

The effects of diet and addition of Conjugated Linoleic Acid (CLA) on goat kid complement system activity.

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Abstract / Resumen:

40 newborn goat kids of Majorera breed (20 males and 20 females) were used for evaluating the effect of Conjugated Linoleic Acid (CLA) milk replacer addition in Complement System Activity (CSA). The animals were separated of their dam's immediately after birth and were randomly distributed in four groups. Goat kids were fed with frozen-thawed goat colostrum by bottle-feeding at 2, 14 and 26 hours of life. After colostrum feeding period, the control group (MR) received a commercial milk replacer, the MG group was fed with milk goat, the CLA-2 group received milk replacer plus 2 ml of CLA-60 and the CLA-4 group received milk replacer plus 4 ml of CLA-60. All animals were fed twice daily until day 60 after birth. To determine the CSA effect, blood samples were collected every 24 hours from day 1 to day 5 and at day 10, 20, 30, 40, 50 and 60 of life. Blood samples were centrifuged and the blood plasma fraction was frozen at -80°C until analysis. The CSA was measured using DGHB++ buffer (Dextrose, Gelatin, Hepes) to evaluate total CSA and Mg-EGTA-DGHB buffer to determine CSA alternative pathway. Alternative and total CSA did not differ in our study and increased throughout the experimental period in all groups. MR goat kids showed the lowest threshold CSA until 40 days of life (by 0-15%), while threshold values in MG group was observed until day 10; for the CLA-2 this threshold was found until day 5 of the experiment; nevertheless in the CLA-4 group the activity increased at day 3 of life. In all experimental groups the highest values were observed at 50 and 60 days of life. CSA did not differ significantly at 1, 2, 3, 4, and 10 days of life in all groups; however at day 5, CSA was significantly higher in CLA-4 than in control goat kids. MG had significantly higher CSA at day 50 than MR, CLA-2 and CLA-4. The CSA reached similar values at 2 months of life for MG, CLA-2 and CLA-4 groups; however MR group presented lower CSA at this time. In conclusion, the CLA addition to goat milk replacer improves the complement system activity in goat kids in a similar way that animals fed with goat milk after 2 months of development.

Effects of Sodium Selenite addition to goat colostrum on IgG immune passive transfer. Preliminary results

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Abstract / Resumen:

According to previous studies in calves, selenium addition increased the absorption of IgG from colostrum. The present study tests the potential effect of selenium addition to goat colostrum on goat kid passive immune transfer. For the development of the experiment, 20 newborn Majorera goat kids were used. Animals were separated from their dams and dried immediately after birth. Their umbilical