

عنوان مقاله:

Protective effects of the fruit extract of raspberry (*Rubus fruticosus* L.) on pituitary-gonadal axis and testicular histopathology in streptozotocin induced diabetic male rats

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خلاصه مقاله:

Objective: Protective effects of raspberry (*Rubus fruticosus* L.) fruit extract on pituitary-gonadal axis and testicular tissue in diabetic male rats, were investigated. Materials and Methods: Sixty male rats were divided into control, sham (saline treated), streptozotocin (STZ)-diabetic, and STZ-diabetic animals treated with 50, 100 and 200 mg/kg/day of raspberry extract. After 4 weeks, blood samples were obtained and left testes were removed and prepared for histopathological studies. Serum levels of Luteinizing hormone (LH), Follicle stimulating hormone (FSH), testosterone, Nitric oxide (NO), and malondialdehyde (MDA), as well as superoxide dismutase (SOD) and catalase (CAT) activity level were assayed. Sperm number and motility in the epididymis samples were measured. Data were analyzed using ANOVA (one-way analysis of variance). Results: Serum levels of LH, FSH and MDA significantly increased in diabetic rats, however, treatment with the extract significantly reversed the alterations. Serum levels of testosterone and NO, activity of SOD and CAT, and sperm number and motility significantly decreased and severe destruction of testicular histology was observed in diabetic animals while treatment with the extract significantly reversed the pathologic alterations observed in diabetic rats. According to the results, 100 and 200 mg/kg of the extract were able to effectively reverse the diabetes complications. Conclusion: Our findings demonstrated that the fruit extract of raspberry has protective effects on male reproductive system in diabetic rats partially due to its improving effects on NO system, and SOD and CAT activity.

کلمات کلیدی:

Diabetes, Male reproductive system, Nitric oxide, Malondialdehyde, Superoxide Dismutase, Catalase

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