Indian Journal of Basic and Applied Medical Research; June 2015: Vol.-4, Issue- 3, P. 431-434

**Original article
Optical microscopic analysis of liver of sildenafil citrate treated albino rats**

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**Abstract**

Background: Sildenafil citrate, an oral therapy for Erectile dysfunction (ED), is a selective inhibitor of cGMP - specific phosphodiesterase type 5 (PDE5). Our aim was to study the drug induced histological changes in the liver of Albino rats treated with Sildenafil citrate.

Materials and methods: 48 healthy male Wistar Albino rats were chosen and divided into eight groups, each consisting of six animals in it. Group S1 served as the control and was treated with conductivity water (@ 1µg /g body wt.)µ. Groups S2, S3, S4 and S5 served as the experimental groups, being treated with a single dosage of the experimental drug (i.e.) Sildenafil citrate (@ 1µg /g body weight) and were sacrificed after 1hr, 2 ½ hrs, 4 hrs, and 24 hrs. Groups S6, S7 and S8 were treated with a single dosage of the drug for 15, 30 and 45 days and were sacrificed after 4hours of the last dosage. A vertical ventral midline incision was made in the abdominal wall to collect the liver samples.

Result: Liver damaging effects were observed, more in the case of animals with prolonged exposure to Sildenafil citrate.

Conclusion: Sildenafil citrate, if administered to Albino rats on long- term basis, will have adverse effects on the structure and vital metabolic functions of the Liver.