Treatment-Related Characteristics Among Younger Women with Generalized Myasthenia Gravis

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Background

- Generalized myasthenia gravis (gMG) is a rare, chronic autoimmune neuromuscular disease that manifests with fluctuating muscles weakness and fatigue[1]
- Due to typically earlier presentation in women, the diagnosis of gMG is often made during childbearing years (18–45)[2]
- There is a lack of research in women during this critical life stage where family planning and other priorities present differentiating considerations for gMG management[3]

Objective

To describe treatment patterns among younger women with gMG

Methods

- Data were drawn from the Adelphi gMG Disease Specific Programme™ (DSP), an extensive cross-sectional dataset of US-based gMG-treating neurologists and their consulting patients with gMG collected between January and August 2024. The DSP methodology has been previously published and validated[4–7]
- Physicians were eligible for inclusion if they were responsible for the management of at least one patient with a confirmed diagnosis of gMG and identified as having a primary specialty of neurology
- Physicians reported patient-level data on their gMG patients, including demographics, clinical characteristics, current and treatment history
- For this analysis, patients were included if they were MGFA class II–IV at time of survey

Results

Demographics and Clinical Characteristics

- Data was collected from 40 neurologists with respect to 266 patients with gMG: 55 women aged 18–45 (younger women), 24 men aged 18–45 (younger men), 73 women aged ≥46 (older women), and 114 men aged ≥46 (older men)
- Patients had a mean (standard deviation; SD) age of 54.9 (14.0) years, 51.9% were male. The mean (SD) time since diagnosis was 3.9 (5.4) years; younger women had a shorter time since diagnosis (2.2 [1.8] years; **Table 1**)
- 83.1% of patients were MGFA class II at time of survey with a mean (SD) MG-ADL score of 4.7 (3.3) and 69.9% were anti-AChR positive (**Table 1**)
- Among younger women, 1 patient was pregnant and 4 had informed their physician of their plans to become pregnant in the next 12 months
- On average, from diagnosis to time of survey, patients received a mean (SD) of 1.8 (0.9) treatment regimens, with 83.5% of patients receiving a maintenance treatment at time of survey (**Table 1**)

Table 1. ***Demographics, clinical characteristics, and treatment status at time of survey of patients with gMG***

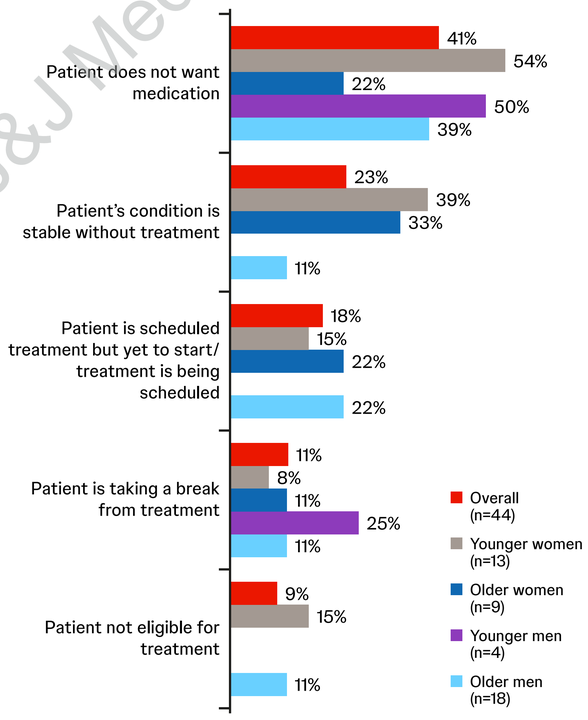
	Overall (n=266)	Younger Women (n=55)	Older Women (n=73)	Younger Men (n=24)	Older Men (n=114)
Age (years); mean (SD)	54.9 (14.0)	37.9 (6.8)	61.2 (10.1)	39.6 (5.1)	62.2 (10.0)
Gender, male; n (%)	138 (51.9)	0 (0.0)	0 (0.0)	24 (100.0)	114 (100.0)
Time since diagnosis (years); mean (SD)	3.9 (5.4)	2.2 (1.8)	3.8 (4.1)	4.3 (4.6)	4.8 (7.0)
Antibody status, AChR+; n (%)	186 (69.9)	34 (61.8)	59 (80.8)	17 (70.8)	76 (66.7)
MG-ADL score; mean (SD)	4.7 (3.3)	4.0 (3.1)	4.9 (3.1)	4.7 (3.5)	4.9 (3.4)
MGFA classification at time of survey					
Class II; n (%)	221 (83.1)	48 (87.3)	62 (84.9)	19 (79.2)	92 (80.7)
Class III; n (%)	40 (15.0)	6 (10.9)	11 (15.1)	4 (16.7)	19 (16.7)
Class IV; n (%)	5 (1.9)	1 (1.8)	0 (0.0)	1 (4.2)	3 (2.6)
Treatment Status					
Prescribed maintenance treatment currently, yes; n (%)	222 (83.5)	45 (76.4)	64 (87.7)	20 (83.3)	96 (84.2)
Time since current maintenance treatment initiation (years); mean (SD)	2.0 (3.0)	1.3 (1.2)	1.8 (2.4)	1.9 (2.3)	2.5 (3.9)
Number of maintenance regimens received since diagnosis; mean (SD)	1.8 (0.9)	1.8 (1.0)	1.9 (0.9)	1.8 (0.9)	1.7 (0.8)

