CHANGES IN MOTILITY GASTROINTESTINAL IN PARKINSON'S DISEASE MODEL INDUCED 6-OHDA IN RATS

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Gastrointestinal disorders are physiological changes commonly found in patients with Parkinson's disease (PD) may reduce the therapeutic responses by decreasing the absorption of nutrients and drugs. The objective of this study was to evaluate the effect of PD on changes in gastrointestinal motility (Gastric Emptying - GE; Intestinal Transit - IT and Compliance Gastric - CG). Used male Wistar rats (300-350g), divided into 02 groups: control (saline) and DP (6-hydroxydopamine - 6-OHDA), 06 animals per group. Anesthetized with ketamine and xylazine and submitted to intrastriatal injection of 6-OHDA (21 µg/µl - animal) for controlling an saline solution. 14 days after the surgical induction, we proceeded to GE studies at 10, 20 or 30 min after gavage, 20 minutes after gavage IT, and CG. To determine the GE rate, 1.5 ml of a test meal (phenol red-0.5 mg / ml in 5% glucose) was administered by gavage. The IT was determined by direct administration of the test meal in the duodenum. The GC was evaluated by a barostat system 4, 8 and 12 cmHg pressure to gastric distension. The data, mean ± SEM and analyzed by "t" test (P <0.05). PD delayed in time 10min EG (42.77% ± 2,647 vs 53.40% ± 2,803;) at time 20 minutes (33.50% ± 2.539 vs 44.06% ± 2.231) and time 30 min (30. 97% ± 2,230 vs 1,880 ± 38.27%). The DP also promoted delay in IT (4.273 ± 0.226 vs 2.951 ± 0.317). There was no significant variation in CG 4 cmHg (2,444 ± 0.2346 vs 2.461±0.08601 ml), 8 cmHg (2,643 ± 0.1032 vs 2.635±0.2580 ml) and 12 cmHg (2,960 ± 0.2746 vs 2.777 ± 0.1105 ml). Therefore, the induction model of DP of 6-OHDA is able to delay gastric emptying and intestinal transit, however, had no effect on gastric compliance.

Keywords: Parkinson's disease; 6-hydroxydopamine; Gastrointestinal motility;