

EFFECT OF TWO DIFFERENT TREATMENTS ON THE CLINICAL SIGNS AND INFLAMMATORY PARAMETERS IN CASE OF EXPERIMENTALLY INDUCED ACUTE PUERPERAL METRITIS IN DAIRY COWS

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Summary. The aim of the study was to test the effect of two treatments on clinical cure and inflammatory response in the case of acute puerperal metritis (APM) associated with retained foetal membranes. Late gestation healthy cows (n=21) were divided into three groups (A, B and C), seven animals in each group. In order to obtain RFM followed by APM, induced parturitions were used. Treatments were started on the third day post-partum (PP). Group A was treated with an oxytocin analogue carbetocin and intrauterine administration of cephalosporin. Group B treatment was intramuscularly treated with ceftiofur followed by two injections of PGF_{2α} at an interval of 8 h on the eighth day PP. Group C served as controls. In order to analyze acute phase proteins (APP) as markers of inflammatory response, blood samples were collected twice a week. General health status, body temperature, and vaginal discharge characteristics were recorded daily. Uterine involution was followed by ultrasonographic examination once a week. Uterine biopsies for bacteriological analyses were taken once a week for seven weeks PP. Milk samples for the analysis of progesterone were taken twice weekly.

Body temperature decreased more rapidly in group A than in group C ($P = 0.014$). Uterine involution in the treated groups A and B occurred earlier than in group C ($P = 0.012$ and $P = 0.002$, respectively). No significant differences were found between the groups with regard to vaginal discharge, the time changing patterns of APP, the start of ovarian activity, and the length of the first luteal phase PP. Decrease of bacterial growth in uterine biopsies was lower in group B than in group C ($P = 0.009$). Levels of APP were high in all the groups and declined to the baseline after the third week PP.

Treatments had no clear effect on the improvement of clinical signs and inflammatory parameters.

Keywords: dairy cow, puerperal metritis, RFM, treatment.