Daru

Volume 15, Issue 4, 2007, Pages 199-204

Relaxant effect of Satureja hortensis on guinea pig tracheal chains and its possible mechanism(s)

Boskabady, M.H. , Aslani, M.R., Mansuri, F., Amery, S.

Department of Physiology, Ghaem Medical Centre, Mashhad University of Medical Sciences, Mashhad, Iran

Abstract

View references (24)

Background: In Iranian ancient medical books, the therapeutic effects of Satureja hortensis on respiratory diseases have been reported. In order to verify these reports, the relaxant effect of aqueous-ethanolic extract of Satureja hortensis on guinea pig trachea was examined. Methods: The relaxant effects of 6 cumulative concentrations of extract (0.15, 0.3, 0.45, 0.6, 0.75 and 0.9 g %) in comparison with saline and 4 cumulative concentrations of theophylline (0.15, 0.3, 0.45, and 0.6 mM) by their effects on precontracted tracheal chains of guinea pig by 10 μM methacholine (group 1) or 60 mM KCl in two different conditions including: non-incubated tissues (group 2) and incubated tissues with 1 μM propranolol, 1 μM chlorpheniramine and 1 μM atropine (group 3, for each group n=6) were examined. Results: In group 1, the extract and theophylline showed concentration dependent relaxant effects compared to that of saline ($p<0.05$ to $p<0.001$). In group 2, three last concentrations of theophylline and four higher concentrations of extract showed significant relaxant effects compared to that of saline ($p<0.05$ to $p<0.001$). The effects of four lower concentrations of extracts in groups 1 and 2 were significantly lower than those of theophylline ($p<0.05$ $p<0.001$). In group 3, the extract did not show any significant relaxant effect. There were significant correlations between the relaxant effects and concentrations of extract and theophylline in groups 1 and 2 ($p<0.001$ for all cases). Conclusion: These results showed a potent relaxant effect of Satureja hortensis on guinea pigs trachea which was comparable to that of theophylline.

Reaxys Database Information

|

Author keywords

Bronchodilatory; Guinea pig; Satureja hortensis; Trachea

Indexed Keywords

EMTREE drug terms: alcohol; atropine; chlorpheniramine; methacholine; plant extract; potassium chloride; propranolol; satureja hortensis extract; theophylline; unclassified drug

EMTREE medical terms: animal experiment; animal tissue; article; bronchodilatation; controlled study; drug effect; drug mechanism; guinea pig; male; medicinal plant; nonhuman; plant leaf; satureja hortensis; savory; trachea muscle

Chemicals and CAS Registry Numbers: alcohol, 64-17-5; atropine, 51-55-8, 55-48-1; chlorpheniramine, 132-22-9; methacholine, 55-92-5; potassium chloride, 7447-40-7; propranolol, 13013-17-7, 318-98-9, 3506-09-0, 4199-09-1, 525-66-6; theophylline, 58-55-9, 5967-84-0, 8055-07-0, 8061-56-1, 99007-19-9

Manufacturers:Drug manufacturer: Sigma, United Kingdom.

ISSN: 15608115 CODEN: DJTSF Source Type: Journal Original language: English

Document Type: Article

References (24)

View in table layout

Page Export Print E-mail Create bibliography

1