

عنوان مقاله:

Comparison of the effects of fresh leaf and peel extracts of walnut (Juglans regia L.) on blood glucose and β-cells of streptozotocin-induced diabetic rats

محل انتشار:

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خلاصه مقاله:

There is some report about the hypoglycemic effect of Juglans rejia L. leaf in alloxan induced diabetic rats and hypoglycemic effect of its fruit peel administered intra peritoneally. Thirty male Wistar rats divided into five groups, to evaluate the hypoglycemic and pancreas β -cells regenerative effects of oral methanolic extracts of leaf and fruit peel of walnut. Rats were made diabetic by intravenous (IV) injection of $\Delta \circ$ mg kg-1 streptozotocin (STZ). Negative control group did not get STZ and any treatment. Positive control, leaf extract, peel extract and insulin groups were treated orally by extract solvent, $\gamma \circ \circ$ mg kg-1 leaf extract, $\gamma \circ \circ$ mg kg-1 peel extract and Δ IU kg-1 of subcutaneous neutral protamine Hagedorn (NPH) insulin, respectively. Four weeks later, blood was collected for biochemical analysis and pancreases were removed for β -cells counts in histological sections. Diabetes leads to increase of fast blood sugar (FBS) and HbAic, and decrease of β -cell number and insulin. FBS decreased only in leaf extract group. HbAic decreased in leaf extract and insulin groups. The β -cells number increased in leaf and peel extract groups. Insulin increased moderately in all treatment groups. We showed the proliferative properties of leaves and peel of Juglans regia L. methanolic extract in STZ- induced diabetic rats, which was accompanied by hypoglycemic effect of leaf

كلمات كليدى:

Diabetes, Walnut leaf, Walnut peel, Hypoglycemia, Insulin

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