

TITLE: IDENTIFICATION OF BACTERIA FROM COLOSTRUM, SALIVA OF COWS AND CALVES STOOL: EVIDENCES OF SHARING MICROBIOTA AFTER CHILDBIRTH

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ABSTRAT:

The supply of colostrum associated with the management of calves at birth improves the performance and reproductive efficiency of dairy animals. In addition, the contact between mother and baby stimulates the initial colonization in the animals. The objective of this work was to characterize the bacterial microbiota present in the colostrum, saliva and feces of cows and calves. Samples of colostrum, saliva and feces were collected from cows and their offspring at one day after delivery (n = 9). Serial dilutions (10^{-1} to 10^{-7}) were plated on Brain Heart Infusion medium (BHI) and incubated at 37 °C for 24 h. Fifty isolates from colostrum, 36 calf fecal isolates, 73 calf saliva isolates, and 47 cow saliva isolates were obtained based on the phenotypic differences among the colonies. The isolate cultures were incubated for 24 h in BHI medium and DNA were extracted to taxonomic identification analyses by sequencing of 16S rRNA gene. Twenty-two different bacterial species were identified among the samples, and *Escherichia fergusonii* was the only species present in all four samples (colostrum, saliva and feces from mother and calf). That species represented 22% of the total isolates obtained from the samples evaluated. Saliva of calves was the environment with the highest diversity of species (n = 13). Eight species were shared among the calf saliva, while the colostrum samples showed 6 species shared with the saliva of the mothers and calves. *Staphylococcus aureus* and *Staphylococcus chromogenes* were the predominant species in the colostrum. However, there was no direct relationship between the presence of these bacteria and the occurrence of mastitis in the animals from which they were isolated. These results evidenced the microbiota sharing among cows and calves during and after calving, which may influence the colonization of the gastrointestinal tract of calves and the development of these animals. Experiments are being conducted to investigate the common microbiota between cows and their offspring through independent culture methods.

KEYWORDS: Colostrum, Calf, *Escherichia fergusonii*, Microbiota

DEVELOPMENT AGENCY: CNPq, FAPEMIG, CAPES