Hepatic antioxidant effect of paroxetine in rats exposed to chronic restraint model

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Liver is one of the major organs that could be affected by chronic exposure to stress because stress may result in hepatic inflammation in particular due to accumulation of reactive oxygen species (ROS). The present study was done to investigate the potential antioxidant effect of paroxetine, as a selective serotonin re-uptake inhibitor (SSRI), to protect against chronic restraint stress-induced oxidative damage in the liver. Thirty Wister albino rats were divided into 3 equal groups. Group 1 was control, non-stressed non-treated group. Group 2 was exposed to chronic restraint model by placing them in wire mesh cages exactly fit to their size for 6 hours daily for 21 days. Group 3 were also exposed to chronic restraint model for 21 days while they were administered by paroxetine 1 mg/kg/day ip during the restraint period. At the end of the study, liver transaminases (ALT and AST) & GPx, catalase enzymes and TBARS were determined by spectrophotometric methods. Glutathione repletion ability by hepatic cells with and without paroxetine treatment was also determined in all tested groups. The results showed a significant (p<0.05) increase in serum levels of ALT & AST and liver levels of GPx and catalase enzymes while levels of TBARS were significantly (p<0.05) reduced in paroxetine-treated group compared with non-stressed non-treated control rats. Glutathione repletion ability was also significantly (p<0.05) increased in treated group to a level comparable to the control non-stressed non-treated values. Paroxetine could possess a protective effect to liver tissue of chronic restrained rats.

Biography
Sahar Mohamed Kamal has completed her MBBCh in 1991 from Faculty of Medicine, Ain Shams University. Then, she obtained her M.Sc. in pharmacology from the same Faculty at Pharmacology department in 1997 followed by her M.D. in CNS pharmacology in 2002. She is now an associate professor of Pharmacology since 2007. She has published 22 papers in national and international reputed journals and has been serving as an editorial board member of JND and JNID of OMICS publisher.

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