***gMG**=generalized myasthenia gravis, **SD**=standard deviation, **AChR**=acetylcholine receptor antibody, **MG-ADL**=Myasthenia Gravis Activities of Daily Living, **MGFA**=Myasthenia Gravis Foundation of America.*

Treatment Patterns

- **Figure 1** shows the class of treatment prescribed at time of survey split by comparison groups of age and gender. A total of 27% of younger women had received methotrexate and 18% mycophenolate mofetil, which are contraindicated in pregnancy
- 16.5% (n=44) of patients were not receiving treatment at time of survey, 23.6% (n=13) in younger women, 12.3% (n=9) in older women, 16.7% (n=4) in younger men, and 15.8% (n=18) in older men. Of those not receiving treatment, physicians cited that 40.9% of patients had refused medication; 53.8% amongst younger women, 22.2% in older women, 50.0% in younger men, and 38.9% in older men (**Figure 2**)
- Additionally, 42% of younger women were not in remission at the time of survey (vs 25% older women, 33% younger men, 32% older men), respectively (**Figure 3**)

Figure 2. ***Physician-reported reasons for patients with gMG not prescribed maintenance treatment at time of survey (top five)***



***gMG**=generalized myasthenia gravis.*

Figure 3. ***Physician-reported remission status of patients with gMG***

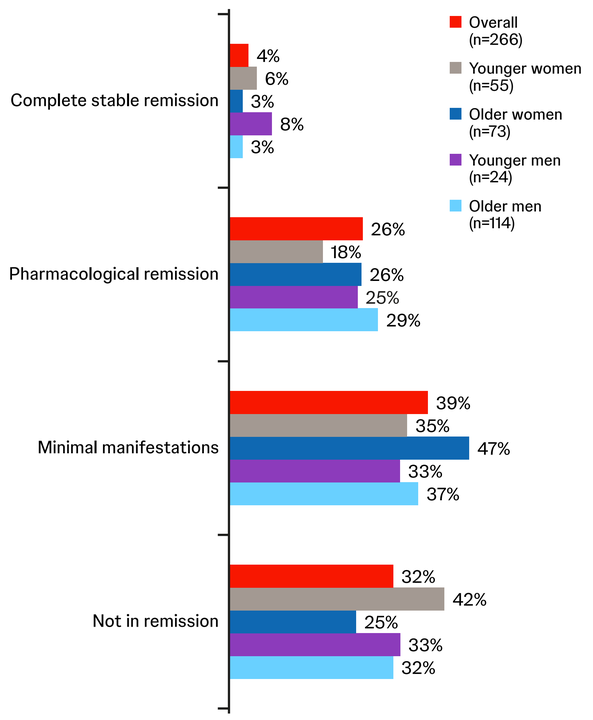


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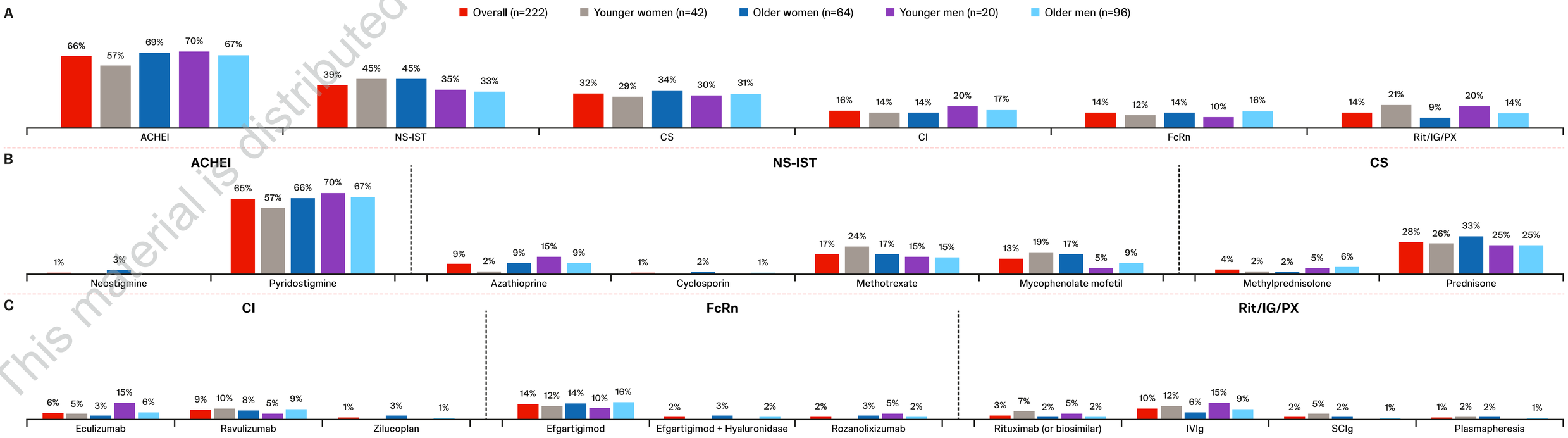
