

EFFECT OF AMILORIDE AND BUMETANIDE ON IONIC CURRENTS IN THE EPITHELIUM OF CAECUM FROM STARVED RABBITS

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The aim of this study was to determine the effect of starvation on the transport of sodium and chloride ions in the epithelium of rabbit caecum. The experiment consisted in measuring transepithelial electrical potential (PD in mV) and the transepithelial electrical potential difference (dPD in mV) of an isolated fragment of rabbit caecum, before and after 4-day-long starvation. The studied tissue was incubated in Ringer solution and subsequently ion transport was modified through incubation in the Ringer solution supplemented with amiloride or/and bumetanide.

It was demonstrated that the values of electrophysiological parameters of the tissue fragments of caecum from starved rabbits were substantially lower than the values for the fragments of control caecum. A similar relationship was observed also in the reaction of this tissue to mechanical stimuli. After the incubation of the caecum tissue fragments in the presence of amiloride or/and bumetanide, the value of transepithelial electrical potential and the sensitivity to mechanical stimuli decreased in both groups studied.

Experimental data presented in this paper indicate that the starvation process has effect on lowering sodium and chloride ion transport and decreasing sensitivity of the epithelium of the caecum to mechanical stimuli.

Key words: *amiloride, bumetanide, caecum, rabbit, starvation, Ussing's method, ion transport*

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