

Antidiarrheal activity of wood creosote: inhibition of muscle contraction and enterotoxin-induced fluid secretion in rabbit small intestine

Ogata N., Shibata T.

Pharmacology 62, 181-187 (2001).

<和文タイトル>

木クレオソートの止瀉活性：ウサギの小腸における筋収縮およびエンテロトキシン誘発性腸液分泌の抑制

[Abstract]

Wood creosote has long been used as an antidiarrheal agent, but its mechanism of action is not well understood. To elucidate the mechanism of its antidiarrheal activity, we have addressed questions whether it inhibits fluid secretion induced by *Escherichia coli* heat-stable enterotoxin (STa) in rabbit jejunum *in vivo*, and whether it inhibits muscle contraction of isolated rabbit ileum *ex vivo*. Wood creosote (10-100 mg/l) instilled in a ligated loop of jejunum inhibited STa-induced fluid secretion ($p < 0.05$). It also inhibited the spontaneous phasic, acetylcholine-induced tonic and Ba^{2+} -induced tonic contractions of longitudinal and circular muscles of ileum dose-dependently with IC_{50} values of 130-530 mg/l. These data provide further evidence that the antidiarrheal activity of wood creosote is attributable to its antisecretory and antimotility effects.

Pharmacology S. Karger AG の許可を得て転載