Title

TREATMENT PATTERNS IN PATIENTS WITH IMMUNOGLOBULIN A NEPHROPATHY – EVIDENCE FROM REAL-WORLD DATA

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Introduction

Immunoglobulin A nephropathy (IgAN) is the most common form of primary glomerular disease worldwide, with an estimated annual incidence of 25 per million. The kidney disease improving global outcomes (KDIGO) guidelines recommended that IgAN patients with hypertension and proteinuria >0.5 g/day be treated with either an angiotensin-converting enzyme inhibitors (ACEis) or angiotensin receptor blockers (ARBs). This study aimed to assess real-world treatment patterns in patients with IgAN.

Methods

Data were drawn from the Adelphi IgAN Disease Specific Programme, a survey of IgAN-treating nephrologists and their patients reporting cross-sectional and retrospective data. It ran in the United States (US), EU5 (France, Germany, Italy, Spain and the United Kingdom), China and Japan between June and October 2021. Nephrologists completed structured online records for successive patients presenting with IgAN, including patients' demographics, clinical characteristics and prescribed treatments.

Results

A total of 293 nephrologists completed records for 1,733 patients. The mean patient age was 43.4 years and 59% were male. The median time between diagnosis to first-line treatment was 4.0 days. Proteinuria (39%-78%) and hematuria (28%-63%) were the most prevalent symptoms at the start of treatment across all classes. Patients from Japan (58%) had the lowest levels of proteinuria, whereas patients from China (83%) had the highest. Hematuria levels were lowest in China (49%) and highest in Japan (59%) and the US (59%).

The mean number of lines of therapy was 1.5 and ARBs and ACEis were the most recently prescribed treatments across all countries (US: 44% & 43%; EU5: 43% & 49%; China: 63% & 19%; Japan: 62% & 7%). As the first-line therapy, 81% of patients received non-immunosuppressants (ISTs) (US: 89%, EU5: 87%, China: 78% and Japan: 66%) followed by corticosteroids (45%), non-steroidal ISTs (18%), alternative medications (12%), biologic ISTs (3%) and other therapies (10%). Overall, 34% of patients switched to second-line therapy (US: 21%, EU5: 33%, China: 41%, and Japan: 33%) and non-ISTs were the top intervention in all countries (US: 95%, EU5: 93%, China: 78%, and Japan: 80%). A total of 30% of patients switched to third-line therapy (US: 14%, EU5: 24%, China: 42% and Japan: 21%) and non-ISTs were the most used treatment option across all countries (US: 88%, EU5: 90%, China: 84% and Japan: 88%) (Table 1). The main physician-reported reasons for switching treatment at first and second lines were: improved condition, worsened condition, primary lack of efficacy, worsened disease activity, side effects and no change in disease activity (Figure 1). The following factors influenced treatment regimen selection across all treatment classes: overall efficacy (53%-75%), reduction of proteinuria (51%-67%), long-term efficacy (47%-57%) and rapid onset of action (48%-53%).

Conclusion

The majority of IgAN patients were treated with non-ISTs across all countries and at different lines of therapy. Physicians switched IgAN patients across different treatments because most of these patients did not show improvement in their disease condition. There is still a significant unmet need for novel targeted treatment options for IgAN patients that particularly target pathogenetic pathways of kidney damage.

