## Effect of Ciprofloxacin on Sexual Hormones and Spermatocytes in Rat

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## Abstract

**Background and Objectives:** Ciprofloxacin is a synthetic antibacterial agent belonging to Fluoroquinolone drugs affecting effectively on gram-negative bacterial infectious. The aim of this study was to assess the effect of ciprofloxacin in the spermatogenesis period.

**Material and Methods:** The subjects were 20 male wistar rat randomly divided in to control (n=10) and experimental group (n=10), given 12.5mg/kg ciprofloxacin (soluble in drinking water) in spermatogenesis period. On the day of 28, the sperm was collected from cauda epididymis and sent for analysis.

**Results:** Based on light microscopic observation and statistical analysis, the majority of seminiferous tubules of control group were healthy, in Sc 8-9 stage. But in test group, sertoli cell degeneration and absence of sex cells were confirmed, and in some parts, just basal layer of seminiferous tubule was remained in Sc 3-5 stage.

**Conclusion**: Sex hormones (LH and FSH) and spermatogenesis (sperm count, motility and viability) were significantly decreased in test group compared to those of controls (P<0.05). Ciprofloxacin has some adverse effects on sperm related variables in 28 day period.

Keywords: Ciprofloxacin, Sperm, Sex Hormones