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Healthcare Resource Utilization and Costs in Patients with Generalized Myasthenia Gravis Initiating Efgartigimod in Japan: A Real-World Retrospective Analysis

Cécile Blein[1], Hirofumi Teranishi[2], Koichi Tsuda[2], Ryohei Aoyagi[2], Sho Inagaki[3], Jiangyuan Luo[3], Yunlong Zheng[3], Masanori P. Takahashi[4]

[1]argenx BVBA, Ghent, Belgium; [2]argenx Japan, Minato-ku, Tokyo, Japan; [3]ZS Associates International, Minato-ku, Tokyo, Japan; [4]Department of Clinical Laboratory and Biomedical Sciences, The University of Osaka Graduate School of Medicine, Suita, Osaka, Japan

BACKGROUND | METHODS

Study background

- Generalized myasthenia gravis (gMG) is a rare, chronic, IgG-mediated autoimmune neuromuscular disorder characterized by fatigable muscle weakness.[1]
- Efgartigimod (EFG), a neonatal Fc receptor (FcRn) blocker that selectively reduces circulating IgG autoantibodies, was approved in Japan in January 2022 as a treatment for patients with gMG with an inadequate response to glucocorticoids (GC) or other immunosuppressive therapies.[2]
- Patients with gMG are reported facing treatment burden from hospitalizations required for repeated infusion of fast-acting treatments.[3]
- While the previous study in the United States suggests that EFG reduces hospitalizations events, real-world evidence on EFG utilization and its impact on healthcare resource utilization (HRU) in routine clinical practice in Japan remains limited.

Study objectives

- To evaluate the impact of EFG on HRU in patients with gMG in Japan.
- To evaluate the impact of EFG on cost burden in patients with gMG in Japan.

Patient selection criteria

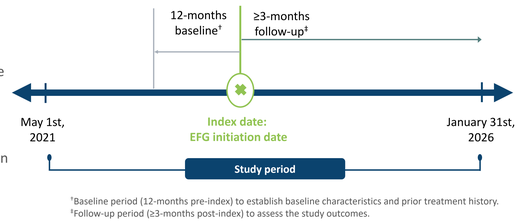
- Patients who initiated EFG between May 1st, 2022 and January 31st, 2026.
- EFG initiators aged 15 or older on the index date.
- EFG initiators who had at least 1 MG diagnosis and activity in the baseline.
- EFG initiators who had at least 3-months follow-up period.

Study outcome

- **gMG treatment utilization:** Proportion of gMG treatment patterns during the baseline, and EFG treatment patterns during the follow-up period were reported descriptively. Continuous EFG use was defined as (1) no concomitant biologic treatments and (2) a <120-day interval between the last EFG administration and the end of follow-up.
- **Healthcare Resources Utilization (HRU)**
  - *Hospitalization occurrences:* all cause and gMG-related hospitalization events during the baseline and the follow-up period were described by per patient per year (PPPY)
  - *ICU admission rates (%):* ICU admission rates for both all cause and gMG-related hospitalizations were calculated during the baseline and the follow-up period
  - *Length of stay:* total and mean length of stay (LoS) for both all cause and gMG-related hospitalizations were calculated during the baseline and the follow-up period

Study type and dataset

- This is a retrospective, observational database study using claims data from MDV, one of the largest claims database in Japan, covering ≥ 480 hospitals and approximately 45 million patients.[4]
- The dataset covered the period between May 1st, 2021 and January 31st, 2026.



†Baseline period (12-months pre-index) to establish baseline characteristics and prior treatment history.
‡Follow-up period (≥3-months post-index) to assess the study outcomes.

RESULTS

Figure 1. Patient selection

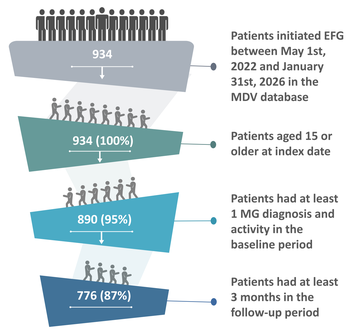
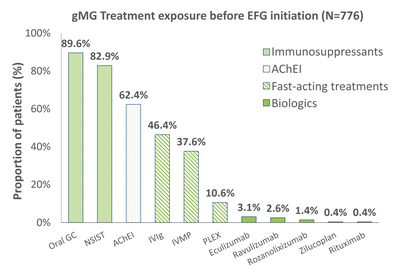


Table 1. Baseline demographics and characteristics

	N = 776
Sex, n (%)	
Female	463 (59.7%)
Age, years	
Mean (SD)	57.2 (16.0)
Median (IQR)	57.0 (46.0-70.0)
Charlson Comorbidity Index	
Mean (SD)	1.7 (1.9)
Median (IQR)	1.0 (0.0-2.0)
gMG-related comorbidities, n (%)	
Cardiovascular Disease, Congestive Heart Failure, Coronary Artery Disease	64 (8.2%)
COPD/Asthma	192 (24.7%)
Diabetes	402 (51.8%)
Hyperlipidemia/Hypercholesterolemia	294 (37.9%)
Insomnia	256 (33.0%)
Bone Diseases (Osteoporosis, Rheumatoid Arthritis, Spondylitis Deformans)	554 (71.4%)
Thrombosis	59 (7.6%)
Follow-up availability period, months	
Mean (SD)	19.4 (11.6)
Median (IQR)	16.7 (9.7-28.3)

- Among 776 EFG initiators (mean age, 57.2 years; female, 59.7%; mean CCI score, 1.7; mean follow-up, 19.4 months), bone disease (71.4%) and diabetes (51.8%) are the most frequent comorbidities.

