



Histomorphological Changes Associated with Different Doses of Chinese Propolis in the Bursa of Fabricius of Chickens

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Abstract:

This experiment was carried out to investigate the effect of dietary supplementation of Chinese propolis on the histological structure of bursa of Fabricius in Ross 308 broiler chickens. Eighty chicks were divided into 5 groups, 16 chicks each. Group 1 was fed only on basic diet and kept as control while groups 2, 3, 4 and 5 were fed on basic diet and received ether extract of propolis (EEP) in a dose of 100, 250, 500 or 750 mg/kg diet respectively. The treatment started from the first day after hatching and extended to day 42 where all birds were sacrificed and bursa of Fabricius were removed, processed and examined histologically. Chickens received EEP in a dose of 100 and 250 mg/kg diet showed an increase in size of the bursal folds and bursal lymphoid follicles with minimal regressive changes into the bursa such as a slight increase in the amount of inter-follicular connective tissue. Higher doses of EEP (500 and 750 mg/kg diet) produced substantial changes into the bursa such as degeneration in lymphatic follicles represented by cyst formation, liquifactive necrosis and significant increase in inter-follicular connective tissue. Our findings suggest that high doses of EEP led to faster bursal involution with subsequent negative impact on the humoral immune status of chicken.

Keywords:

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