Presentation of delta (d) glucose is determinant of renal preservation in diabetes

We previously reported that d-glucose is a strong predictor of renal function change in diabetes. This study is an expansion of a previous study with longer duration. Data was compared between first and last visits. Eighty five diabetic patients were treated with a combination of glargine or detemir and regular or fast acting insulin for 26.3±24.6 (SD) months. Blood pressure was controlled by beta blockers, calcium channel blockers, sympathetic inhibitors, or a combination, and chlorthalidone in resistant cases. Angiotensin converting enzyme inhibitors and receptors blockers (ACEI/ARB) were excluded in order to reduce the risk of acute and chronic renal failure. Objectives were to determine if this paradigm of treatment prevents progression of diabetic nephropathy. Fasting (F) and 2-hour postprandial (2hPP), glucose, serum creatinine (scr) and estimated glomerular filtration rate (eGFR); haemoglobin A1c (HbA1c); and sitting systolic and diastolic blood pressure (SBP, DBP) were recorded for first and last visits. Mean blood pressure (MBP) and differences (d, 2hPP-F) were calculated for glucose, scr, and eGFR. Parameters between first and last visits were compared using a paired t-test adjusted for age, gender and duration of treatment with P<0.05 considered significant. Significant differences were found between first and last visits for F and 2hPP glucose, F and 2hPP scr, and F and 2hPP eGFR, and HbAIc dglucose, sitting SBP and MBP were significantly lower at last compared to first visit. Combining both visits dglucose and HbAIc showed a direct and positive correlation with dscr. Change in post minus pre-treatment values was significantly positive and correlated between HbAIc and FBG, 2hPPG or dglucose. In conclusion the current study emphasizes the importance of control of dglucose (2hPP-F) with insulin in preserving renal function in diabetes.

Biography
Anil K Mandal is board certified in Internal Medicine and Nephrology (not yet recertified in Nephrology). Diabetes Mellitus is the most common cause of kidney failure in the USA and worldwide; this strong association between diabetes and kidney failure has inspired him to develop the framework of Mandal Diabetes Research Foundation to assist diabetic patients in living a good life with medical treatment, and avoiding dialysis. He is a published author/editor of 12 books and more than 100 articles on research in diabetes and kidney disease. He is a two-time Fulbright Scholar and a Visiting Professor of 23 countries which permitted lectures on diabetes, high blood pressure and kidney diseases on five continents of the world. His astute knowledge and total dedication help patients get better and to live a good life.

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