PP-255

HistopathologicalChanges in Manto Tissues of *Physa acuta* Draparnaud, 1805 (Gastropoda: Physidae) Exposedto $CuSO_4$

Birgül OTLUDİL[1], Sabahat AYAZ[1]
[1]Dicle UniversityFaculty of ScienceDepartment of Biology, TURKEY
birgulotl@dicle.edu.tr

The aim of the study: The aim of this study is to determine hsitopathological changes in mantle of Physa acuta exposed to different concentration of copper sulphatede for increased periods according to copper sulphatede accumulation.

Material and Methods: Physa acuta specimens were acclimated to laboratory conditions for 15 days.After adaptation period, the snails were divided into 4 groups.

Group I. the snail control group not exposed to CuSO4 concentration

Group II. Snails exposed to 0,05 mg/l concentration of CuSO4

Group III. Snails exposed to 0,1 mg/l concentration of CuSO4

Group IV. Snails exposed to 0,2 mg/l concentration of CuSO4

The sublethal CuSO4 doses were applied to all experimental groups except the control group for 30 days. In order to determine the histopathological alterations, histological preparations of the mantle samples from snails taken from the control and experimental groups at 10th, 20th and 30th days of the experiment were prepared. Histopathologic changes were examined with light microscope and photographed.

Results: In the control group, the mantle consists of epidermal layer, columnar muscle fibrils, lipid vacuoles, and pigment cells. In Group there wasn't any histopathological changes in the mantle. In the experimental groups, at the end of the 10th day, increase in pigment cells in the mantle, (Group II), an increase in pigment cells and lipid vacuoles and atrophy in muscle fibrils (Group III) and (Group IV) were determined.At the end of the 20th day, there was an increase in pigment cell and lipid vacuoles in the mantle (Group II), in Group III atrophy in the muscle fibrils, condensation of lipid vacuoles, desquamation in the epithelium were observed. In Group IV, the histopathological changes were more severe than Group III and necrosis was detected.At the end of the 30th day, in Group II desquamation in the epithelium, atrophy in the muscle fibrils, increase in lipid vacuoles were detected; in Group III in addition to the histopathological changes of Group II necrosis was observed. In Group IV connective tissue and muscle fibrils were replaced by pigment cells and lipid vacuoles. Physa acuta was exposed to CuSO4 at sublethal concentrations of 0.05 mg/l, 0.1 mg/l, 0.2 mg/ l for 30 days and histopathological changes in mantle tissues were observed to increase with dose and duration.

Acknowledgment: Research was supported by Dicle University Scientific Research Project Coordinator (DÜBAP) with 07-02-19 numbered project. Birgül OTLUDİL and Sabahat Ayaz contributed to the research.

Keywords: Physaacuta, copper sulphate, histopathology, manto, snail.