

## ALTERATIONS OF CARDIAC CHOLINOCEPTORS DURING DIAZEPAM TREATMENT AND AFTER WITHDRAWAL

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Diazepam 2, 5, 10, 15 and 20 mg/kg were administered intraperitoneally twice daily for 7 days to male Wistar rats weighing 180-220 gm. The control group was received the same quantity of distilled water instead of diazepam. The animals were sacrificed one hour after the last dose for studying the effect of diazepam treatment and 1, 3, 5 days later for studying the alteration of cholinergic receptors during withdrawal period. Spontaneously beating rat's right atrium were used throughout the study. The test organ was bathed with 95% O<sub>2</sub>, 5% CO<sub>2</sub> aerating Krebs's solution and the temperature was kept constant at 35°C. The heart rate and force were recorded by using the Grass polygraph model 79 D.

Pilocarpine ( $10^{-8}$  M to  $10^{-4}$  M) was selected as the representative of muscarinic receptor agonists. The augmentation of pilocarpine effect was observed in rats treated with high doses of diazepam. This supersensitivity is reversible during the withdrawal period.