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OC-008 - (22702) - EFFECTS OF SELECTIVE VAGOTOMY ON MALE FERTILITY IN A TYPE 2 DIABETES RAT

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This study investigates the effects of selective vagotomy on testicular functions in diabetic rats to explore potential mechanisms linking metabolic disorders to male infertility.

The study included 32 Wistar albino rats divided into four groups: a diabetes control group, a sham-operated group, a selective vagotomy group, and a non-diabetic control group, each consisting of eight animals. Diabetes was induced via intraperitoneal administration of nicotine amide followed by streptozotocin. Only rats with blood glucose levels exceeding 250 mg/dl were included. Surgical interventions were performed in the relevant groups, and all animals were maintained on a standard diet for 12 weeks. Biweekly measurements of body weight and food intake were recorded to monitor metabolic changes. At the conclusion of the experiment, body weight and blood glucose levels were measured, and testicular tissues were collected for histological and biochemical analysis.

The findings of this study suggest that the vagus nerve plays a critical role in regulating metabolic and reproductive functions under diabetic conditions. Selective vagotomy appears to influence testicular functions by altering glucose homeostasis and metabolic parameters, indicating a potential neuro-metabolic connection between the vagus nerve and male reproductive health.

These results suggest that vagal nerve manipulation could influence male reproductive health, particularly in conditions of metabolic stress such as diabetes. The study highlights the importance of understanding neuro-metabolic interactions in addressing diabetes-related infertility and may guide future therapeutic interventions targeting the vagal nerve.

Palavras-chave : male infertility, diabetes, selective vagotomy,