Evaluation of the possible protective role of quercetin on letrozole - Induced testicular injury in male albino rats

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Background: The purpose of this study was to appraise the possible adverse effects of quercetin against the aromatase inhibitor-letrozole induced the developmental toxicity potential in male albino rats.

Methods: Control male albino rats were received vehicles used for flavonoids and vehicles used for letrozole. The rats in the first experimental group received letrozole at 0.04 mg/kgbwt for three months. The second experimental group was treated with the flavonoids quercetin (Q) by gavage at a dose of 50 mg/kg bwt for ten consecutive days after letrozole administration.

Results: Major treatment-related effects of letrozole included a dose-dependent increase in hormone levels and lipid peroxidation following exposure to 0. 04 mg/kg letrozole; and severe abnormalities with severe cellular deformation and disorganization in both spermatogenic and interstitial cells. The seminiferous tubules of the testes of the animals given quercetin and letrozole exhibited a rather normal appearance and the measured hormones levels restore nearly the normal levels.

Conclusion: Exposure to that dose of letrozole that are equal to the daily recommended human dose has toxic effects on the spermatogenic lineage in rats, while simultaneous treatment of quercetin and letrozole could prevent the deleterious effects on testicular tissue caused by letrozole administration.

Biography

Manar E. Selim has completed his Ph.D. at the age of 34 years from Ain Shams University and postdoctoral studies from Ain Shams University, Faculty of Science. She has published more than 21 papers in reputed journals and serving as an editorial board member of repute. She has many rewards in her career (molecular embryology).

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