

CKD PROGRESSION IN PATIENTS WITH COMPLEMENT 3 GLOMERULOPATHY (C3G) IN A US MULTI-CENTER ASSESSMENT

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Introduction

Patients with C3G have high rates of progression despite treatment. Using electronic medical record data, this study characterized disease progression in a US cohort of patients with C3G.

Methods

This was a retrospective cohort study of de-identified patients within the US Optum Life Science clinical electronic health record database, aged ≥ 12 years at C3G diagnosis (per ICD-10 or SNOMED) between Jan 2015–Jun 2022. Index date was the date of diagnosis. Patients had continuous clinical activity ≥ 12 months before (baseline) and ≥ 6 months after (follow-up) index. Patients were followed until death or data end.

Patient and clinical characteristics were assessed using descriptive statistics, and time to CKD progression using Kaplan–Meier analyses.

Results

Of 284 patients in the final sample, mean age \pm SD was 49 years \pm 21; 136/228 (60%) had stage ≥ 3 CKD at index. During follow-up, 115/188 patients (61%) progressed to a higher CKD stage than at index, and/or to kidney failure; median time to progression was 12.6 months (95% CI: 9.4, 17.7). At 6 and 12 months, 38% and 48% of patients, respectively, had a progression of CKD stage. In progressors ($n=115$), mean age was 54 years and mean Charlson Comorbidity Index (CCI) score was 2.8; in non-progressors ($n=73$), mean age was 48 years and mean CCI score was 1.8. Among progressors and non-progressors, 14% and 6% of patients, respectively, were African American, had hypertension (79% and 55%), and had prior kidney transplant (10% and 3%) at baseline. At index, 68/115 (59%) of progressors and 28/73 (38%) of non-progressors had CKD stage ≥ 3 . Within 90 days of index, a higher proportion of progressors relative to non-progressors were treated with ACE inhibitors (31% and 22%) or ARBs (23% and 14%). Up to 90 days after index, mean \pm SD protein:creatinine ratio was 2.3 ± 2.6 g/g in 21

assessed non-progressors and 3.7 ± 5.0 g/g in 53 assessed progressors. The proportion of patients with complement C3 level <77 mg/dL at baseline was 15/47 (32%) among progressors and 9/24 (38%) among non-progressors.

Conclusion

Patients with C3G progress rapidly despite supportive care. Noted differences between progressors and non-progressors warrant further investigation.

This abstract was also submitted for the ASN'23 congress. By submitting the abstract to WCN'24, abstract authors declare that re-submitting the abstract is permitted by the organizers of the previous meeting.

Theme

Better Kidney Health: Preventative and Environmental Science, Population Health Science (Global Kidney Health), Policy/Advocacy

Topic

Epidemiology, Outcomes and Health Service Research Related to CKD or its Complications

Key words (5 maximum)

complement, chronic kidney disease, glomerulopathy

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