Diagnostic pathways in immunoglobulin A nephropathy in Japan: Results from a real-world survey

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Background

Immunoglobulin A nephropathy (IgAN) is the most prevalent form of primary glomerulonephritis globally, with the highest annual incidence in Japan (45/million/year).[1–3] In most patients in Japan, potential cases of IgAN are first identified at a health check-up, followed by referral to a nephrologist for patient assessment.[4] However, there are limited real-world data on diagnostic pathways in IgAN in Japan. This analysis therefore aims to describe these, based on physician and patient perceptions.

Methods

The Adelphi Real World IgAN Disease Specific Programme (DSP)™ was a point-in-time survey of IgAN-treating nephrologists and their patients conducted in several countries, including Japan, from June to October 2021. Eligible nephrologists from 23 prefectures in Japan completed structured patient record forms online. Patients with a corresponding nephrologist patient record completed questionnaires on their current IgAN, including demographics, clinical data, and signs and symptoms.

Results/Discussion

In this survey, 55 nephrologists from Japan completed records for 282 patients and 125 patients completed self-reported questionnaires. Nephrologists saw an average of 76% of patients in a hospital setting, 21% in a clinic or office, and 4% in another setting. At first consultation with any healthcare professional (HCP) for IgAN signs or symptoms, 51% of patients presented directly to a nephrologist, while 49% needed onward referral following initial consultation with a primary care physician (43%),

urologist (5%), or other HCP (1%) (n=280). Patients who directly presented to a nephrologist took a median of 33.0 days (interquartile range [IQR], 3.0–73.0) between symptom onset and initial consultation (n=81), an additional 36.5 days (18.8–92.0) to diagnosis (n=110), and a further 23.0 days (1.0–63.0) to first-line treatment initiation (n=115). Conversely, for patients who initially visited a non-nephrologist, it took a median of 61.0 days (23.0–276.2) between symptom onset and initial consultation (n=106), an additional 62.0 days (30.5–169.0) to diagnosis (n=125), and a further 24.0 days (0.2–60.5) to first-line treatment initiation (n=120) (**Table 1)**.

Nearly all patients were diagnosed with IgAN with kidney biopsy, by nephrologists. At diagnosis, mean proteinuria and eGFR values were 1.1 g/day (n=212) and 66.8 mL/min/1.73^2 (n=213), respectively; the majority of patients were at chronic kidney disease (CKD) stages 1 (16%), 2 (46%), or 3a (24%) (**Table 2**), and hematuria was reported as the most common symptom in 66% of patients (n=280) (**Table 3**).

Conclusion

In Japan, the time taken from symptom onset to diagnosis was shorter for patients who directly consulted with a nephrologist, rather than with a non-nephrologist. Regardless of the route taken, nephrologists diagnosed IgAN at earlier CKD stages, where renal function was relatively preserved, with hematuria being the most common symptom. This observation suggests that timely referral to a nephrologist may allow for earlier IgAN diagnosis and management.

References

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Table 1. Timeframes for each step of the therapeutic pathway, stratified by whether the patient initially consulted with a nephrologist or other HCP

Timeframe	From symptom onset to consultation		From consultation to diagnosis*		From diagnosis to treatment	
Measurement	At first visit		At diagnosis		At treatment	
Initial consultation	Nephrologist	Other HCP	Nephrologist	Other HCP	Nephrologist	Other HCP
Days, median (IQR)	**N=81**	**N=106**	**N=110**	**N=125**	**N=115**	**N=120**
	33.0 (3.0–73.0)	61.0 (23.0–276.2)	36.5 (18.8–92.0)	62.0 (30.5–169.0)	23.0 (1.0–63.0)	24.0 (0.2–60.5)

*If a nephrologist at first consultation referred a patient to another nephrologist for diagnosis (N=18), the median (IQR) from first consultation to diagnosis was 32.5 days (16.2–81.8).

Table 2. Clinical parameters at diagnosis, stratified by whether the patient presented to a nephrologist, or other physician at initial consultation

Parameter at diagnosis	Overall patient cohort	Nephrologist	Other HCP
Proteinuria (g/day), mean (±SD)	**N=212**	**N=95**	**N=117**
	1.1 (0.90)	1.2 (0.70)	1.1 (1.04)
≥1 g/day, n (%)	105 (50)	55 (58)	50 (43)
<1 g/day, n (%)	107 (50)	40 (42)	67 (57)
eGFR (mL/min/1.73 m^2), mean (±SD)	**N=213**	**N=93**	**N=120**
	66.8 (21.41)	69.0 (22.43)	65.1 (20.52)
CKD stage based on physician-reported eGFR levels	**N=213**	**N=93**	**N=120**
CKD Stage 1, n (%)	34 (16)	17 (18)	17 (14)
CKD Stage 2, n (%)	99 (46)	46 (49)	53 (44)
CKD Stage 3a, n (%)	51 (24)	19 (20)	32 (27)
CKD Stage 3b, n (%)	21 (10)	7 (8)	14 (12)
CKD Stage 4, n (%)	7 (3)	3 (3)	4 (3)
CKD Stage 5, n (%)	1 (<1)	1 (1)	0 (0)

Table 3. Clinical characteristics and symptom burden of IgAN patients at diagnosis

Clinical characteristics	**N=280**
Age (years), mean (±SD)	47.0 (16.09)
Male, n (%)	140 (50)
Hypertension (140/90 mmHg), n (%)	91 (32)
Dyslipidemia, n (%)	31 (11)
Type 2 diabetes, n (%)	10 (4)
Sign/Symptom	**N=280**
Hematuria, n (%)	185 (66)
Proteinuria/foamy urine, n (%)	179 (64)
Edema in extremities, n (%)	50 (18)