

Antispasmodic Effects of Rooibos Tea (*Aspalathus linearis*) is Mediated Predominantly through K_{π} -Channel Activation

Abstract:

Rooibos tea has been widely used for abdominal spasm and diarrhoea. The aim of the present study was to explore the possible mechanism for its use in such ailments. Its aqueous extract (RT) at 0.3–10 mg/ml produced relaxation of spontaneous and low K_{π} (25 mM)-induced contractions of rabbit jejunum, with weak effect on high K_{π} (80 mM)-induced contractions. In the presence of glibenclamide, relaxation of low K_{π} -induced contractions was prevented. Cromakalim inhibited contractions induced by low K_{π} , but not high K_{π} , while verapamil did not differentiate in its inhibitory effect on contractions produced by the two concentrations of K_{π} . RT also exhibited antidiarrhoeal and antisecretory activities in mice. The spasmolytic effect was concentrated in organic fractions. Its constituents, chrysoeriol, orientin and vitexin showed a similar pattern of spasmolytic effects to the extract, while rutin was more like verapamil. So Rooibos tea possesses a combination of dominant K_{ATP} channel activation and weak Ca_{π} antagonist mechanisms and hence justifies its use in hyperactive gastrointestinal disorders.