

عنوان مقاله:

Protective properties of Rydingia persica in reproductive complications induced by diabetes in male rats: An experimental study

محل انتشار:

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خلاصه مقاله:

Background: In Iranian traditional medicine, Rydingia persica (R.P) is commonly used to treat diabetes mellitus (DM). Objective: We assessed the protective effects of R.P against testis and epididymis oxidative stress and the hormonal changes induced by DM. Materials and Methods: Forty male Wistar rats (12 wk old) weighing 230-270 gr were divided into five groups (n = 8/each): 1. Control (C); 2. diabetic (D); 3. diabetic + R.P200 (D+R200); 4. diabetic + R.P400 (D+R400); and 5. diabetic + R.P600 (D+R600). Groups C and D received 2 ml of normal saline orally daily for two wk and groups D+R200, D+R400, and D+R600 received 200, 400, and 600 mg/kg body weight of R.P powder, respectively, orally daily for two wk. DM was induced by a single intraperitoneal injection of streptozotocin at 60 mg/kg body weight. We assessed malondialdehyde, glutathione peroxidase, glutathione reductase, superoxide dismutase, catalase, hydrogen peroxide, and glutathione in both the testis and epididymis and also the histological changes of the testis. Results: Diabetic rats showed a significantly increased and decreased level of oxidant and antioxidant factors, respectively, and a significantly lower level of serum testosterone and luteinizing hormone than the control group. In the histological study of the testis, deteriorations were observed. Treatment with R.P reversed these changes toward the state of the control group with the highest effectiveness shown by group D+R600. Conclusion: The data obtained suggest that R.P powder has antioxidant effects on testis and epididymis tissues in diabetic rats and that it improves histological testicular structure in diabetics. It can also correct testosterone and luteinizing hormone changes induced by DM.

کلمات کلیدی:

,Rydingia Persica, دیابت شیرین, Diabetes mellitus, Rydingia persica, Oxidative stress, Reproductive, Testosterone استرس اکسیداتیو, تولید مثل, تستوسترون.

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