

Preventive Effects of Vitamin E and Catechin on Spermatogenic Disturbance Induced by di-(2-Ethylhexyl)Phthalate in Rat

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The purpose of the present study was to determine the preventive effects of the two antioxidant vitamin E and catechin on DEHP-induced disturbance of spermatogenesis in male rats. Rats at 4 weeks of age were randomly allocated into five groups with 20 animals per group. The first group was not any administrated as control. The second group was administrated DEHP(2 g/Kg) daily for 14 days. The third group was administrated vitamin E(500 IU/Kg) following DEHP treatment by the same method(daily for 14 days). The fourth group was administrated catechin(200 mg/Kg) following DEHP treatment by the same method. Th fifth group was coadministrated vitamin E(500 IU/Kg) and catechin(200 mg/Kg) following DEHP treatment by the same method. In order to determined preventive effects, we examined pathological changes of testis with apoptotic index, characteristics of sperm with computer assisted sperm analysis(CASA). Vitamin E and catechin supplementation were significantly prevented the testicular atrophy, apoptosis of germ cells in the seminiferous tubules and abnormal rate of sperm. Moreover, sperm concentration, viability and motility was significantly recovered in groups of alone and along with vitamin E and catechin. The results suggest that preventive effects of alone and along administration of vitamin E and catechin on DEHP-induced testicular atrophy damages have been demonstrated.

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