

EFFECTS OF INDOLINOREN ON RENAL EXCRETORY FUNCTION IN RATS WITH ACUTE RENAL FAILURE

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Research objectives – to investigate the influence of indolinoren on the state of renal excretory function in experimental acute renal failure (ARF).

Materials and methods. Studies were carried out on 40 nonlinear white female rats weighing 180-220 g. ARF was induced in experimental rats by single injection of 50% glycerol solution in dosage 10 ml/kg. Experimental animals were divided into 4 groups: 1 – intact control; 2 – control with pathology; 3 – ARF + indolinoren (29,5 mg/kg); 4 – ARF + furosemide (6 mg/kg). Indolinoren and furosemide were administered intragastrically in therapeutic-preventive regiment during 3 days before inducing ARF and 2 days in the setting of ARF. Efficacy of indolinoren was evaluated by the rate of excretory renal function on the first and second day of ARF.

Obtained results. In glycerol-induced acute toxic kidney injury in rats the significant violation in renal excretory function took place. Oligoanuretic stage of ARF occurred, anuria appeared in 20% of cases on the 2-nd day of experiment and in 60% of cases – on the 3-rd day. Thereof, diuresis in rats of control group in relation to intact group of animals on the 2-nd day of experiment was $0,55 \pm 0,10$ ml/100g (for rats without anuria), on the 3-rd day – $0,26 \pm 0,05$ ml/100g (for rats without anuria).

Indolinoren has shown an accurate increase of diuresis in ARF: on the 2-nd day diuresis was $1,74 \pm 0,14$ ml/100 g that is approximately 4 times higher in relation to control group of animals. On the 3-rd day of experiment diuresis slightly decreased and was $1,23 \pm 0,27$ ml/100 g for the total group of animals and $1,53 \pm 0,22$ ml/100 g – for animals without anuria. Anuria appeared in 20% of animals. It was established that in experiment indolinoren was inferior to comparative drug on the 2-nd day and there was no significant difference on the 3-rd day.

Conclusions. Indolinoren in acute renal failure exerts nephroprotective properties, promotes the increase of diuresis, prevents development of anuria.