The expression of tnf-α and il-6 exploring the histological and biochemical antidiabetic effects of okra seed on alloxan diabetic model.

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Introduction: Diabetes has been known for thousands of years, but it is still one of the global health problems impacting the lives of hundreds of millions of people. The mechanisms underlying the disease are still not well understood.

Study objectives: This study investigates the possible role of Okra seed in lowering blood sugar levels in a variety of diabetic rats. Moreover, the study will explore the expression of infiltrating cell immune profiles in the liver tissue of diabetic rats, including TNF-α and IL-6.

Methodology: The animal diabetic model was induced in rats. Three groups of rats were randomly selected and assigned into three groups, the control group (N=10), the diabetic group (N=10), and the Okra group (N=10). Diabetes was induced by giving alloxan (120 mg/kg) intraperitoneally. Glucose level was measured daily for a month. A blood glucose level of more than 200 mg/dl was considered an indication of diabetes. At the end of the experiment, the animals were terminated, and the liver tissue was taken and fixed in 10% formalin for 24 hours, after which the liver was processed and sectioned. Two sets of slides were prepared, one for hematoxylin and an eosin stain. The other setoff slides were stained for immunohistochemistry to study the immunoreactivity of TNF-α and IL-6.

Conclusion: The study demonstrates that Okra seed has significant hypoglycemic and cholesterol-lowering effects in diabetic rats. Okra treatment mitigated diabetes-induced liver damage by reducing inflammation and restoring liver tissue structure.

Biography

Kawther Faisal Ahmad Amawi is an Associate Professor in Histology and Embryology at the University of Jordan, specializing in cancer research and microbiology. She holds a B.Sc. in Applied Biology and a Ph.D. in Biology from the National and Kapodistrian University of Athens. Her research focuses on cancer, diabetes, antimicrobial resistance, and various health conditions. Dr. Amawi has published extensively in international journals and presented her work at numerous academic conferences. She is dedicated to advancing medical research and education in applied biology.

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