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Title

Prevalence and clinical characteristics of kidney transplants in complement 3 glomerulopathy patients: results from a real-world, multi-country survey

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Introduction:

Complement 3 glomerulopathy (C3G) is a rare kidney disease, with an estimated worldwide incidence of 1-2 million people/year. C3G is associated with a high risk of disease progression, with an estimated 50% of patients progressing to kidney failure within 10 years of diagnosis. Kidney transplant is an option for patients whose native kidney fails. We aimed to understand the prevalence and outcomes of kidney transplant in a real-world study across 8 countries.

Methods:

Data were drawn from the Adelphi C3G Disease Specific Programme™, a cross-sectional survey of C3G-treating nephrologists which included the capture of retrospective data. Data were collected in France, Germany, Italy, Spain, the United Kingdom (EU5), China, Japan and the United States (US) from August 2022 – April 2023. Nephrologists completed forms for 1-9 consecutive C3G patients, reporting demographic and clinical information including transplant history and eligibility. Analyses presented here are descriptive.

Results:

Overall, 111 nephrologists completed records for 385 patients (EU5 n=189, China n=60, Japan n=36, US n=100). Median (interquartile range; IQR) patient age at time of survey was 42.0 (30.0-55.0) years and 59% of patients were male. A total of 83% of patients were receiving

pharmacological treatment for their C3G, with a further 9% having been treated in the past and 8% treatment naïve. Where reported (n=363), patients had been diagnosed with C3G for a median (IQR) of 1.5 (0.6-3.4) years.

Nephrologists reported that for 42% (n=160) of patients, their current condition made them eligible for kidney transplant and of these 30% (n=48) were on a waiting list to receive one. Of those not eligible (n=225), 82% did not have severe enough C3G to need a transplant and 12% had other health problems that prevented them being suitable. For 4% of patients, the physician considered them unsuitable due to their risk of C3G recurrence.

Of all patients in the sample, 6.5% (n=25) had previously had a kidney transplant. Of these, two patients had undergone more than one transplant. Transplant prevalence ranged from 11% of patients in the EU5 to 3% in China, 2% in the US and 0% in Japan. 65% of patients had experienced C3G recurrence after a kidney transplant.

For patients (n=21) that have received only one kidney transplant and for those whom time since the transplant was reported, median (IQR) time since transplant was 1.7 (0.7-2.9) years. Based on reported glomerular filtration rate (GFR) at time of survey (n=22), 32% of transplanted patients were at chronic kidney disease (CKD) stage 2, 23% at stage 3a, 14% at stage 3b, 27% at stage 4 and 5% at stage 5. Proteinuria at time of survey was also reported for these patients (n=20) with a median (IQR) of 0.9 (0.3-2.7) g/24 hours, and proteinuria reported prior to their kidney transplant (n=12) being 3.3 (1.4-5.0) g/24 hours. Symptoms related to kidney disease were reported for 43% of these patients including fatigue (17%), edema (13%), osteoporosis (9%), sleep problems (9%) and headache/migraine (9%).

Conclusion:

Without disease modifying therapeutics, patients with C3G will continue to experience disease progression, require symptom management, and need replacement therapy and dialysis.