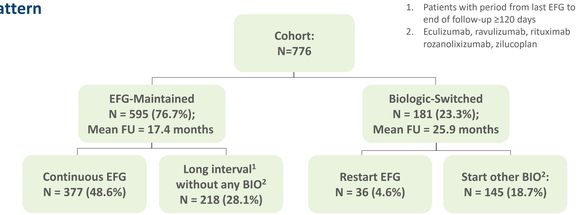
Figure 2. gMG treatment exposure before EFG initiation



- Immunosuppressants (Oral GC: 89.6%, nonsteroidal immunosuppressants [NSISTs]: 82.9%) were the most common gMG treatments prior to EFG initiation.
- The most common fast-acting treatments received prior to initiating EFG were intravenous immunoglobulins (IVIg, 46.4%), followed by intravenous methylprednisolone (IVMP, 37.6%), and plasma exchange (PLEX, 10.6%).
- Biologics use prior to EFG initiation was limited; the most common biologic was eculizumab (3.1%).

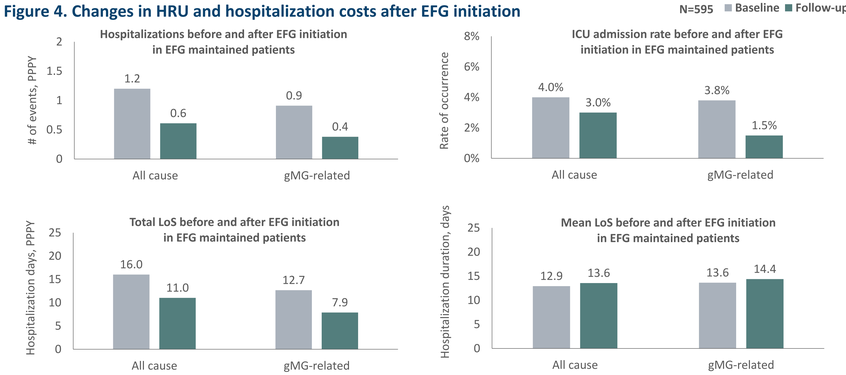
Figure 3. Real-world EFG treatment pattern

- Of 776 patients in the analysis, 595 (76.7%) maintained EFG treatment throughout the follow-up (mean follow-up duration: 17.4 months).
- Among 595 EFG-maintained patients, 218 had long interval without any biologics.



1. Patients with period from last EFG to end of follow-up ≥120 days
2. Eculizumab, ravulizumab, rituximab rozanolixizumab, zilucoplan

Figure 4. Changes in HRU and hospitalization costs after EFG initiation



- All cause and gMG-related hospitalizations decreased after EFG initiation from 1.2 and 0.6 in the baseline to 0.9 and 0.4 in the follow-up period; ICU admission rates similarly declined for both hospitalization categories.
- All cause and gMG-related total LoS decreased after EFG initiation from 16.0 and 12.7 in the baseline to 11.0 and 7.9 in the follow-up period, while mean LoS remained stable.

KEY TAKEAWAYS

Intravenous immunoglobulin (IVIg) and intravenous methylprednisolone (IVMP) were the most commonly used fast-acting treatment prior to efgartigimod (EFG) initiation, reflecting existing high hospitalization burden in patients with gMG.

Reductions in hospitalization occurrence, ICU admission rate, and total length of stay were observed in patients with gMG after EFG initiation.

The findings suggest EFG's potential to lower hospitalization -related healthcare resource utilization in patients with gMG in Japan.

LIMITATIONS

- The study results may not represent all patients with gMG in Japan, since the data captured from MDV only encompasses a network of hospitals.[5]
- The study results only include treatments and outcomes of each patient occurred in the same hospital, since it is not possible to track patient record across facilities in the hospital-based claims record.[5]

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ABBREVIATIONS

gMG: generalized myasthenia gravis; **EFG**: efgartigimod; **FcRn:** neonatal fragment crystallizable receptor; **IVIg:** intravenous immunoglobulin; **IVMP:** intravenous methylprednisolone; **PLEX:** plasma exchange; **AChEI:** acetylcholinesterase inhibitors; **GC:** glucocorticoids; **NSIST:** non-steroidal immunosuppressive therapies; **HRU:** healthcare resource utilization; **MDV:** Medical Data Vision; **PPPY:** per patient per year; **BL:** baseline; **FU:** follow-up; **COPD:** chronic obstructive pulmonary disease; **SD:** standard deviation; **IQR:** interquartile range; **CCI:** charlson comorbidity index

DISCLOSURES AND ACKNOWLEDGMENTS

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The material in this poster has not been previously presented or published.
HT, **KT**, **RA** and **CB** are employees of and hold stock in argenx.
YZ, **JL** and **SI** are employees of ZS Associates International Inc. and are paid consultants for argenx.
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