



Effects of Tannin-based Herbal Formulationson Treatment of Avian Trichomoniasis

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Objective: Avian trichomoniasis is a high-cost disease in the poultry industry, among other infections. This infection is distributed worldwide among wild and domestic birds, particularly the order of Columbiformes (pigeons and doves). Extracts of herbal plants do not result in drug resistance or tissue remnants; therefore, they are a reliable and safe substitute for treating trichomoniasis. This study assesses the antitrichomonal properties of 2 herbal plants complex (*Quercus infectoria* and *Allium Sativum*) in pigeons compared to Metronidazole.

Materials & Methods: In this experiment, 32 birds were used and divided into four equally numbered groups with four replicates in each group. Except for group (D), all groups were experimentally infected with *Trichomonas gallinae*. We used an herbal mixture to treat Group (A), and Metronidazole was given to Group (B). Our positive control group (C) was experimentally infected with *T. gallinae* but not treated. Our negative control group (D) was healthy throughout the experiment. The experiment included performance index, weight gain, wet mount, and biochemical & hematological examination.

Results & Conclusion: Results showed that treatment with an herbal complex remarkably decreased the adverse pathogenic effects of *Trichomonas* spp., compared to Metronidazole. After treating group (A) for one week, birds became almost healthy and, on some levels, better than the metronidazole treatment group. One week of hematological post-treatment studies showed that Hypochromic anemia annoyed the positive control group's squabs with macrocytic and protected groups (A) and (B) revealed regular blood images. Evident eosinophilia and basophilia occurred in infected groups, but after treatment in groups (A) and (B), eosinophil and basophil counts decreased. All the data analysis on weight gain, ALT, and total leukocyte showed perfect results of the herbal mixture. The weight gain was significantly higher in groups A, B, and D compared to group C, but no difference was observed between treated groups. To conclude, the antitrichomonal properties of the mentioned herbal compound suggest its usage as a different antitrichomonal substance to chemotherapeutic medicine for the control of trichomoniasis.

Keywords: Control, Herb, Pigeon, Tannin, *Trichomonas gallinae*.