

## **Protective Effects of Vitamin C and Vitamin E on Experimentally Induced Testicular Torsion and Detorsion in Rat Model**

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**Abstract :** Aim: To evaluate and compare the effects of Vitamin C and Vitamin E on experimentally induced testicular torsion and detorsion in rats. Methods: Forty Male Wistar Albino rats were divided into five groups. Animals in the Group I underwent Sham operation, Group II consisted of animals that were subjected to torsion for three hours followed by detorsion for 24 hours without any treatment. While Group III, IV and V were orally pretreated with Vitamin C (40mg/kg.bw), vitamin E (100mg/kg.bw) and a combination of Vitamin C and vitamin E respectively for a period of 30 days. The testes of the experimental groups were manually rotated to 720° clockwise for three hours and counter rotated for 24 hours to induce ischemia and reperfusion. Sequential biopsies were performed and the testes were collected at the end of 24 hours of detorsion for morphological evaluation. Result: There was a significant decrease in the standard tubular diameter and the epithelial height of the seminiferous tubules in the untreated group when compared to Sham controls. The standard tubular diameter and seminiferous epithelial height showed near normal values when animals were pretreated with Vitamin C and Vitamin E individually or in combination. Conclusion: The results showed that pretreatment of with antioxidants vitamin E and vitamin C when administered prior to testicular torsion in rats significantly reduced the torsion and detorsion induced histopathological injury.

**Keywords :** vitamin C, vitamin E, standard tubular diameter, standard epithelial height, testicular torsion

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