Diagnosis and management of Diabetes and relationship of d-glucose to preservation of kidney function

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 but with longer duration. Eighty five diabetic patients were treated with a combination of glargine or detemir and regular 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. 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); hemoglobin A1c (HbA1c); and sitting systolic and diastolic blood pressure (SBP) 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. No significant differences were found between first and last treatments for F and 2hPP glucose, F and 2hPP Scr, and F and 2hPP eGFR, and HbA1c. D-glucose, sitting SBP and MBP were significantly lower at last compared to first visit. Combining both visits, d-glucose showed a direct and positive correlation with dScr. In conclusion the current study reinforces the importance of control of d-glucose (2hPP-F) with insulin and exclusion of ACEI/ARB in achieving renal preservation in Diabetes.

Biography

Anil K Mandal is a native of India and a naturalized citizen of the United States. He graduated from Calcutta National Medical College and is a diplomate of American Board of Internal Medicine. He is the author of many books and articles on research in Diabetes and kidney disease. He is two-time Fulbright Scholar to India and Visiting Professor to 24 countries where he has lectured on Diabetes, high blood pressure and kidney disease. He began the Diabetes Research Foundation for the prevention and treatment of Diabetes based on his knowledge that Diabetes is the most common cause of kidney failure worldwide. He is dedicated to helping diabetic patients live a good life and not enter dialysis.

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