

The Evaluation of the Effects of Atypical Antipsychotics on Sperm Quality by Computer-Assisted Sperm Analysis in Rats

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Abstract : Atypical antipsychotics such as quetiapine, olanzapine, and risperidone have been frequently and chronically used to treat psychiatric disorders accompanied by psychosis mainly schizophrenia. Since these drugs are commonly used in male patients of reproductive age, it is required to determine the possible effects of them on the reproductive system. In this study, it was aimed to evaluate the possible toxic effects of quetiapine, olanzapine and risperidone, which are the most frequently prescribed and chronically used psychiatric drugs, on sperm parameters. For this purpose, quetiapine (10, 20 and 40 mg/kg), olanzapine (2.5, 5 and 10 mg/kg), and risperidone (1.25, 2.5 and 3 mg/kg) were administered to male rats for 28 consecutive days. At the end of this period, sperm concentration, motility, and morphology were investigated by a computer-assisted sperm analysis system. According to the results, sperm parameters were negatively affected by antipsychotic use.

Keywords : quetiapine, olanzapine, risperidone, sperm count, motility, sperm morphology, computer-assisted sperm analysis

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