



PHYTOCEE®

Immunological Alterations Effects of Ingredient of PHYTOCEE® in Broilers : *Withania somnifera* (Ashwagandha)

OBJECTIVE

To study the effect of dietary supplementation with of *Withania somnifera* root powder (WSR) in chicken experimentally infected with infectious bursal disease virus (IBDV).

MATERIALS AND METHODS

5-day-old chicks (n=48) of either sex, reared individually under cage system. The test comprised of a two-factorial design (n=12) as under:

WS	Virus
-	+
-	Control (C)
+	<i>Withania somnifera</i> supplemented (WS)

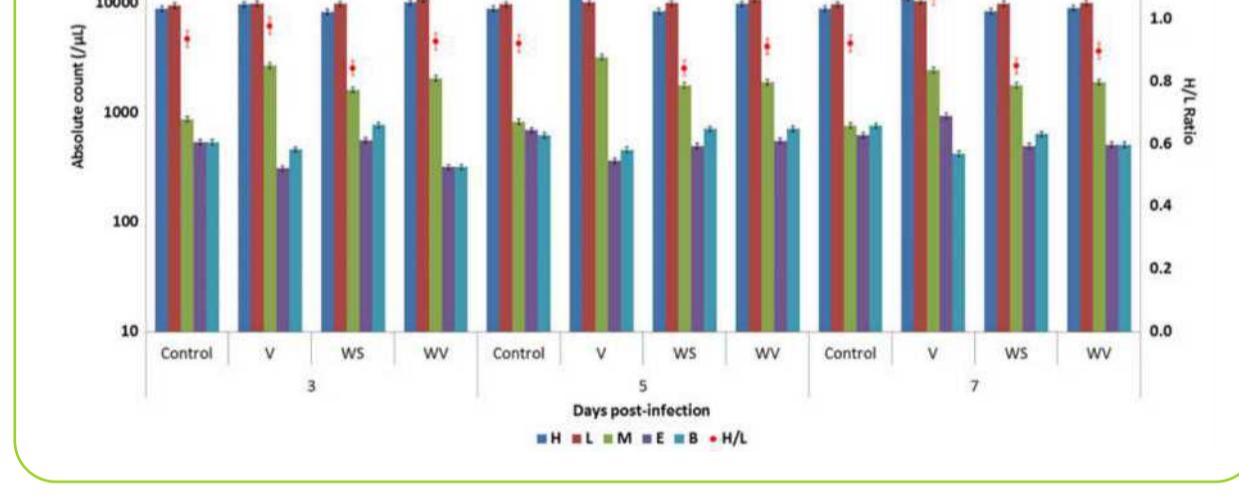
Virus infected (V)

Withania somnifera supplemented and virus infected (WV)

Chicks at 1 week of age were randomly assigned to one of the four groups viz. Control (C), virus infected (V), *Withania somnifera* supplemented (WS), and *Withania somnifera* supplemented and virus infected (WV). Birds of groups WS and WV started to receive *Withania somnifera* root powder (WSR) at 1% of the feed. At 4 weeks of age, birds of groups V and WV received a total of 0.25 mL viral suspension, containing about 1.7×10^4 TCID50 of IBDV, through oral, intraocular, intranasal, and intra-cloacal routes; the birds of groups C and WS were mock infected with buffered saline. Blood was collected in heparinized vials on days 3, 5, and 7 post-infection and total erythrocyte count and total leucocyte count were determined.

RESULTS

Figure: Absolute leucocyte counts and heterophil to lymphocyte ratio in birds postinfection.



H, Heterophil; L, Lymphocyte; M, Monocyte; B, Basophil; E, Eosinophil.

CONCLUSIONS

Withania somnifera root powder supplementation improved erythrocytic indices viz. absolute leucocyte counts and heterophil to lymphocyte ratio.

OUTCOME

Hence, this study results inferred that dietary supplementation of *Withania somnifera* in broilers could play a pivotal role in immunological alterations.

Reference:

Ganguly B, Mriges M, Chauhan P et al. Dietary supplementation with *Withania somnifera* root powder ameliorates experimentally induced Infectious Bursal Disease in chicken. Trop Anim Health Prod. 2020;52(3):1195-1206.