

Renal histology of cobb 500 lineage 14 days old treated with filtered water

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Bird kidneys are brown and elongated, arbitrarily divided in cranial, medial and caudal regions, by extern iliac and sciatic arteries. It is known that microbiological quality of water interferes on integrity of small intestine. In birds it is observed that are few researches of type of water in poultry house. In this way it is aimed investigate the effect of the faucet water and filtered water on renal morphology in poultry during the growth phase. For that, two treatments were carried with 16 repetitions each one. It was verified that faucet water had 10^3 NMP of total coliforms and $2.8 \times$ more than 2.4×10^1 NMP of *Escherichia coli* before beginning the investigation, and in filtered water there were absence of total coliforms and *Escherichia coli*. After 14 days of investigation, five animals of each treatment were anesthetized and sacrificed, for kidneys histological study. For that, the right kidneys were located, scratched and weighted and caudal pole fragments were selected. Subsequently, the kidney fragments were immersed in Bouin's fixer solution for 24 hours. After dehydration, by crescent alcohol concentration series, the samples were included in paraplast and sectioning with microtome. In each histological slide, it was positioned seven micrometers thickness semi-serial section. The preparations were then stained with Hematoxiline-Eosin technique. After careful analysis using light microscope, the slides were selected and photographed with an Olympus photomicroscope. The kidneys had the medium weight of 2.9 ± 0.51 g e 2.8 ± 0 , and 43 g for birds treated with faucet and filtered water, respectively. Analyzing the histology of both treatments, it can be verified that the morphology was similar, not evidencing interference of the quality of water in renal structures. In two treatments, was noticed that the cortical region of birds presented intensely stained and constituted by glomeruli, proximal and distal convoluted tubule. The medullar area contained many collectors' tubules of high epithelium composed by basophilic cells and intermediary tubules with evident nuclei and proximal convoluted tubules have straight lumen and they were covered with cubic cells with brush border. Distal convoluted tubules present wide tubular lumen of clear outline. Like this, can be evidenced that microbiological quality of water doesn't interfere on renal morphology of chickens of Cobb lineage.

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