

Title

PROGNOSIS, DIALYSIS AND TRANSPLANTATION IN PATIENTS WITH IMMUNOGLOBULIN A NEPHROPATHY: EVIDENCE FROM REAL-WORLD DATA

Authors/affiliations

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Introduction

Immunoglobulin A nephropathy (IgAN) is the most common form of primary glomerulonephritis worldwide, with an estimated annual incidence of 25 per million. Approximately 50% of IgAN patients with proteinuria ≥ 1 g/day progress to kidney failure in 15 years. This analysis aimed to describe prognosis, dialysis and transplantation in IgAN patients.

Methods

The Adelphi IgAN Disease Specific Programme was a non-interventional, retrospective, point-in-time survey of IgAN-treating nephrologists in the US, EU5 (France, Germany, Italy, Spain, UK) and Asia (China and Japan) between June and October 2021. Nephrologists completed structured online records for successive patients presenting with IgAN, including patient's demographics, clinical characteristics and details on dialysis and kidney transplantation (KT).

Results

A total of 295 nephrologists completed records for 1727 patients. The mean patient age was 43.2 years and 59% were men.

The deterioration of kidney function over a median of 95 weeks was evident from the higher proportion of patients in chronic kidney disease (CKD) stages 3b, 4 and 5, at the point of survey compared to at diagnosis. The proportion of patients in CKD stages 3b and 4 increased from 11% to 12% and 6% to 7% respectively from the time of diagnosis to the time of survey. The proportion of patients in CKD stage 5 (kidney failure) also increased from 3% at diagnosis to 5% at the time of survey (**Figure 1**). According to nephrologists, 51% of 1503 patients are expected to progress to kidney failure during their lifetime, of which 13% are expected to progress within three years, thus requiring dialysis or KT. At the time of survey, only 4% of 1727 patients were on dialysis, which included 2% from those with mild/moderate disease and 14% from those with severe disease as per physician perceived severity at diagnosis. Approximately half of the patients (46%) were expected to require dialysis at some point in the future (40% of those with mild/moderate disease and 80% of those with severe disease). Only 1% of 1727 patients had undergone KT at the time of survey, of which nearly half of the patients had mild/moderate severity (10/21) and slightly more than half of the patients had severe disease (11/21) at diagnosis. Of the remaining patients, 18% were considered eligible for KT (14% from the mild/moderate group and 37% from the severe group). Of the patients deemed eligible for KT, nearly one fourth were on a waiting list (**Table 1**).

Conclusion

The proportion of patients who had CKD stage 3b, stage 4 and kidney failure increased from the time of diagnosis to the time of survey indicating the deterioration of kidney function with time. Although few patients were on dialysis or had received a transplant at the time of the survey, approximately half of the patients were expected to need dialysis in their lifetime and nearly one fourth of patients deemed eligible for a transplant were on a waiting list to undergo transplantation as per nephrologists. There should be an urgency for patients and nephrologists to seek early diagnosis and treatment to slow progression and prevent or delay dialysis. Also, there should be a strong need for more donors to shorten transplantation time and maintain quality of life for longer.

Table 1: Prognosis, dialysis and transplantation in IgAN patients, per severity as perceived by physician at diagnosis

	Total			Mild or moderate			Severe		
	N	Mean (SD)	n (%)	N	Mean (SD)	n (%)	N	Mean (SD)	n (%)
Patient age (years)	1727	43.2 (14.91)	-	1441	42.6 (14.65)	-	286	46.6 (15.75)	-
Male patients	1727	-	1016 (59%)	1441	-	833 (58%)	286	-	183 (64%)
Based on condition at time of survey, when will patients progress to kidney failure									
Within next 12 months	1503	-	41 (3%)	1271	-	18 (1%)	232	-	23 (10%)
>12months – 3 years	1503	-	151 (10%)	1271	-	91 (7%)	232	-	60 (26%)
>3 years	1503	-	568 (38%)	1271	-	457 (36%)	232	-	111 (48%)
I don't think they will progress to kidney failure (according to nephrologists)	1503	-	743 (49%)	1271	-	705 (55%)	232	-	38 (16%)
Dialysis									
Currently receiving dialysis	1727	-	67 (4%)	1441	-	28 (2%)	286	-	39 (14%)
<i>As per current condition, when will the patient require chronic dialysis</i>									
Within next <12 months	1517	-	33 (2%)	1290	-	17 (1%)	227	-	16 (7%)
12 months – 3 years	1517	-	154 (10%)	1290	-	89 (7%)	227	-	65 (29%)
>3 years	1517	-	510 (34%)	1290	-	410 (32%)	227	-	100 (44%)
I don't think they will require dialysis (according to nephrologists)	1517	-	820 (54%)	1290	-	774 (60%)	227	-	46 (20%)
Kidney transplantation (KT)									
Undergone a KT	1727	-	21 (1%)	1441	-	10 (1%)	286	-	11 (4%)
Eligible for a KT as per current condition	1706	-	303 (18%)	1431	-	200 (14%)	275	-	103 (37%)
Currently on waiting list for a KT	303	-	72 (24%)	200	-	33 (16%)	103	-	39 (38%)

Abbreviations: KT: Kidney Transplantation; SD: Standard Deviation

Figure 1: Proportion of patients present in various chronic kidney disease stages at different time points

