



METHANOLIC EXTRACT FROM *ACHILLEA ERIOPHORA* L. LEAVES INDUCES CELL MIGRATION AND PROLIFERATION IN HUMAN FIBROBLASTS

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Achillea eriophora L., a member of the Asteraceae family, is a perennial herb with 30–60 cm erect stem; tomentose leaves up to 10 cm; and compact capitule with ligulate yellowish flowers. It is an endemic species in Khorasan province of Iran [1]. Different species of *Achillea* have been used in folk medicine against several disturbances including skin inflammations, spasmodic and gastrointestinal disorders, and hepato-biliary complaints [2]. Proliferation and migration of fibroblast cells have a basic function in wound healing process. In this study the effects of methanolic extract from the leaves of *A. eriophora* on the migration and proliferation of the cells were evaluated.

Shade-dried leaves were subjected to extraction by absolute methanol (1:20 W/V) using maceration method at room temperature. Total phenol and flavonoid content in crude extract were measured by spectrophotometry [3]. The extract was evaporated under vacuum and the remaining powder was dissolved in DMSO and diluted in Dulbecco's Modified Eagle's Medium (DMEM) for preparation of various concentrations. Cytotoxic effects of the extract were assessed by MTT assay. The proliferation of human fibroblast cells (HFF3) was monitored by a calorimetric method, and migration was assessed by the closure of a denuded area scratched in confluent monolayer cells [4]. Total phenolic contents were estimated as 1050.829 mg of gallic acid equivalents (GAE)/100 g of leaf dry weight and flavonoid contents as 216.56 mg of quercetin equivalents (QE)/100 g of leaf dry weight. Proliferation and migration of HFF3 cells were stimulated by low (0.1–0.8 µg/ml) and intermediate concentrations (1–30 µg/ml) of the extract, respectively.

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EFFECT OF DRIED HYDROALCOHOLIC *TRIGONELLA FOENUM-GRÆCUM* EXTRACT ON INSULIN RESISTANCE AND CARDIOVASCULAR RISK FACTORS IN METABOLIC SYNDROME PATIENTS

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Metabolic Syndrome is a set of risk factors that lead to diabetes, cardiovascular diseases and if not treated cause death because of these conditions. Metabolic Syndrome has a direct relation with Insulin Resistance and lipid metabolism disorders that is a background for cardiovascular diseases. In time treatment of risk factors can play an important role in prevention of cardiovascular diseases. Considering the health benefits of *Trigonella foenum-graecum* the purpose of this study was investigation the effect of dried hydroalcoholic *Trigonella foenum-graecum* extract on insulin resistance and risk factors of cardiovascular disease in patients with metabolic syndrome. Methods: Study was conducted as a double-blind clinical trial on 50 patients with metabolic syndrome. Patients divided in two groups randomly, treatment group which receive 2 capsules that contain 500 mg *Trigonella foenum-graecum* dried extract and control group that receive placebo for 3 months. Evaluation of diet, anthropometrical, biochemical, systolic and diastolic measurements were investigated, laboratory biochemical's like fasting insulin, total cholesterol, triglyceride, LDL-C, HDL-C, hs-CRP and IL-6 after 12 hour fasting were measured, for statistical analyses use pair t-test chi square test and ANOVA regard to variant type. Results: Comparison two groups in end of study shows that *Trigonella foenum-graecum* extract reduced significantly total cholesterol, insulin resistance, systolic blood pressure, IL-6 and hs-CRP in treatment group compare to control. But no significance change was seen on weight, waist circumference, and diastolic blood pressure, Triglyceride, LDL-C and HDL-C. Conclusion: use of dried hydroalcoholic *Trigonella foenum-graecum* extract can be effective in reducing some cardiovascular risk factors in patients with metabolic syndrome without significant effect on anthropometric indexes.



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**METHANOLIC EXTRACT FROM ACHILLEA ERIOPHORA L. LEAVES INDUCES CELL
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به صورت سخنرانی ارائه نمودند.


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