

عنوان مقاله:

Effects of Portulaca oleracea ethanolic extract on reproductive system of aging female mice

محل انتشار:

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خلاصه مقاله:

Background: Aging contains morphological and functional deterioration in biological systems. D-galactose (D-gal) generates free radicals and accelerates aging. Portulaca oleracea (Purslane) may have protective effect against oxidative stress. **Objective:** Purslane ethanolic extract effects were evaluated on antioxidant indices and sex hormone in D-gal aging female mice. **Materials and Methods:** 48 female NMRI mice (25-35 gr) were randomly divided into, 6 groups: 1- control (normal saline for 45 days), 2- Purslane (200 mg/kg for last 3 weeks), 3-D-gal (500 mg/kg for 45 days), 4-D-gal+Purslane, 5- Aging, 6-Aging+Purslane. Sex hormones, antioxidants and malondialdehyde (MDA) level of ovary and uterus were measured. Histological assessment was also done. **Results:** In D-gal treated and aging animals, LH and FSH levels were significantly increased ($p<0.001$) while estrogen and progesterone levels were significantly reduced ($p<0.001$) in comparison with control group. MDA contents were significantly increased in ovaries and uterus of D-gal and aging groups ($p<0.01$). Superoxide dismutase (SOD) ($p<0.001$) and catalase ($p<0.01$) activities were significantly decreased in both aging and D-gal treated animals. Ovarian follicles were degenerated and atrophy on uterine wall and endometrial glands was observed in D-gal and aging groups. Alteration in hormone levels, MDA contents and antioxidant activity were significantly reversed by Purslane ($p<0.05$). Purslane could also improve histological changes such as atrophy of endometrium. **Conclusion:** These findings indicate that Purslane can attenuate aging alternations induced by D-gal and aging in female reproductive system.

کلمات کلیدی:

Aging, D-galactose, Portulaca oleracea L (Purslane), antioxidant enzyme, sex hormones

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