Diabetes Mellitus and Long-Term Impact on Renal Function In Patients With Renal Angioplasty: Results were Performed Using Retrospective Transplantation Renal Angioplasty and Stent Placement

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Background. Many previous studies have shown a poor outcome in diabetes mellitus patients undergoing renal angioplasty. However, the activity of diabetes mellitus on renal function outcomes in low risk to high risk patient is not known. The purpose of this study was to assess the renal function outcomes in diabetes mellitus patients undergoing renal angioplasty.

Methods. Data from 1991 to 2000 was collected from a prospectively followed cohort of patients with diabetes mellitus receiving renal angioplasty. Renal function was assessed by serum creatinine (Cr) levels at baseline, 3 months, 1 year, 3 years, and 5 years. The following renal function outcomes were measured: change in Cr level, renal failure, and death. The primary endpoint was the change in Cr level over time.

Results. The study included 42 patients with diabetes mellitus and 42 patients without diabetes mellitus. The baseline mean Cr level was 1.50 ± 0.59 mg/dl. At 3 months, 1 year, and 5 years, the mean Cr levels were 1.33 ± 0.60, 1.22 ± 0.39, and 1.16 ± 0.40 mg/dl, respectively. In contrast, the patients with diabetes mellitus had worsening of renal function over time, with a decrease in Cr level from 1.50 ± 0.59 mg/dl at baseline to 1.16 ± 0.40 mg/dl at 5 years.

Conclusion. Diabetes mellitus is associated with worsening of renal function over time. The change in Cr level was significant (p < 0.05) at each time point compared to baseline. This suggests that diabetes mellitus patients undergoing renal angioplasty may require more aggressive management to prevent worsening of renal function.