

## **The short –term nephropathological complications in experimentally induced diabetes mellitus in female domestic rabbits**

### **Abstract:**

This study was designed to assess the pathological changes in kidneys after twenty days from induction of diabetes mellitus in female rabbits. Sixteen female rabbits were used in this experiment and divided into two equal groups: diabetic group (Df) and control group (Cf). Animals were housed in cages under 12/12 h light/dark cycle at  $25\pm 2$  °C & 60% relative humidity with standard granulated food & water available ad libitum. The animals were left one month for adaptation. Diabetes mellitus was induced by i.v injection of alloxan monohydrate at dose rate 100 mg/kg dissolved in 1 ml of normal saline, while the control group was injected with 1 ml of normal saline. Blood was collected after three days to check fasting serum glucose. The procedure of alloxan injection and blood collection were made on empty stomach. The laboratory tests including serum glucose estimation at days (0, 3, 10 and 20) days. After taking blood samples four rabbits were sacrificed by decapitation. The kidneys were removed for histopathological study by using H/E stains. We found the following results according to the periods of the experiments: Serum glucose level was elevated, by checking after 3 days of injection of alloxan, and still elevated to the end of the experiment. The histopathological results after 10 days of

induction of diabetes revealed that there were edema, hypertrophy and hypercellularity of glomeruli without any cast or inflammation, while there were necrosis as well as glomerular swelling after 20 days of induction of diabetes.