Proceedings of International Conference on Modern Science and Scientific Studies
Hosted online from Paris, France.
Date: 19th May - 2024
ISSN: 2835-3730 **Website:** econferenceseries.com

EXPLORING THE CORRELATION BETWEEN BLOOD KLOTHO AND GLYCEMIC STATUS IN DIABETIC NEPHROPATHY PATIENTS

Miraxmedova Xilola To‘xtasinovna,
Sadikova Nigora Gayratovna,
Botirova Nigina Akram qizi
Tashkent Medical Academy,Uzbekistan

Introduction:

Diabetic nephropathy, a common complication of diabetes, is characterized by kidney damage resulting from prolonged high blood sugar levels. Recent research has been delving into the role of klotho, a protein with potential anti-aging and renal protective properties, in diabetic nephropathy. This study aimed to investigate the correlation between blood klotho levels and glycemic status in diabetic nephropathy patients.

Methods:

Blood samples were collected from two groups of diabetic nephropathy patients: Group 1 (C2, A2) and Group 2 (C3a, A2). Various biochemical indicators were analyzed, including fasting blood glucose levels, postprandial blood glucose levels, glycated hemoglobin (HbA1c), blood klotho levels, and glomerular filtration rate (GFR) measured by creatinine-cystatin C.

Results:

In Group 1, the mean fasting blood glucose level was 10.2 ± 3.9 mmol/l, while in Group 2, it was 12.47 ± 2.9 mmol/l. Similarly, postprandial blood glucose levels were 13.3 ± 5.2 mmol/l in Group 1 and 16.7 ± 3.7 mmol/l in Group 2. The levels of glycated hemoglobin (HbA1c) were 9.35 ± 2.6% in Group 1 and 10.7 ± 1.9% in Group 2. Notably, blood klotho levels were significantly different between the two groups, with Group 1 exhibiting higher levels (295.4 ± 28.13 pg/ml) compared to Group 2 (142.3 ± 8.2 pg/ml). Additionally, the glomerular filtration rate (GFR) measured by creatinine-cystatin C was higher in Group 1 (69.3 ± 6.63 ml/min/1.73 m^2) compared to Group 2 (54.9 ± 3.14 ml/min/1.73 m^2), with a statistically significant difference ($p<0.05$).

Discussion:

The findings of this study suggest a potential correlation between blood klotho levels and glycemic status in diabetic nephropathy patients. Group 1, characterized by lower blood glucose levels, exhibited higher levels of blood klotho and a higher GFR compared to Group 2, indicating better renal function. These results hint at the protective role of klotho in diabetic nephropathy, potentially contributing to improved kidney function and glycemic control. Further research is warranted to elucidate the underlying mechanisms and explore the therapeutic implications of modulating klotho levels in diabetic nephropathy management.

Conclusion:

In conclusion, this study provides valuable insights into the relationship between blood klotho levels, glycemic status, and renal function in diabetic nephropathy patients. Understanding the role of klotho in this context could pave the way for novel therapeutic strategies aimed at mitigating kidney damage and improving glycemic control in diabetic individuals.