



Investigating the preventive effect of herbal medicine, Against Coccidiosis in Broilers

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Objective: Coccidiosis is an acute disease in the poultry industry worldwide. The present study aims to evaluate the effectiveness of an herbal mixture (*Artemisia Annu* and *Quercus infectoria*) in preventing coccidiosis. Artemisinin has been shown to induce oxidative stress in parasite cells and directly inhibit sporulation and cell wall formation in *Eimeria* species. *Quercus infectoria* has medicinal effects such as anti-inflammatory, astringent, antidiabetic, antimicrobial, and gastroprotective.

Materials & Methods: 120 one-day-old Ross 308 broiler chickens were purchased and reared under standard management practice with free access to feed and water. Toward the finish of the second week, the birds were moved from the litter to the cages and randomly gathered in groups. Each bird in groups A, B, and C were challenged via oral gavage with 200,000 sporulated oocysts of the prepared *Eimeria* spp. Group (A) takes an herbal mixture. Group (B) was treated whit Monensin. Group C did not receive any treatment. Group (D) was not infected and was healthy all the experiment period. To assess coccidial oocyst shed by chickens, oocyst per gram of feces (OPG) was counted using the McMaster method on days 5, 7, 9, and 11 after the challenge. On day seven after the challenge, lesion scoring was performed using Johnson & Reid method. For this reason, three birds from each replicate were slaughtered and evaluated for gastrointestinal lesions.

Results & Conclusion:As a result, Clinical signs of infection were improved in treated groups. The weighting and mortality rates of groups A and B were almost the same, and there was no significant difference, and Group C had the lowest weight gain. The feed conversion ratio in groups A, B, and D was significantly less than in group C. Also, in the grading of intestinal lesions, group A, which was treated with an herbal mixture, performed better than the group treated with Monensin. Oocyst count was significantly lower in treated groups, and no significant difference was seen between these groups. According to the results of this research, the herbal mixture can be a natural and safe alternative to chemical anti-coccidiosis drugs such as Monensin.

Keywords: Broilers, Coccidiosis; Herbal mixture; Prevention, treatment.