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Ex-vivo spasmolytic activities and *In-vivo* antidiarrheal of the aqueous extract of the roots of *Echinopskebericho mesfinin* isolated guinea-pig and ileum rodents

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Diarrhea is a common gastrointestinal disorder characterized by an increase in stool frequency and a change in stool consistency. Inspite of the availability of many drugs as antidiarrheal agents, the search for a drug with affordable cost and better efficacy is essential to overcome diarrheal problems. The root extract of Echinopskebericho, is used by traditional practitioners for the treatment of diarrhea. However, the scientific basis for this usage has not been yet established. The purpose of the present study was to evaluate the antidiarrheal and spasmolytic activities of the aqueous extract of the roots of E. kebericho in rodents and isolated guinea-pig ileum preparations. In the castor oil induced intestinal transit test, E.kebericho produced a significant ($p < 0.01$) dose dependent decrease in propulsion with peristaltic indexvalues of 45.05±3.3, 42.71±2.25 and 33.17±3.3%, respectively at doses of 100, 200 and 400 mg/kg compared with 63.43±7.3% for control. In the castor oil-induced diarrhea test, the mean defecation was reduced from 1.81±0.18 to 0.99 ± 0.21 compared with 2.59 ±0.81 for control. The extract (at doses stated above) significantly decreased the volume of intestinal fluid secretion induced by castor oil (2.31±0.1 to 2.01±0.2) in relation to 3.28±0.3 for control. When tested on a guinea-pig ileum, root extract of Echinopskebericho exhibited a dose dependent spasmolytic effect, 23.07 % being its highest inhibitory effect. The results obtained in this study give some scientific support to the use of Echinopskebericho as an antidiarrheal agent due to its inhibitory effects on the different diarrheal parameters used in this study.

Biography

Fisseha Shiferie completed his master's degree at the age of 26 years from Addis Ababa University and studying for another master's degree in France at the France School of Public Health.

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