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Thesis Title	Bronchodilatory effect of some drugs and medicinal plants in rabbit induced bronchospasm		
Year	2006		
Abstract	<p>It's well documented that using of histamine and acetylcholine directly on tracheal muscle (in vitro) caused tracheal muscle constriction as well as intravenous administration of these substances to animal (in vivo) caused brochospasm accompanied by symptoms of dyspnea . this study was done in two sides:</p> <p><b>in vitro study</b>,the aqueous extract of medicinal plants was used on tracheal muscle directly, in case of acetylcholine four out of five has a positive effect in tracheal smooth muscle relaxation . the aqueous extract of effective plants include <i>Glycyrrhiza Glabra, Hedera-Helix, Melissa Officinalis and Pimpinella Anisum</i> at concentration (0.4mg/ml) for each plant, in which the mentioned dose induced tracheal smooth muscle relaxation in trachea pretreated with acetylcholine, while in case of histamine three out of five has a positive effect in tracheal smooth muscle relaxation. The aqueous extract of effective plants include, <i>Glycyrrhiza Glabra, Hedera-Helix and Melissa Officinalis</i> at concentration(0.4mg/ml) for each plant, in which the mentioned dose induced tracheal smooth muscle relaxation in tracheal pretreated with histamine at a dose(<math>2 \times 10^{-4}M</math>).</p> <p><b>In vivo study</b>, seventy rabbits were used, divided into 7 groups (10 rabbit for each group ). The aqueous extract of <i>Glycyrrhiza Glabra, Hedera-Helix, Melissa Officinalis ,Pimpinella Anisum and pinus pinea</i> at a concentration(1.5mg/kg) was given after half hour from histamine administration at a dose(0.4mg/kg) to induce bronchial smooth muscle constriction which accompanied by bronchospasm and dyspnea. The aqueous extract of <i>Glycyrrhiza Glabra, Hedera-Helix and Melissa Officinalis</i> which had been used led to bronchial smooth relaxation and relief of dyspnea. The laboratory finding indicated that histamine caused significant decrease in serum calcium levels in which the results were(7.77,8.8,8.8,8.7,8.1,8.1)<math>\mu\text{g}/\text{dl}</math> in groups(2,3,4,5,6,7) respectively. In the same time magnesium results were(18.9,19.9,20.8,21.4,21.4,19.8)<math>\mu\text{g}/\text{dl}</math> in groups(2,3,4,5,6,7) respectively</p>		

and selenium results were (135.2,137.3,135.4,139.8,139.2,132.2) $\mu\text{g}/\text{dl}$  in groups(2,3,4,5,6,7)respectively. the aqueous extract of *Glycyrrhiza Glabra*, *Hedera-Helix* and *Melissa Officinalis* which have been used caused significant increase in serum calcium levels in which the results were (33.07,26.7,33.8) $\mu\text{g}/\text{dl}$  in groups(3,4,5)respectively . in the same time magnesium results were(74.2,69.8,74.9) $\mu\text{g}/\text{dl}$  in groups(3,4,5)respectively. And selenium results were (300.6,249.2,271.9) $\mu\text{g}/\text{dl}$  in groups(3,4,5)respectively. These results indicated clearly the possibility of using the aqueous extract of these plants to relief the bronchospasm in human after adjustment the effective dosage.