Clinical characteristics of patients and healthcare resource utilisation in European centres with and without dedicated headache clinic: Real-world evidence from the multinational BECOME study

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BACKGROUND

- There is limited European data on migraine burden in patients with prior prophylactic treatment failures (PPTF)[1]
- The BECOME study described the proportion of patients who had one or more PPTF and sought care at tertiary centres within a 3-month period. The effects of disease burden on healthcare resource utilisation (HRU) and patient-reported outcomes were also studied[1,2]
- Here we report the impact of migraine on HRU among patients visiting centres with dedicated headache clinics (DHC) and without dedicated headache clinics (WHC) from the BECOME study

OBJECTIVE

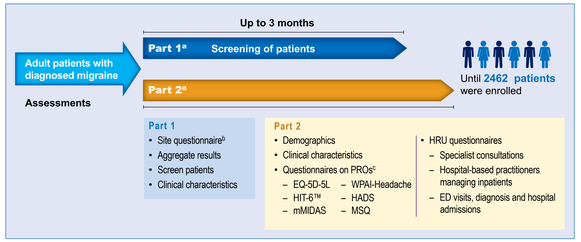
- To evaluate the burden of migraine and HRU in DHC and WHC in patients with ≥1 PPTF and ≥4 monthly migraine days (MMD) in Part 2 of the BECOME study

METHODS

Study Design

- BECOME was a prospective, multicentre, non-interventional study conducted in two concurrent parts over 3 months across 17 European countries and Israel (**Figure 1**)
- Part 1 assessed clinical characteristics of all patients with migraine visiting headache specialist centres over 3 months
- Patients with ≥1 PPTF and ≥4 MMD identified by study investigators were enrolled in Part 2 of the study to assess the burden of migraine and HRU

Figure 1. BECOME Study Design

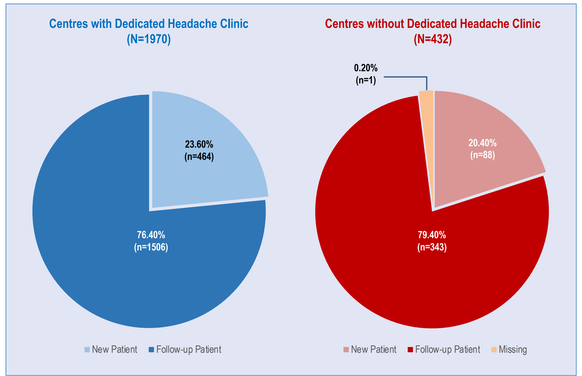


[a]Part 1 and Part 2 of the study could be completed on the same day. [b]The 20-item site questionnaire described the properties of the site and their management of migraine Patients. [c]Intended for all patients and completed within 1 day. ED, emergency department; EQ-5D-5L, EuroQol 5 dimensions 5 levels; HADS, Hospital Anxiety and Depression Scale; HIT-6™, Headache Impact Test; HRU, healthcare resource utilisation; mMIDAS, modified Migraine Disability Assessment (1-month recall period); MSQ, Migraine-specific Quality of Life; PROs, patient-reported outcomes; WPAI, Work Productivity and Activity Index

RESULTS

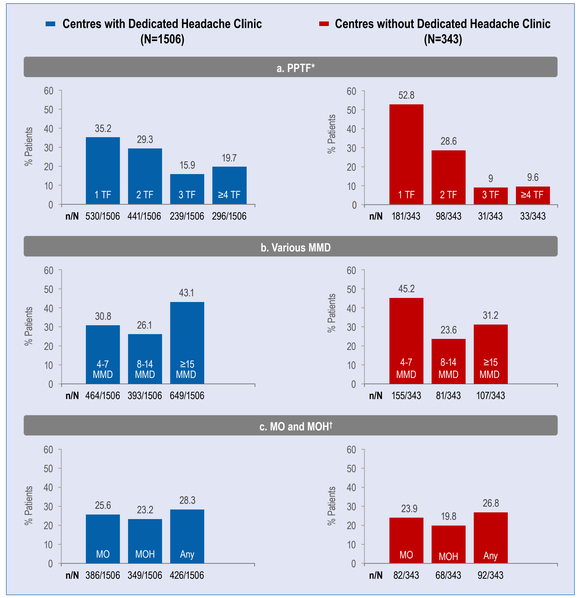
- Overall, 2402 patients in Part 2 were grouped according to centre (DHC [n=1970]; WHC [n=432]) and patient status (new-to-centre/follow-up) (**Figure 2**). DHC had a slightly larger new-to-centre patient pool vs WHC
- Here we present data for follow-up patients (DHC [n=1506]; WHC [n=343]). In centres with DHC, there was a higher proportion of patients with ≥4 PPTF (19.7% vs 9.6%), ≥8 MMD (26.1% vs 23.6%) and ≥15 MMD (43.1% vs 31.2%) vs those in WHC. MMD≥15 is headache occurring on 15 or more days/ month with at least eight migraine days. The number of follow-up patients with acute medication overuse (MO) and medication-overuse headache (MOH) were also higher in DHC (25.6% [MO] and 23.2% [MOH]) vs WHC (23.9% [MO] 19.8% [MOH]) (**Figure 3**)
- A high proportion of patients from both types of centres reported neurologist visits followed by general practitioner visits, in the past 3 months (**Figure 4**)
- More emergency room (ER) visits and hospitalisations owing to migraine in the past year were reported by patients in DHC vs those in WHC (ER: 20.7% vs 18.7%; hospitalisations: 9.0% vs 6.7%). In contrast, magnetic resonance imaging (MRI) scans for exclusion of secondary causes were more common in WHC vs DHC (23.3% vs 19.3%), possibly reflecting that doctors with less experience in headaches may request more scans (**Figure 5**)

