

Demonstration of antidiarrheal and antimotility effects of wood creosote

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木クレオソートの止瀉効果および運動抑制効果の実証

[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). Contractions 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.

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