

Evaluation of the relationship between aflatoxins levels and pathological lesions observed in chicken livers slaughtered in Ahvaz slaughterhouse

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Abstract

This study was aimed to investigate the relationship between aflatoxin levels and pathological lesions observed in poultry liver. Out of 50 liver samples including 10 samples with healthy appearance and 40 samples with pale appearance from 10 herds in Ahvaz slaughterhouses were randomly selected. One part of the selected liver was evaluated for histopathological lesions after staining by hematoxylin & eosin and periodic schiff method, and the other part was frozen to measure different types of aflatoxins by HPLC technique. The results showed that none of the 10 liver tissue samples with healthy appearance and 2 of 30 liver tissue samples with swollen and pale appearance were infected with aflatoxins B1, G1, B2 0.19 ± 0.01 , 0.17 ± 0.04 , $0.075 \pm 0.007 \mu\text{g kg}^{-1}$, respectively. In liver tissues with healthy appearance and with swollen and pale appearance, histopathological lesions were often observed in the form of hepatocellular swelling and vacuolar degeneration. The results of this study showed that there was no significant relationship between histopathological lesions of the liver and aflatoxin contamination in the relevant samples and these general lesions also occur under the influence of other pathogenesis factors, so the effect of other factors affecting the growth of broilers should be studied.

Key words: Aflatoxin, HPLC, Pathology, Liver chicken

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