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FEATURES OF THE DIAGNOSTIC METHODS TO IDENTIFY THE SHEEP SUBCLINICAL MASTITIS IN ACCORDING TO INFECTIOUS ETIOLOGY.

CARACTERÍSTICAS DIAGNÓSTICAS DE MÉTODOS PARA IDENTIFICAÇÃO DA MASTITE SUBCLÍNICA OVINA DE ACORDO COM A ETIOLOGIA INFECCIOSA.

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Mastitis is an infection of the mammary gland mainly caused by bacteria. In sheep, besides it causes chemical and physical changes in milk with the loss in quality, mastitis changes the glandular tissue which may lead to premature cull-out from the herd. This study aimed to evaluate the diagnostic features of the California Mastitis Test (CMT) and somatic cell count (SCC) to the identification of subclinical mastitis in sheep according to the micro-organisms isolated. The work is at an early stage and CMT was performed in all ewes. It was considered positive results all degrees of reaction, while the negative reaction was considered when there was not viscosity. Subsequently, samples were collected aseptically from milk and were sent for microbiological analysis. A total of 160 milk samples were analyzed from 85 Santa Inês sheep belonging to the Embrapa Southeast Livestock in São Carlos, São Paulo. Samples were plated on sheep blood agar to 5% and incubated for 24h/72h at 35 ° C. In samples with growth, tests to the identification of the microorganisms were performed, macroscopic characteristics of the colonies and the production or absence of hemolysis, Gram staining, catalase test, coagulase test with rabbit plasma and verification of acetoin production. The sensitivity of the diagnostic tests were determined in accordance to the ratio of the positive tests and the presence of the disease, while the specificities were calculated according to the ratio of the negative results and the absence of disease. The efficiency was based on the percentage of true results that the test was able to provide diagnosis. SCC in milk was determined using the somatic cell count Somacount 300 (Bentley) and the presence of the disease was given when isolated coagulase-positive staphylococci (CPS), coagulase-negative staphylococci (CNS), coliforms and other microorganisms (Corinebacteria, strep and association of two bacteria in a same sample). It was used the limit value of 300 000 cells/ml of milk to the screening of the positive and negative samples. A total of 125 samples were negative in the microbiological examination, of which 102 were presented as CMT-negative and 23 were positive to the CMT. Among the positive samples for microbiological analyzes, 12 were negative to the CMT. Thirty-four samples were positive for mastitis after the SCC, from a total of 118. SCC showed greater sensitivity than the CMT for identifying cases of ovine mastitis to the most classes of micro-organisms (67.0% vs. 50.0% for CPS; 80.0% vs. 71.4 % for CNS; and 87.5% vs. 55.6% for other micro-organisms), except for coliforms (85.7% vs. 90.0%), probably by the least amount of results for SCC when compared to CMT. The CMT was more efficient in the diagnosis of mastitis for all classes of micro-organisms (80.0% vs. 79.9% for CPS, 82.0% vs. 71.5% for CNS, 82.2% vs. 72.0 % for coliforms, and 80.0% vs. 72.2% for other micro-organisms) due to greater specificity when compared with SCC (81.6% vs. 71.2%). It is concluded that the test SCC offered so far, better diagnostic sensitivity for detection of ovine mastitis for most micro-organisms, providing greater security for the screening of cases in the herd which, in the future, may facilitate the effectiveness of disease control measures.

Key words: milk microbiology, diagnostic tests, somatic cells, ovine mastitis.