Demonstration of antidiarrheal and antimotility effects of wood creosote

Ogata N., Baba T., Shibata T.

[Abstract]
Wood creosote administered to rats prevented castor-oil-induced diarrhea with an ED$_{50}$ of 53 mg/kg p.o. This antidiarrheal effect was apparently produced by acceleration of net fluid absorption from the intestine, as shown by a 52% decrease (p < 0.001) of residual fluid volume in an intestinal loop, and partly by suppression of intestinal motility. Wood creosote also inhibited spontaneous longitudinal contractions of isolated ileal segments in rats (IC$_{50}$ = 28 mg/l) and guinea pigs (IC$_{50}$ = 17 mg/l). Conpressions of the guinea pig ileum induced by electrical stimulation, bradykinin and acetylcholine were also inhibited dose-dependently. We conclude that wood creosote has an antidiarrheal activity and that this effect is exerted by inhibition of intestinal motility and by augmentation of net fluid absorption from the intestine.