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**CONGRESS PROCEEDINGS**

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University of Belgrade, Department for International Cooperation  
Faculty of Veterinary Medicine, Department of Ruminants and Swine Diseases  
Serbian Buiatric's Association

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**Findings on *Coxiella burnetii* in cow udder and its excretion in milk**

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**Summary**

Q fever is one of the most common rickettsial diseases; particularly significance of this disease is its zoonotic character. In domestic animals, Q fever most often runs as a latent disease and from clinical symptoms can occur abortions and reduced fertility. In addition to these symptoms related to the reproductive tract, also was noticed pneumonia, polyarthritis and mastitis. In pathogenesis of this disease, after primary replication in the lymph nodes, stage of bacteremia occurs when it comes to the localization of bacteria into the predilection organs, primarily the mammary gland and uterus of pregnant animals. Localization of bacteria into the mammary gland is essential for long-term excretion in milk, in cow milk it can be excreted more than a year and even during successive lactations, while excretion in feces and in vaginal mucus takes several weeks. The presence of pathogens in the mammary gland stresses the immune response. In this paper we compare the local immune response of the mammary gland, through analysis of somatic cell count in milk and the systemic response with differential blood screen. Analysis of blood results showed that there was no increase in the number of leukocytes in the blood of infected cows which indicates to a chronic infection. The only change was the increase in the number of red blood cells higher of physiological values and it was determine in all investigated cows, but in one case that exceeded the value of  $11 \times 10^{12}/L$ . Local immune response of the mammary gland was expressed in infected cows by increasing the somatic cell count and average value was 853000/mL of composite milk. It is important to note that somatic cell count in the bulk tank milk samples did not exceed 300000/mL, and that the herd consisted of 5% infected cows. Our results show that by controlling somatic cell count in bulk tank milk we cannot suspect of the presence of chronically infected cows.

**Key words:** cow, milk, Q fever, *Coxiella burnetii*, somatic cell count.

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