OPEN ACCESS Freely available online

ISSN: 2572-5629
Diabetes Case Reports

Short Communication

The Cohort Investigation on Diabetic Nephropathy and Diagnosis

Brody Shepard*

Department of Human Science, Georgetown University, Washington, Columbia

ABOUT THE STUDY

Diabetic nephropathy is a type of kidney disease that affects persons who have diabetes for a long time. It happens when a person's kidneys are damaged by excessive blood glucose levels. Diabetic kidney disease affects roughly 40% of diabetic patients and is the most common cause of CKD worldwide. It's a micro vascular issue that affects people with Diabetes Type 1 (T1DM) and Diabetes Type 2 (T2DM). Persistent albuminuria and a steady reduction in the glomerular filtration rate are symptoms of the condition. There is strong evidence that early treatment can slow or stop the disease from progressing. While patients with type 2 diabetes mellitus may have albuminuria at the time of diagnosis, diabetic nephropathy develops 15 to 20 years later in type 1 diabetes. This distinction is primarily due to the difficulty in determining the precise onset of type 2 diabetes [1]. Diabetes causes structural and functional abnormalities in the kidney, resulting in proteinuria, hypertension, and progressive kidney function loss, which is characteristic of diabetic nephropathy. Patients with newly diagnosed T2DM who were treated to a goal blood pressure of 150/85 mmHg for a median of 15 years had a 37% lower risk of microvascular problems than those who were treated to a target of 180/105 mmHg. The hazard ratio for developing micro- and microalbuminuria and impaired kidney function, defined as eGFR60 ml/min per 1.73 m2 or doubling the blood creatinine level, increased by 15% for every 10-mmHg increase in mean systolic BP. In general, patients with T2DM who have a systolic blood pressure of more than 140 mmHg have an increased risk of f End-Stage Renal Disease (ESRD) and death [2,3].

Characteristics of diabetic nephropathy

Diabetic nephropathy is associated with microalbuminuria and hypertension. In patients with type 1 diabetes, blocking the renin-angiotensin system delays the evolution of diabetic nephropathy, but analogous data for hypertensive people with type 2 diabetes is absent. The renoprotective impact of the angiotensin-II-receptor antagonist irbesartan in hypertensive patients with type 2 diabetes and microalbuminuria was investigated in a study. The baseline characteristics in each of the three groups were shown in the same way. Ten of the 194 patients in the 300-mg group (5.2%) and 19 of the 195 patients in the 150-mg group (9.7%) met the primary endpoint, compared to 30 of the 201 patients in the placebo group (14.9%) hazard ratios, 0.30 and 0.61. During the research, the average blood pressure in the placebo group was 144/83 mm Hg, 143/83 mm Hg in the 150-mg group, and 141/83 mm Hg in the 300-mg group. Patients who received irbesartan saw fewer serious side effects [4].

DIAGNOSIS

The evolution of nephropathy after type 2 diabetes diagnosis has not been well documented in a single group. The goal of this study was to characterize the evolution of micro albuminuria, macro albuminuria, consistently raised plasma creatinine or Renal Replacement Therapy (RRT), and mortality through the phases of micro albuminuria, macro albuminuria, persistently elevated plasma creatinine, and death. Micro albuminuria progressed at 2.0% per year after diabetes diagnosis, macro albuminuria progressed at 2.8% per year, and macro albuminuria progressed to high plasma creatinine (>or=175 micro mol/L) or renal replacement therapy at 2.3% per year.

CONCLUSION

Micro albuminuria was found to be 24.9% common, macro albuminuria was 5.3% common, and increased plasma creatinine or RRT was 0.8 % common ten years after diabetes diagnosis. The annual fatality rate for patients with high plasma creatinine or RRT was 19.2%. With increasing nephropathy, there was a trend for an increased risk of cardiovascular death, with an annual rate of 0.7% for subjects with no nephropathy, 2.0% for those with micro albuminuria, 3.5% for those with macro albuminuria, and 12.1% for those with elevated plasma creatinine or Renal replacement therapy. People with macro albuminuria were more likely to die than to acquire renal failure in any given year [5].

Correspondence to: Brody Shepard, Department of Human Science, Georgetown University, Washington, Columbia, E-mail: Shepard_b01@edu.com

Received: 15-Apr-2022, Manuscript No. 2572-5629-22-16851; **Editor assigned:** 20-Apr-2022, PreQC No. 2572-5629-22-16851 (PQ); **Reviewed:** 28-Apr-2022, QC No 2572-5629-22-16851; **Revised:** 10-May-2022, Manuscript No. 2572-5629-22-16851 (R); **Published:** 17-May-2022, DOI: 10.35841/2572-5629.22.7.121.

Citation: Shepard B (2022) The Cohort Investigation on Diabetic Nephropathy and Diagnosis. Diabetes Case Rep. 7: 121.

REFERENCES

1. Gheith O, Farouk N, Nampoory N, Halim MA, Al-Otaibi T. Diabetic kidney disease: worldwide difference of prevalence and risk factors. J Nephropharmacol. 2016; 5(1):49.
2. Bakris GL, Weir MR, Shanifar S, Zhang Z, Douglas J, van Dijk DJ, et al. Effects of blood pressure level on progression of diabetic nephropathy: results from the RENAAL study. Arch Intern Med. 2003; 163(13): 1555-1565.
3. Retnakaran R, Cull CA, Thorne KI, Adler AI, Holman, RR., UKPDS Study Group. Risk factors for renal dysfunction in type 2 diabetes: UK Prospective Diabetes Study 74. Diabetes. 2006;55(6): 1832-1839.
4. Parving HH, Lehnert H, Brochner-Mortensen J, Gomis R, Andersen S, Arner P. The effect of irbesartan on the development of diabetic nephropathy in patients with type 2 diabetes. N Engl J Med. 2001; 345(12): 870-878.
5. Adler AI, Stevens RJ, Manley SE, Bilous RW, Cull CA, Holman RR, et al. Development and progression of nephropathy in type 2 diabetes: The United Kingdom Prospective Diabetes Study. Kidney Int. 2003; 63(1): 225-232.