

EFFECTS OF AMILORIDE AND BUMETANIDE ON ION TRANSPORT IN THE CAECUM OF RABBIT

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Effect of selective blockers of sodium and chloride ion transport (amiloride and bumetanide) on transepithelial electrical potential (PD), transepithelial electrical potential difference (dPD), and electrical resistance of the tissue (R) of isolated fragment of the rabbit's caecum were determined using electrophysiological methods designed for measuring ionic currents occurring in epithelial tissues.

A modified Ussing apparatus enabling application of mechanical and chemical stimuli on the isolated tissue was used in the experiment.

It was demonstrated that amiloride used for incubation of the caecum fragments lowered by some 24% the value of PD and by 50% the value of dPD. Incubation of the caecum fragments with bumetanide resulted in a decrease in the PD value by 73% and in the value of dPD by some 83%. The results obtained with the tissue incubated in Ringer solution with addition of both compounds were comparable with those observed for the tissue incubated with bumetanide.

As can be concluded from the above-mentioned experiments, both ion transport pathways contribute jointly to the induction of PD in the epithelium of the rabbits caecum.

Key words: *amiloride, bumetanide, caecum, ion transport, rabbit*

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