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## Glycemic control with intensive insulin treatment fundamental to renal preservation in diabetes

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**D**iabetes is the most common cause of end stage renal disease (ESRD). Previous studies imply angiotensin converting enzyme inhibitor (ACEI) and angiotensin receptor blocking (ARB) drugs contribute to prevalence of ESRD in diabetes. This study investigates renal preservation in diabetes by intensive insulin therapy.

**Methodology:** 46 adult diabetes patients, 28 female, 18 male, were studied for mean 14.2 months (1.5-115 months). Diabetes was diagnosed by 2-h postprandial glucose of  $\geq 200\text{mg/dL}$  (11.1 mmol/L) and treated by Glargine or detemir insulin after breakfast and dinner, with regular insulin by finger-stick glucose 2-h post-meal and bedtime. Blood pressure (BP) was controlled with anti-hypertensive therapy excluding ACEI/ARB drugs. Glucose, serum creatinine (Scr), estimated glomerular filtration rate (eGFR), and glycosylated hemoglobin at first and last visits were obtained. BP was recorded in both visits. Results were compared between first and last visits. A paired two-tailed test  $P<0.05$  was significant. Patients were divided by 2hPP glucose of  $<$  or  $>$  11.1 mmol/L.

**Results:** Glucose at last visit was significantly lower ( $8.4\pm0.6$  mmol/L) than first visit ( $10.3\pm0.7$  mmol/L) in all patients group associated with significantly reduced Scr in last visit ( $100.3\pm5.2 \mu\text{mol/L}$ ) compared to first visit ( $110.9\pm7.8 \mu\text{mol/L}$ ). No change in eGFR was noted between first and last visits. Significant reduction of HbA1c ( $9.14\pm0.52$  v.  $7.60\pm0.45 p<0.0148$ ) was found in less than 11.1 mmol/L group. BP's were normal ( $<140/80\text{mmHg}$ ) in both visits in all groups.

**Conclusion:** The paradigm of therapy presented in this study is proven effective in renal preservation in diabetes.

### Biography

Anil K. Mandal completed his MBBS (equivalent to M.D.) at the age of 24 from Calcutta University in India. He received his nephrology training at the University of Illinois, Chicago and has done extensive research on hypertension, diabetes, and kidney disease. He has published more than 200 papers and abstracts as well as 12 books. He has been a Visiting Professor in 24 countries including numerous times in India, and is a courtesy clinical Professor of the University of Florida, Gainesville. He is dedicated to changing the direction of diabetes care in order to help diabetics live a complication-free life.

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