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The use of urinary α -amylase level in a diagnosis of chronic renal failure

Background: Renal failure is a condition in which the kidneys fail to adequately filter waste products from the blood. Kidney failure is mainly determined by a decrease in glomerular filtration rate. Early recognition could help clinical management, but current indices lack the sufficient predictive value for renal failure.

Objective: The objective is to investigate the status of urine α -amylase in Iraqi patients with chronic renal failure in an attempt to investigate its role in the diagnosis of renal diseases.

Methods: A case control study was done on 30 male patients with renal failure who were recruited from the Iraqi Dialysis Center at Baghdad Teaching Hospital, Baghdad, Iraq between November 2015 and March 2016. The control group comprised of 10 age matched apparently healthy volunteers. Urine samples were obtained from patients and control at 10 AM and stored at -5°C until assayed for the evaluation of α -amylase by a colorimetric method.

Results: It was demonstrated that there was a significant ($p=0.000$) decrease in the level of urinary amylase in patients with chronic renal failure in comparison with control. Urinary amylase exhibited AUC values equal to one in patients with chronic renal failure ($\text{AUC}=1.00$) with an excellent value of accuracy presented as specificity (100%) and sensitivity (100%).

Conclusion: Level of urinary α -amylase in chronic renal failure patients was significantly lower than that of controls. It was also demonstrated that the urinary amylase test showed to be an excellent diagnostic and predictive marker in patients with chronic renal failure.

Biography

Haidar A Abdul Amir has completed his PhD from the Department of Chemistry and Biochemistry, College of Medicine, Al-Nahrain University, Iraq. He has published more than 6 papers in reputed journals.

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