

Original Paper

Effect of *Peppermint* extract on colon motor activity following immobilization stress in mice

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Abstract

Background and Objective: Hydroalcoholic extract of *Peppermint* is traditionally used for gastrointestinal disorders. This study was done to evaluate the effect of *Peppermint* extract on the mice colon motor activity following immobilization stress.

Methods: In this experimental study, 30 male Albino mice were randomly allocated into the three groups; including control, stress and stress + *Peppermint* oil groups (n=10). The second group as a stress group exposed to immobilization stress for four hours during three days. Third group as stress plus *Peppermint* oil group was exposed to stress in addition to administration of 27 mg/kg/bw *Peppermint* oil intraperitoneally prior to stress. After three days, intestinal and peristaltic activity was recorded using pressure transducer from in vitro segments of colon (4-5 cm in length. Also, fecal weight, food intake and body weight was measured for each mouse for in vivo condition.

Results: The mean±SD of fecal weight after three times stress immobilization was 1.36±0.71, 1.06±0.6 and 0.47±0.39 gr in control, stress and Stress + *Peppermint* oil groups, respectively (P<0.05). The mean±SD of internal luminal pressure after three times stress immobilization was 4.47±1.15, 3.48±1.25 and 0.77±0.37 mm/hg in control, Stress and stress + *Peppermint* oil groups, respectively (P<0.05).

Conclusion: *Peppermint* oil is a strong inhibitor for colon motor activity following immobilization stress.

Keywords: *Peppermint*, Immobilization stress, Colon motor activity, Mouse

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Received 20 Sep 2015

Revised 24 Feb 2016

Accepted 24 Feb 2016