Urinary biomarkers of diabetic kidney disease in type II diabetic patients at Lieth area:

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Abstract:

Diabetic kidney disease (DKD) is a time progressive problem give rise in uncontrolled Diabetics increasing risks for CKD and /or ESRD. The vulnerability to renal dysfunction manifested with sudden glomerular hyperfiltration associated with micro-to macroalbuminuria passing to renal failure. So that, screening of specific enzymes shifts or urinary albumin may predict onset diabetic nephropathy. Our study aimed to assessment of urinary alkaline phosphatase (ALP), alanine aminopeptidase (AAP), acid phosphatase (ACP) and microalbuminuria of 100 diabetic patients compared to 51 healthy volunteers of matched age and sex in Al-Lieth area. Mean values of measured biomarkers in patient group for ALP, AAP, ACP, Cr and MAU were 17.2 U/L, 14.3 U/L, 426.4 U/L, 86.3 mg/L and 28.6 mg/dl VS in control group were 8.7 U/L, 5.9 U/L, 188.5 U/L, , 161.6 mg/dl and12.1 mg/L respectively. Despite of significant comparisons between markers ratio means in patients with control groups ($p \leq 0.001$) for genders, 49% of diabetics suffered from microalbuminuria and 60.66% with raised enzyme levels. Additionally, significant positive correlations were found between enzyme markers with BMI ($p \leq 0.01$) and DM durations with blood pressure ($p \leq 0.01$). We concluded that using urinary enzyme levels could be beneficial none-invasive indicators for renal deterioration in type II diabetics.

In conclusion, these markers and their ratios may be used as noninvasive early indicators for renal deterioration in DM type II patients.

Key words: Diabetic kidney disease, urinary enzymes, microalbuminuria, Lieth Area.

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