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Key words: Diabetes mellitus, Diabetic nephropathy, Microangiopathy, Microcirculation.

Ключевые слова: диабет, диабетическая нефропатия, микроангиопатия, микроциркуляция.

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ELECTROLYTES ALTERATIONS IN BLOOD SERUM AND URINE OF RATS AFTER PROLONGED ADMINISTERED OF LAPROL-604

ЗМІНИ ЕЛЕКТРОЛІТІВ У СИРОВАТЦІ КРОВІ І СЕЧІ ЩУРІВ ПІСЛЯ ТРИВАЛОГО ВВЕДЕННЯ ЛАПРОЛА-604

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An experimental model was conducted to study the electrolytes alteration in blood serum and urine of adult Wistar rats were administered by Laprol-604. Laprol-604 has been administered to rats once daily by gavage at doses of 1/10, 1/100 and 1/1000 LD50 (12,5g/kg) is the first, second and third groups, respectively, for 30 days. The control group consisted of 10 intact male rats were kept on a standard diet, without Laprol-604 treatment. At the end of experiment, rats were placed in metabolic cages in order to collect 24-hour urine. Rats were euthanized by intraperitoneal administration of thiopental (20 mg/kg) and subsequently decapitated. Trunk blood was collected in centrifuge tubes. The following electrolytes: potassium, sodium and chloride were measured by

colorimetric method for assessing the Laprol-604 toxic effect on rat kidneys. In Laprol-604 treated groups were observed dose dependent increase in serum sodium and chloride levels. Both of sodium and chloride were raised in 1,4 and 1,5 times, respectively, in blood serum of rats first group and 1,2 and 1,4 times, respectively, in blood serum of rats second group compared to control values. Opposite values of these electrolytes were found in urine. The excretion sodium and chloride was reduced significantly. Concerning to potassium, it's level was declined in 1,7 and 1,5 times in serum of first and second animal groups, respectively, while urine potassium was elevated. Laprol-604 has produced dose depended electrolytes alteration in blood serum and urine rats at given doses 1/10 and 1/100 LD50.

Key words: kidney, Laprol-604, surfactant, sodium, potassium, chloride.

Ключові слова: нирка, Лапрол-604, поверхнево-активна речовина, натрій, калій, хлорид.