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USE OF NANOPARTICULATE AND CONVENTIONAL ANTIMICROBIALS FOR TREATMENT OF SUBCLINICAL MASTITIS IN SHEEP AT DRYING OFF

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There are few studies in Brazilian herds about the control methods for mastitis in sheep as there is lack of specific products for treatment of this disease in ewes. The aim of this study is to determine the efficacy of subclinical mastitis treatment immediately before the dry period in ewes, as well the rates of spontaneous recovery in an untreated control group. Two antimicrobial formulations, a conventional and a nanoparticulate cloxacillin are being studied. Santa Ines ewes have been distributed in three groups, considering a 50% prevalence of subclinical mastitis: G1 (control); G2 (intramammary infusion of 100 mg of cloxacillin); G3 (intramammary infusion of 50 mg of cloxacillin nanoparticulate). The subclinical mastitis was previously diagnosed by California Mastitis Test (CMT) and somatic cell count (SCC). The infectious mastitis was confirmed by microbiological analysis before and after treatments likewise all treatments were performed after susceptibility tests in vitro. Preliminary results show that infectious subclinical mastitis was identified in 44 ewes. Up to now, coagulase-negative *Staphylococci* were the most prevalent microorganisms before treatments. SCC before treatment to G1, G2 and G3 were 1,622,000; 1,035,000 and 171,000 cells/mL and after treatment were 2,356,000; 1,025,000 and 384,000 cells/mL, respectively. The cure rates were 26.3% to G1; 45.0% to G2; and 60.0% to G3. So far, the cure rate for ewes treated by nanoparticulate antimicrobial have been higher than other groups. However, further investigation will be performed to evaluate possible differences among the groups and the association of the cure rates according to microorganisms.