

Effects of Paroxetine on Biochemical Parameters and Reproductive Function in Male Rats

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Abstract : Selective serotonin reuptake inhibitors (SSRI) are a class of molecules used in treating depression, anxiety, and mood disorders. Paroxetine (PRT) is one of the mostly prescribed antidepressant which has attracted great attention regarding its side effects in recent years. This study was planned to assess the adverse effects of PRT on the biochemical parameters and reproductive system. Fourteen male Wistar rats were randomly allocated into two groups (7 rats or each): control and treated with PRT at dose of 5mg/kg.bw for two weeks. At the end of the experiment, blood was collected from retro orbital plexus for measuring the biochemical parameters, whereas the reproductive organs were removed for measuring semen quality and the histological investigations. Results showed that PRT induced significant changes in some biochemical parameters and alteration of semen quality including sperm count, spermatids number and sperm viability, motility, and abnormalities. The histopathological examinations of testis and epididymis revealed an alteration of spermatogenesis, cellular disorganization and vacuolization, enlargement of interstitial space, shrinkage and degenerative changes in the epithelium of seminiferous and epididymal tubules with few to nil numbers of spermatozoa in their lumen. In conclusion, PRT treatment caused changes in some biochemical parameters and sperm profile as well as histopathologic effects of reproductive organs.

Keywords : antidepressant, biochemical parameters, reproductive function, paroxetine

Conference Title : ICTAP 2019 : International Conference on Toxicology and Applied Pharmacology

Conference Location : Paris, France

Conference Dates : July 18-19, 2019