VACCINAL IMMUNE RESPONSE AND INTERFERENCE OF COLOSTRAL ANTIBODIES IN CALVES VACCINATED AT 2, 4 AND 6 MONTH OF AGE BORN FROM REVACCINATED FEMALES

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According to Panamerican Health Organization, 2797 cases of rabies in cattle were reported in 2004 in the countries of the Americas, 87% more cases than in 2002. Although no predisposition of race, sex or age, but a great prevalence of rabies can be observed in young animals. The newborns are entirely dependent on passive immunity absorbed from maternal colostrum for their protection against infection during the first weeks of their life. The occurrence of numerous cases in calves under one year of age may be related mainly to immunity in this age, since this phase occurs the lacking of colostral immunity and the animals have not been vaccinated against rabies, or if received the first vaccine, in most cases, not received the vaccinal booster. The objective of this work was to evaluate the interference of colostral antibodies and the humoral immune response of calves vaccinated against rabies at 2, 4 and 6 month of age, born from revaccinated females. Females revaccinated against rabies at the final third of pregnancy were studied. Forty hours after parturition blood from dams and offsprings were collected and the antrirabies neutralizing sera antibodies titers analyzed by RFFIT. The conventionally defined VNA level of 0.5 IU/ml was considered as a cut-off for rabies protection. Antibodies transferred by colostrum with similar titers were observed in all calves studied 48 hours after birth. Seroneutralizing anti-rabies titers above 0.5IU/mL remained until the 5th month in calves vaccinated to 2 months while decreased after the 3 months in the other groups representing a period of lack of protection higher than to 2 months vaccinated group. None of the groups presented satisfatory serological response after the first vaccination, but all have appropriate response after revaccination. The study showed that anti-rabies vaccination can be recommended in calves two months of age regardless of maternal vaccination status followed by re-vaccination 30 days after, and when they reach 12 months of life.