

HISTOPATHOLOGICAL CHANGES OF KIDNEY OF BROILER CHICKEN EXPOSED TO CHRONIC HEAT STRESS

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ABSTRACT

The aim of this research was to know histopathological changes of kidney of broiler chicken exposed to chronic heat stress. Twenty broilers were divided randomly into 2 groups, 10 broilers each are being exposed to chronic heat stress for 21 days. The first 21 days were the adaptation period in a chamber with temperature 24-28°C and humidity 40-55%. After 21 days, continue with exposure to heat stress in a chamber with temperature 36-40°C and humidity 50-65% in 8 hours per day. After exposed to chronic heat stress, kidney tissues were processed, and kidney tissue histopathological changes were evaluated by using the Klopfleisch modified scoring method. The data was analyzed by Mann – Whitney Test. The results of this research showed that chronic heat stress exposure causing the presence of degeneration of tubular epithelial cell, necrosis of tubular epithelial cell, necrosis of glomerular and interstitial infiltration. From the analysis data the overview of multiparametric showed that when control group compared with the treatment group showed significantly difference ($p < 0.05$).

Key words: chronic, heat stress, kidney, broiler