Urine Albumin Creatinine Ratio as an Independent Marker for Diabetic Nephropathy in Hypertension (UNITE)

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LATE BREAKING

P-0680; Stream: Science of Diabetic Complications; Topic: Complications - kidney

Background

- As per the International Diabetes Federation report there were 69.1 million cases of diabetes in India in 2015.
- In the Chennai Urban Rural Epidemiology Study, the prevalence of overt nephropathy and microalbuminuria was 2.2% and 26.9%, respectively, in the urban citizens with diabetes.
- It is recommended to assess urine albumin excretion yearly to diagnose and monitor kidney damage in patients with type 1 diabetes for five years or more or with type 2 diabetes.
- More frequent monitoring may be indicated in patients with changing clinical status or after therapeutic interventions

Aim

- To assess the utility of Urine Albumin Creatinine Ratio (UACR) spot kit method to estimate the grade of albumin excretion and correlate with the glycemic levels (HbA1c) in patients diagnosed with diabetic nephropathy with hypertension. UACR estimates 24-hour urine albumin excretion. Twenty-four-hour collection and timed specimens are not necessary

Method

- We analysed the results from the DRKDCC database, an independent, comprehensive holistic diabetes set up. 84 patients met the screening criteria for UACR and 30 patients were the final data set after including for the co-morbid scenario of hypertension, till the timelines of June 2017. In our single institutional set up, we estimated UACR by using ACR kit by Biosense Technologies

Results

- The data was retrospectively analysed and data of all the patients with UACR values more than 30 mg/g were included for analyses.
- The data set was sub-classified across the two groups, the Group 1 with HbA1c > 7 % (n=18) and the Group 2 with HbA1c < 7 % (n=12). Mean UACR values in Group 1 was 100.6 ± 22.47 Vs mean UACR in Group 2 was 128.3 ± 30.99 ; $p = 0.4633$; 95% CI -48.73 to 104.3.
- The mean age of the patients were 51.1 years.
- The duration of diabetic nephropathy ranged from 1 year to 21 years

Fig: Patients with UACR more than 30

Discussion

- The results of our study reveal that UACR is an independent marker of diabetic nephropathy irrespective of the level of glycemic control.
- Early adoption of UACR as a diagnostic tool to appropriately and timely intervene to enable the standard care of therapy to halt or delay the progression of diabetic nephropathy would be important to manage the growing burden of diabetic nephropathy

Bibliography

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