads to death in patients with brucellosis. Adversely affects the activity of the heart valve. Arthritis is a disease of the joints. The inflammation from the infection causes pain, swelling and reduces movement activity. Infection can also affect the testicles, causing epididymorhitis with unpleasant sensations in the groin area and problems with urination. When an infection of the liver and spleen is affected, their size increases, which is accompanied by pain. If the bacterium has affected the central nervous system, then meningitis and encephalitis may occur – inflammatory processes in the meninges. As a result, partial or complete loss of vision. If a pregnant woman has

brucellosis, then the risk of miscarriage, premature birth, and abnormal fetal development is high. If a woman falls ill with acute brucellosis, it is recommended that she refrain from pregnancy for at least 2-4 months after the complete disappearance of all clinical and laboratory signs of infection (that is, after full recovery). The fact is that even with full-fledged treatment, there is a possibility that a certain amount of brucella may remain in the body in a viable state, which can lead to a relapse (re-exacerbation) of the disease after a while.

This is explained not so much by the high probability of infection of the fetus (which is about 20-25%), but by the toxicity of antibacterial drugs used to treat brucellosis. If the infection occurred in the late stages of pregnancy, the option of delivery by caesarean section is considered. If the pregnancy period is too short for this, the woman is hospitalized in a special department of the hospital, where the necessary treatment is carried out and the condition of the pregnant woman and fetus is monitored. In an extremely serious condition of the patient, the issue of premature termination of pregnancy is resolved by a consultation of doctors with the participation of the woman herself and her closest relatives.

The main complications of brucellosis in pregnant women are:

spontaneous abortion – observed in 20-30 percent of women;

intrauterine fetal death – occurs in more than 15 percent of cases;

fetal malformations – observed in 7-8 percent of children whose mothers suffered brucellosis during pregnancy;

premature birth is observed in about 15 percent of cases.

The natural hosts of brucella are sheep, goats, cattle and pigs. There have been cases of human infection with brucellosis from reindeer. In rare cases, the source of infection may be horses, camels, yaks and some other animals that secrete the pathogen with milk, urine, feces, amniotic fluid. The cause of the disease is bacteria of the genus Brucella, which live in the body of animals (usually agricultural) and can be transmitted to humans if they come into close contact with the source of infection or consume insufficiently heat—treated dairy and meat products. Depending on the duration of the disease, brucellosis can be acute (up to 3 months), subacute (up to 6 months) and chronic (more than 6 months). Separately, there is a residual, so-called residual form of the disease, which includes changes that persist for more than 2 years after complete cure of infection: inflammation or pain in the joints, damage to the nervous, reproductive, and cardiovascular systems. But it is often difficult to establish the boundaries of the transition stages of the infectious process, so these time intervals are very relative. Symptoms of acute and subacute brucellosis. Acute and subacute forms of the disease, as a rule, begin with a sharp deterioration in well-being and the appearance of characteristic clinical symptoms that are similar to SARS or influenza. At an early stage, the symptoms gradually increase, after a while the patient's condition may return to normal.

If a person's temperature rises, well-being worsens, bones and joints hurt, you should contact a therapist as soon as possible or call a doctor at home. To understand whether a person has had brucellosis, or to clarify the stage of infection, antibody tests are used. At different stages of the disease, antibodies of different classes are synthesized — M (IgM), G (IgG) or A (IgA). When infected with brucellosis, class M immunoglobulins enter the bloodstream first, about 10-14 days after infection — G, then — A. It is important to donate blood for IgG antibodies in dynamics using the paired serum method: an increase in titer confirms the diagnosis of brucellosis. Infection of a woman with brucellosis during pregnancy increases the risk of obstetric

complications: premature birth, miscarriage. In addition, intrauterine infection can lead to pathologies of the development of the nervous and cardiovascular system of the fetus.

Regardless of the form of the disease, treatment is carried out in an infectious diseases hospital or in an infectious diseases department. Therapy aimed at destroying the causative agent of brucellosis, bacteria of the genus Brucella, is most effective in the acute period of the disease (in the first 3 days). With a prolonged course of the disease (subacute and chronic), the course of treatment includes additional drugs for the treatment of lesions of internal organs and systems and lasts at least 6 weeks. Most often, brucella is transmitted to humans from infected farm animals, so the most effective way to prevent it is to limit contact with them. If this is not possible, follow the rules of personal hygiene to reduce the likelihood of bacteria getting on the skin and mucous membranes.

Rules of personal hygiene for pregnant women for the prevention of brucellosis:

wash your hands before and after communicating with animals;

change and wash clothes immediately after contact with animals;

contact animals and unprocessed animal products with gloves, mask, glasses and overalls.

Protection

If contact with animals cannot be avoided, protective clothing, gloves, and a mask must be used

In addition, only pasteurized and well-thermally processed foods should be eaten: milk, meat, eggs. Disinfectants should be used regularly on farms, livestock farms, veterinary clinics, and bacteriological laboratories to prevent brucellosis. At the same time, a systematic preventive examination of personnel engaged in working with animals is carried out (at least once a year).

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