

Seirogan (wood creosote) inhibits stress-induced ion secretion in rat intestinal epithelium

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<和文タイトル>

正露丸（木クレオソート）によるストレス誘発のラット消化管上皮におけるイオン分泌を抑制する

[Abstract]

Acute stress is often associated with abnormalities in gastrointestinal function, including enhanced secretion of water and electrolytes that leads to diarrhea. The goal of our study was to investigate whether Seirogan inhibits stress-induced intestinal secretion in Wistar-Kyoto rats. Electrogenic ion secretion was measured in modified Ussing chambers as an increase in basal short-circuit current (Isc) across isolated rat jejunal or colonic mucosal sheets. Mucosal preparations from rats exposed to cold restraint stress showed a significant increase in basal Isc compared to controls. The cumulative addition of Seirogan to the Ussing chamber caused a concentration-dependent reduction of the stress-induced increase of basal Isc to levels resembling nonstressed controls. In a separate experiment, Seirogan (15 mg/kg) administered by oral gavage inhibited stress-induced secretion and normalized basal Isc in the jejunum and colon. The results suggest that Seirogan may be an effective therapy for patients with stress-associated diarrhea.

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