Abstract

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Chemical and pharmacological evaluation of ethanolic extract of Glycyrrhiza glabra Linn

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Abstract

Introduction: Glycyrrhiza glabra Linn. is the member of Fabaceae family known as licorice. Traditionally it's used in many system of medicines including Unani, Ayurveda, Homeopathy and Chinese to cure various types of complications. Generally licorice is used as mild laxative, anti-arthritic, anti-inflammatory, anti-viral, anti-ulcer, aphrodisiac, estrogenic, antioxidant, anti-neoplastic and anti-diuretic. As the root of the plant contains high percentage of glycyrrhizin which is fifty times more sweeter than sugar. Hence in medicine may be used as sweetening agent for various dosage forms.

Objectives of the study: The study was designed for evaluating it's chemical constituents and pharmacological effects of Glycyrrhiza glabra Linn. through in-vitro and in-vivo assay.

Method: For in-vivo study, biochemical tests were done on rats after oral administration of licorice. In in-vitro assays, ethanolic extract was prepared and evaluated for different pharmacological activities.

Result: It constituted phytoconstituents such as glycyrrhizin, glycyrrhizinic acid, glabrin A&B, glycyrrhetol, glabrolide, isoglabrolide, iso-flavones, coumarins, triterpene sterols. Glycyrrhiza glabra linn. shows antioxidant and lipoxygenase inhibitory activity . Acetyl choline esterase enzyme was also inhibited by the extract. Hypocholesterolemic effect was also observed significantly. The extract posses activity in boosting Hb (Hemoglobin), RBCs (Red Blood Cells) and WBCs (White Blood Cells), low platelet and low potassium levels were also observed with its use .

Conclusion: The study suggest that the irrational use of licorice may be fatal due to electrolyte imbalance, thrombocytopenia and hypokalemia.

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