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The effect of amino acid supplement on the efficacy of the Newcastle vaccine in broiler poultries

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Newcastle Disease (ND) is one of the most important and devastating disease that affected approximately 8000 species of birds. In many countries, ND has economic impact on poultry population and can severely cause economic losses in poultry industries. In spite of vaccination against new castle virus, outbreaks of ND remain common. In the present study, we evaluate the effect of amino acid supplement on the efficacy of the New Castle vaccine in broiler poultry. Hence we added amino acid supplement to the poultry diet (broiler Ross 308) on the days of vaccination. The poultries were vaccinated four time against ND (respectively: B1 beverage vaccine (day 1), Clone beverage vaccine (day 9), LaSota beverage vaccine (day 18), Avinew beverage (day 27)). To assess antibody concentration and evaluate immune system response to vaccine, the blood sampling was taken on days 2, 8, 16, 24, 32, 38 and 44 and heme inhibition (HI) test was performed. The data compared with control group (received any vaccine and amino acid supplement) and vaccinate group (received vaccine without amino acid supplement). The result showed that, in first weeks, there was no differentiation among three groups (because of the parental antibodies). After first week, the antibody concentration increased gradually in vaccinate group and vaccine-amino acid group but there was not significant differentiation between these two groups. But surprisingly the poultry in vaccine-amino acid group gained more weight and less casualties. Final weight in control group, vaccinated group and vaccine-amino acid group were 2500, 2750 and 2870 grams respectively. Casualty in the control group was 10%, in the vaccinate group was 2.7% and finally in the vaccine-amino acid group was 2%.

Recent Publications

- Chen C, Sander J E and Dale N M (2003) The effect of dietary lysine deficiency on the immune response to Newcastle disease vaccination in chickens. *Avian Diseases* 47(4):1346-51..

Biography

Amir Reza Rajabi is DVM student from Babol Azad University, Babol, Iran. His main area of research interests includes the effect of the herbal medicines in poultry health issues.

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