Short communication

Mebeverine influences sodium ion transport in the distal colon

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Abstract:
The study was performed to check if the well-known intestinal spasmolytic effect of mebeverine is paralleled by any changes in intestinal transepithelial currents. The transepithelial potential difference related to ionic currents of the isolated rabbit distal colon wall was measured by means of Ussing’s technique under control conditions and after gentle mechanical stimulation of intestinal epithelial surface by a flux from peristaltic pump and with and without of mebeverine in stimulation fluid. The transient hyperpolarization after mechanical stimulation was diminished after addition of mebeverine to the stimulation fluid when chloride transport was inhibited by bumetanide (BUME) but in the presence of amiloride (AMI), a sodium ion transport inhibitor, the drug did not influence the reaction. It was inferred that mebeverine was able to modulate transepithelial sodium ion transport and in this way to modify interaction between colonic wall and its contents during intestinal passage.

Key words:
distal colon, hyperpolarization, mebeverine, transepithelial sodium ion transport, Ussing technique