Effect of Vitamin E (α-tocopherol) on The Number of Leydig Cell in Mice Treated with 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)

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ABSTRACT

The goal of this research was to verify the effect of vitamin E (α-tocopherol) on the number of Leydig cell in mice treated with 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). Five experimental groups of a combination of TCDD and vitamin E were designed as follows: 0 ng/kg/d and 0 mg/kg/d (P0), 100 ng/kg/d and 0 mg/kg/d (P1), 100 ng/kg/d and 11 mg/kg/d (P2), 100 ng/kg/d and 20 mg/kg/d (P3), and 100 ng/kg/d and 37 mg/kg/d (P4) respectively. Vitamin E and TCDD were given by oral gavage for 9 days. The results demonstrated that 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) could have any effect on male germ cells especially Leydig cell. TCDD decreased the number of Leydig cell in interstitial seminiferous tubule. Vitamin E (α-tocopherol), which is knownly well to have potential as an antioxidant, to protect the damage to the body caused by exposure to 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). Best dose of vitamin E is 37 mg/kg/d increased the number of Leydig cell as well as negative control.

Keyword : Vitamin E, Leydig number cell, 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)