

Effects of Miraculous Oil™ on Kidney Structure and Function of Sprague Dawley Rats

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Structured Abstract

Background: Changes in kidney structure and function owing to unhealthy food intake significantly affect the quality of life. Miraculous Oil™ is a commercialized food supplement derived from a blend of virgin coconut oil, *Moringa oleifera* extract, *Ganoderma lucidum* extract and black seed oil. This innovative laboratory-based formulation is believed to be rich in antioxidant properties and helps to prevent kidney oxidative stress. However, its effects on kidney structure and function remained unclear. Therefore, the study aimed to assess the function and histology of the kidney in rats orally treated with Miraculous oil™ for 28 days.

Methods: Animals were randomly assigned into four groups named (i) normal control group treated with saline, (ii) treatment group at 200 mg/kg bwt, (iii) treatment group at 400 mg/kg bwt, and (iv) treatment group at 600 mg/kg bwt of Miraculous Oil™. The physical parameters such as body weight, food, and water intake were recorded weekly. Animals were sacrificed, and kidneys were harvested and weighed after the treatment period. The kidney function markers such as serum uric acid and creatinine levels were assessed. The histological observation was further performed to identify any kidney structural changes following treatment with Miraculous Oil™.

Results: It was observed that only animals treated with 600 mg/kg bwt of Miraculous Oil™ showed a significant increase in body weight, food, and water intake. Although absolute kidney weight increased significantly in all treated groups, no significant difference was found in the kidney function markers. Haematoxylin and eosin (HE) staining of kidney tissue also showed that all treated rats had normal kidney structures.

Conclusion: In conclusion, these data demonstrated that oral consumption of Miraculous Oil™ up to the dose of 600 mg/kg bwt is safe for kidney structure and function.

Keywords: Miraculous Oil™, toxicity study, Kidney, Uric acid, Creatinine

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