Original Paper

Effect of Hydroalcoholic extract of Valeriana Officinalis root on the ileum contraction in Guinea pig

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Abstract

Background and Objective: Valeriana Officinalis administrated for treatment of many gastrointestinal disorders traditionally and probably reduced smooth muscle contraction and bowel movement. The aim of this study was to determine the effect of Valeriana Officinalis extract on Ileum contraction of Guinea pig ileum in In Vitro model.

Materials and Methods: This experimental study done on five male Guinea pigs. The animals were sacrificed and the pieces of ileum with 2-3cm long (at least 6 pieces) dissected and established in normal Tyrod solution plus Carbogen gas in 37ºc. Tissue fixed between of two electrodes that connected to stimulator apparatus. The contraction of ileum carried to physiograph by isotonic transducer and recorded. A solution with 5 concentration of Valeriana Officinalis extract was added to the organ bath during ileum stimulation with stimulator and the muscle contraction recorded in 7 responses.

Results: Hydroalcoholic extract of Valeriana Officinalis root in concentrations of 5, 15, 50, 150, 500 mg/ml during 0.1 Hz stimulation decreased Ileum contractions in a dose dependent manner. The percent of reduce contraction was 34.45%, 36.07%, 47.53%, 56.42%, and 76.22% respectively. Also Ec50% of this effect of Valeriana Officinalis was found to be 50 mg/ml (P<0.05).

Conclusion: This study showed that Valeriana Officinalis extracts can decrease ileum contraction in dose dependent manner.

Keywords: Valeriana Officinalis, Bowel Contraction, Guinea pig, Ileum

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