Figure 1. ***Physician-reported class of maintenance treatment prescribed at time of survey (A), physician-reported ACHEI, NS-IST, and CS treatment prescribed at time of survey (B), and physician-reported biologic treatment prescribed at time of survey (C)***



***ACHEI**=acetylcholinesterase inhibitors, **NS-IST**=non-steroidal immunosuppressants, **CS**=corticosteroids, **CI**=complement inhibitors, **FcRn**=neonatal fragment crystallizable receptor inhibitors, **Rit**=rituximab, **IG**=immunoglobulins, **PX**=plasmapheresis, **IVIg**=intravenous immunoglobulins, **SCIg**=subcutaneous immunoglobulins.*

Key Takeaway

This data highlights the unmet clinical need for younger women with gMG in the US

Conclusions

- **This analysis found a high percentage of younger women were not receiving treatment for gMG and use of medications contraindicated in pregnancy were observed**
- **Additionally, compared with other groups, younger women were most frequently not in remission**
- **This data supports the need for education on treatment options and benefit/risk of maintenance therapies in this patient population**
- **Improving care for younger women with gMG represents a significant opportunity**

Limitations

- The DSP was not based on a true random sample of physicians or patients. While minimal inclusion criteria governed the selection of the participating physicians and patients, participation was influenced by willingness to complete the survey
- The quality of the data obtained relies on how accurately physicians and patients were able to recall and report information

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