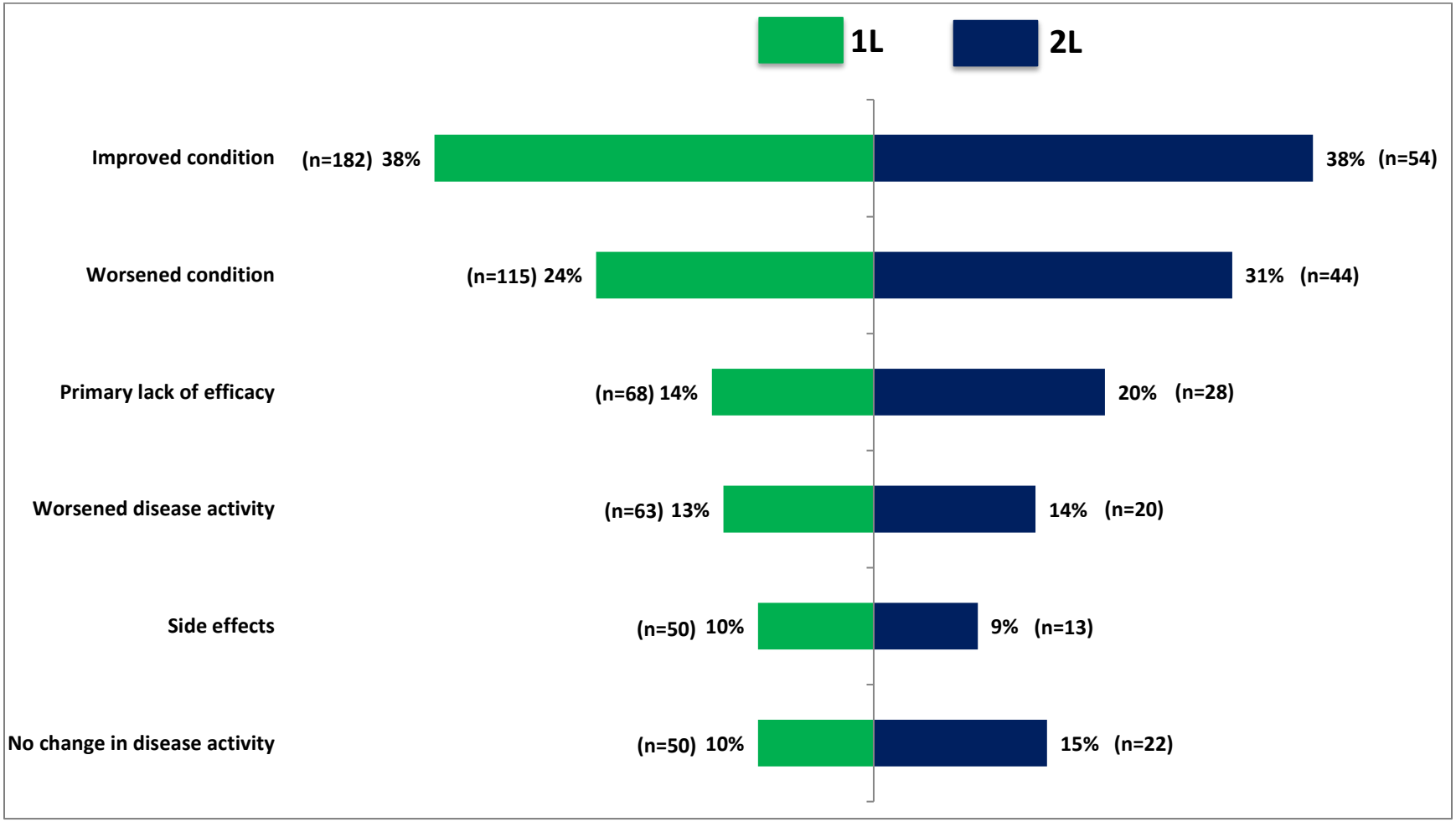
Total characters (with spaces): 3,395/3,400 (includes title, introduction, methods, results and conclusion)

Table 1: Treatment patterns of IgAN patients in the US, EU5, China and Japan

Treatments n (%)	First-line Treatment (N=1,591); n (%)					Second-line Treatment (N=538); n (%)					Third-line Treatment (N=161), n (%)				
	All Regions	US	EU5	China	Japan	All Regions	US	EU5	China	Japan	All Regions	US	EU5	China	Japan
Non-ISTs*	1292 (81)	239 (89)	470 (87)	423 (78)	160 (66)	458 (85)	54 (95)	164 (93)	175 (78)	65 (80)	139 (86)	7 (88)	38 (90)	79 (84)	15 (88)
Corticosteroids[#]	716 (45)	117 (44)	192 (36)	254 (47)	153 (63)	236 (44)	25 (44)	77 (44)	107 (48)	27 (33)	95 (59)	4 (50)	26 (62)	56 (60)	9 (53)
Non-Steroidal ISTs	294 (18)	66 (25)	61 (11)	159 (29)	8 (3)	141 (26)	19 (33)	35 (20)	81 (36)	6 (7)	55 (34)	3 (38)	20 (48)	29 (31)	3 (18)
Alternative Medicines	195 (12)	0 (0)	0 (0)	195 (36)	0 (0)	86 (16)	0 (0)	0 (0)	86 (39)	0 (0)	34 (21)	0 (0)	0 (0)	34 (36)	0 (0)
Other	160 (10)	11 (4)	25 (5)	116 (21)	8 (3)	71 (13)	3 (5)	5 (3)	57 (26)	6 (7)	32 (20)	0 (0)	0 (0)	31 (33)	1 (6)
Biologic ISTs	51 (3)	22 (8)	21 (4)	6 (1)	2 (1)	15 (3)	4 (7)	5 (3)	6 (3)	0 (0)	7 (4)	0 (0)	1 (2)	6 (6)	0 (0)

Abbreviations: EU5: France, Germany, Italy, Spain and the United Kingdom; ISTs: Immunosuppressants; N, n: Sample Size; US: United States. *Non-ISTs includes ARBs, ACEi, statins, diuretics, antiplatelets, sodium-glucose cotransporter-2 inhibitors and others. [&]Non-Steroidal ISTs includes: cyclophosphamide, hydroxychloroquine, mycophenolate mofetil, tacrolimus, azathioprine, leflunomide and cyclosporin, [^]Biologic ISTs includes: Rituximab (MabThera/ rituxan/ rixathon/ ruxience etc.). [#]For those patients currently on first-line treatment, 99% received oral steroids with less than 1% on subcutaneous or intravenous.

Figure 1: The main physician-reported reasons for switching treatment at first and second lines



Abbreviations: 1L: First-line; 2L: Second-line; n: Sample size.