

Summary

This study was done to evaluate and study decaying curve of IBD MDABs of maternal immunity of the native chicken breeds including (Fayoumi, Dandrawi, Senawi and Baladi) were taken in consideration as compared with (Lohmann white) layer type breed.

The results showed that the decline of maternal immunity of IBDV in Lohmann is the faster followed by Senawi, Baladi, Fayoumi and Dandrawi and the 1 day IBD ELISA titers were shown to be nearly equal in Senawi (5449 ± 371) and Lohmann (4536 ± 437) and titer of Baladi chicks was close to the for mentioned two breeds (5327 ± 371), the Dandrawi (4649 ± 331) and Fayoumi (4596 ± 857) are lower but close to each other.

The SD values recorded in Fayoumi breed showing great variation in the recorded titers, while that of the other 4 groups seemed to be homogenous. Comparing the 22 day decline manner in titer it was clear that the loss in titer in Fayoumi (3494) and Lohmann (3413) are nearly equal and followed by Dandrawi (3093) and Baladi (2972) those showing lower titers.

The recorded unprotected titer ≤ 400 was detected at 43 days in Lohmann, Baladi and Senawi, 37 days in Dandrawi and 31 in Fayoumi.

Percentage of decline from its original values showed that Fayoumi last (75.95%) at 22 days followed by (66.53%) in Dandrawi followed by (62.78%) Lohmann, (55.79) Baladi and (55.19) Senawi.

Different breeds showed differences in the slope value that indicate differences in the decay of maternal antibodies and the predication of antibody titer for each breed as the slope in decline curve in Lohmann chicks showed highest values followed by Dandrawi chicks while the Fayoumi and Baladi were as the same values and on the other hand the Senawi showed the lowest value.

Then we used vvIBD field isolate (fy97) to study susceptibility against challenge with virulent IBDV every 5 days started from 10-45 days of age and protective titer level of maternal immunity for each breed by using ELISA test and prediction the optimal time for vaccination as clinical signs and morbidity rates were observed as $\geq 30\%$ in Fayoumi and Dandrawi infected at 15 days of age and in Senawi and Baladi and Lohmann at 20 days of age and it was done to evaluate the extent of protection of maternally derived antibodies (MAbs) against challenge with virulent IBDV.

All breeds showed that clinical signs of infection occurred at 30-35 days of age, and Senawi breed showed the highest values (65 and 70%) followed by Fayoumi (55 and 55%), Dandrawi (50%), Baladi (55-45%) and Lohmann (50-45%).

Mortality rates due to IBD infection varied from 0 to 35% in respective to age, in Fayoumi and Lohmann breeds where maximum 35 and 40% occurred at 30 day of age; respectively. Mortality in Dandrawi and Senawi varied from 5 to 40% and pass in close manner at all intervals with the highest value at 30 days of age while Baladi chicks showed same values but lower only at 20 and 25 days.

Mean lesion scores in Fayoumi were the lowest at all intervals followed by Lohmann, Senawi, Baladi and Dandrawi.

Results of ELISA titers at time of infection showed that Senawi chicks having the highest titers followed by Lohmann, Baladi, Dandrawi and Fayoumi at most intervals.

The conclusion of study:

-the susceptibility for infection by vvIBDV in Fayoumi and Dandrawi infected at 15 days of age $\geq 30\%$ and in Senawi and Baladi and Lohmann at 20 days of age while at 30-35 days of age Senawi breed showed the

highest values (65 and 70%) followed by Fayoumi (55 and 55%), Dandrawi (50%), Baladi (55-45%) and Lohmann (50-45%).

So it necessitate that more studying clearly the causes of these phenomena and role of genetic in protection against IBDV infection