

**PP52****Investigation of phytomedicine Canephron N (drops) in primary prophylaxis of calcium oxalate urolithiasis**A.A. Gaybullaev, S.S. Kariev, S.O. Kasimov, O.O. Khudayberdiev, O.A. Gaybullaev

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**Background:** The specific prophylaxis for stone recurrence (secondary prophylaxis or methaphylaxis) has been already widely debated. There are not information about primary prophylaxis of urolithiasis in regions with high incidence of exogenic risk factors of urinary lithogenesis.

**The Aim:** Is there ability of Canephron N (drops) to prevent urinary lithogenesis in ethylene glycol-fed rats?

**Study Design:** Experimental, nonintervention survey study (phase IV), controlled, prospective - in parallel groups, randomized, open labeled.

**Experimental Animals and Treatments:** Twenty-four male white rats, 4 weeks of age, weighting 180–225 g. were acclimated to a room temperature of 22°C with a 12 h light, 12 h dark cycle, and housed in the animal breeding center. All of the rats were fed standard rat meal during the entire course of the study. They were randomly divide into two groups.

Group 1 (Canephron N; n=12 rats) used drinking water with 0.75% ethylene glycol (EG) as lithogenic inductor during all period of experiment. Canephron N drops (2 drops + 0.25 ml of water) were injected with pipette per os 3 times per day.

Group 2 (placebo; n=12), rats, used drinking water with EG and normal meal plus 0.25 ml of water with pipette per os 3 times per day.

**Methods:** Diuresis 24 hours, pH of urine, microscopy of urinary sediment (degree of crystaluria), measurement of Ca, Mg, Ox, Cit, Ur, and calculation of Index of ion activity of CaOx combination - were chosen as estimated criteria.

**Results:** Canephron N in conditions of experiment was able: to decrease the diuresis on 106 %; to increase the pH of urine from 5.83+1.89 till 7.25+1.38 (on 12 % in average); to decrease the concentration of Ca in urine from 4.03+1.41 till 1.32+0.68 (on 57 % in average); to increase of daily excretion of Mg in urine from 0.95+0.34 till 1.4+0.70 (on 26 % in average); to increase Cit in urine from 0.93+0.41 till 1.32+0.71 (on 22 % in average); to decrease the AP[CaOx] from 2.96+0.32 till 1.16+0.38 (on 31 % in average). All above results have significant difference in comparison with data of control group.

**Conclusions:** Canephron N showed protective effect in increased load by exogenic oxalate and prevented the urolithiasis on 83.4 % (absence of crystaluria in rats). The mechanism of drops effect depends on not only the diuretic ability. There are changes in metabolic status of urine and as result of it is decreasing of AP [CaOx] index, which is confirmed by complex mechanism of Canephron action.