Figure 2. Patients Treated in Centres with and without Dedicated Headache Clinic (Part 2 Population Set)



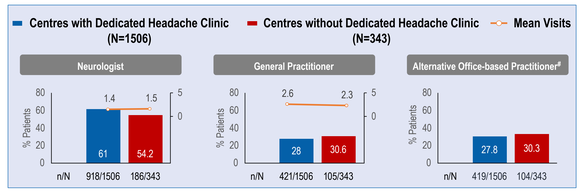
N, total number of patients; n, number of patients in a subgroup

Figure 3. Number of Follow-up Patients in Centres with and without Dedicated Headache Clinic (Part 2 Population Set)



*The antimigraine preparations erenumab and galcanezumab were excluded from determination of the treatment failure frequency (1, 2, 3, ≥4).
≥15 MMD = headache occurring on 15 or more days/ month with at least eight migraine days.
†Medication overuse = patients with any antimigraine treatment with medication overuse during the last 3 months collected on the Patient's Migraine Treatment page in the eCRF; Medication overuse headache = patients in accordance with data collected in About the Patient's Migraine questionnaire; Any = patients with medication overuse and/or medication overuse headache as defined above. N = total number of patients; n = number of patients in a subgroup. MMD, monthly migraine days; MO, medication overuse; MOH, medication-overuse headache; PPTF, prior prophylactic treatment failures; TF, treatment failure

Figure 4. Healthcare Visits by Follow-up Patients (Part 2 Population Set)

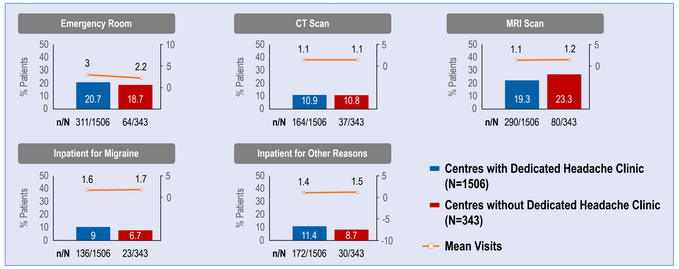


#Mean number of visits were not available. N, total number of patients; n, number of patients in a subgroup

CONCLUSIONS

- While data suggest generally similar patient pools at DHC and WHC, some differences were observed
- DHC had more new-to-centre patients than WHC, possibly owing to referrals, and a higher proportion of refractory patients and patients with ≥8 MMD
- In addition, DHC had more patients with MOH and hospitalisations, probably owing to a larger chronic migraine population and more patients with PPTF

Figure 5. Healthcare Resource Utilisation by Follow-up Patients (Part 2 Population Set)



CT, computed tomography; HRU, healthcare resource utilisation; MRI, magnetic resonance imaging; N, total number of patients; n, number of patients in a subgroup

REFERENCES

1. Lucas C, et al. *J Headache and Pain* 2019; 20(1):109 (A18)
2. Pozo-Rosich P, et al. *J Headache and Pain* 2019; 20(1):109 (A19)

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DISCLOSURES

Patricia Pozo-Rosich — received honoraria as a consultant and speaker during the last 5 years from Allergan, Almirall, Chiesi, Eli Lilly, Novartis and Teva. Her research group has received research grants from Allergan and funding for clinical trials from Alder, Boehringer Ingelheim, MSD, electroCore, Eli Lilly, Janssen Cilag, and Novartis. She is a trustee member of the board of the International Headache Society and a member of the Council of the European Headache Federation. She is on the editorial board of Revista de Neurologia. She is an editor for Frontiers of Neurology and The Journal of Headache and Pain. She is a member of the Clinical Trials Guidelines Committee of the International Headache Society. She has edited the Guidelines for the Diagnosis and Treatment of Headache of the Spanish Neurological Society. She does not own stocks from any pharmaceutical company.
David P.B. Watson — received honoraria from Novartis, Teva and Allergan in the last 12 months for consultancy and educational work.
Paolo Martelletti — Section editor, Medicine, Springer Nature Comprehensive Clinical Medicine; editor-in-chief, The Journal of Headache and Pain; Headache Books Series editor, Springer; EU expert, European Medicines Agency. Former president of the European Federation and chairman of the School of Advanced Studies of the European Headache Federation. He does not hold any stocks of any pharmaceutical companies or medical device companies.
Christian Lucas — collaborated as an expert, investigator or coordinator of clinical trials with Novartis, Teva, Sanofi, Grünenthal, Eli Lilly, Biogen, and Ethypharm.
Charly Gaul — received honoraria for consulting and lectures within the past 3 years from Allergan, Ratiopharm, Eli Lilly, Novartis Pharma, Desitin Arzneimittel, Cerbotec, Bayer Vital, Hormosan Pharma, Grünenthal, Reckitt Benckiser, and Teva. He does not hold any stocks of pharmaceutical companies or medical device companies.
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