Mise en évidence du transfert des endotoxines de la truie vers sa portée dans le contexte du syndrome de dysgalactie post-partum

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Evidence of endotoxins transfer from the sow to the litter in a post-partum dysgalactia syndrome context

In order to study the fate of bacterial endotoxins from the sow gastro-intestinal tract to the bloodstream and their potential transfer to the milk, a trial was conducted on thirty sows in a farm with chronic PDS incidence, starting 3 weeks before expected parturition. A CONTROL group was compared to a SCB group fed supplemental *S. cerevisiae* CNCM-I 1079 at the rate of 2×10^9 CFU/kg feed. PDS symptoms were evaluated twice daily and fecal and blood samples were taken from each sow on selected days pre and post-partum. Colostrum was sampled during the farrowing process and milk thrice during the first week. In litters from parity 1 or 2, blood was taken from at least 4 piglets on day 1. Samples were stored frozen and analyzed at the end of the trial: endotoxins with LAL chromogenic EndPoint Assay; blood Lipopolysaccharide Binding Protein (LBP) with ELISA. Occurrence of PDS symptoms was related to treatment with Chi^2 statistics. Endotoxins and LBP content in feces, blood and milk were log-transformed to meet normality prior to analysis of variance. Frequency of sows exhibiting high rectal temperature (RT) tended to decrease in the SCB group (P=0.09). Colostral endotoxins tended to be reduced with SCB, as did plasma LBP at the end of lactation. Sows with high RT and neonatal diarrhea had significantly higher endotoxins in the colostrum. Frequency of high endotoxins in piglet blood increased with endotoxins in colostrum. These data support the relationship between endotoxins derived from intestinal bacteria and PDS.