Characterisation and treatment of patients with menstrual migraine in real-world clinical practice

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INTRODUCTION

- Menstrual migraine (MM) occurs in 2 out of 3 female migraine patients[1].
- Patients with MM experience more frequent and severe attacks than patients without MM[2].
- Despite this, MM is underdiagnosed and patients with MM are often treated similarly to migraine patients without MM.
- The objective of this study was to assess the demographics, clinical characteristics, treatment patterns and satisfaction of migraine patients with and without MM.

METHODS

- **Data Source** – Data were drawn from the 2022/23 Adelphi Migraine Disease Specific Programme™, a real-world cross-sectional survey with retrospective data collection, conducted in France, Germany, Italy, Spain, the United Kingdom, and the United States. Physicians completed patient record forms for their next 8 –10 consecutively consulting patients with migraine, who were invited to voluntarily complete a self-reported questionnaire.
- **Study Design** – Participants were recruited into the Migraine DSP between May 2022 and January 2024. The survey was conducted according to relevant guidelines and legislation, and the methodology has been published and validated[3-6].
- **Analysis –** This analysis utilized data from patients who were female, aged ≤55 years old and had a physician confirmed diagnosis of migraine. Analysis was conducted on patient demographics, migraine diagnosis, including the estimated presence or absence of MM, prescribed acute and preventive treatment, and acute and preventive treatment satisfaction.
- Patients with reported MM were compared to patients without MM using: Mann-Whitney U tests for ordered categorical data, t-test for continuous outcomes, and Fisher exact tests for nominal categorical data. All data analyses were run using Stata 18[7].

RESULTS

Patient demographics and clinical characteristics

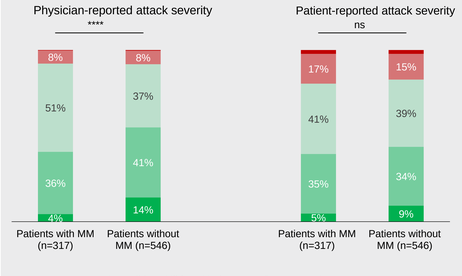
- Primary care practitioners (n=264) and neurologists (n=340) provided data on 3,049 female patients aged ≤55 years old, of which 32% (n=986) were reported as having MM.
- Of these 3,049 female patients, 912 (30%) completed a corresponding voluntary self-reported questionnaire.
- Patients with reported MM were younger than patients without MM and experienced more severe migraine attacks as reported by physicians (all p<0.05, **Table 1** and **Figure 1**).

Table 1. Patient demographics and clinical characteristics

	Patients with MM	Patients without MM	p-value
Patient age, n	**986**	**2,063**	
Mean (SD)	32.9 (9.0)	36.5 (10.1)	<0.0001 (TT)
BMI (≤60), n	**985**	**2,059**	
Mean (SD)	23.5 (3.9)	24.4 (4.6)	<0.0001 (TT)
Employment status, n (%)	**969**	**1,982**	
Working full time	570 (58.8)	1183 (59.7)	
Working part time	91 (9.4)	240 (12.1)	
On long term sick leave	8 (0.8)	25 (1.3)	
Homemaker	67 (6.9)	217 (11.0)	
Student	201 (20.7)	194 (9.8)	
Not working due to retirement	1 (0.1)	12 (0.6)	
Unemployed	31 (3.2)	111 (5.6)	

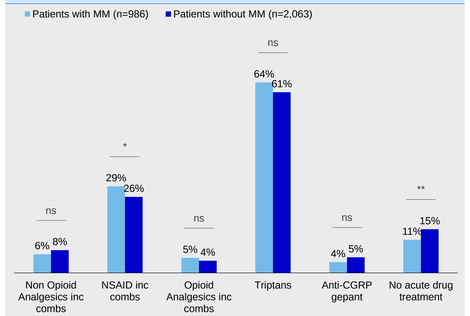
Abbreviations: TT; T test, MM, menstrual migraine; SD, standard deviation; BMI, body mass index
Base sizes vary due to availability of data in patient medical records. BMI Scores ≤60 were excluded.

Figure 1. Physician and patient-reported attack severity



Abbreviations: MM; menstrual migraine, ****; p<0.0001, ns; not significant.
Note – data reported on patient/physician pairs, where patients had fully completed the patient-reported questionnaire and full physician-reported data were concurrently available. Data labels <4% have been removed

Figure 2. Physician-reported current prescribed acute treatment



Abbreviations: inc. combs; including combinations, MM; menstrual migraine, NSAID; Non-steroidal anti-inflammatory, CGRP; Calcitonin-gene related peptide. *; p<0.05, **; p<0.01, ns; not significant.
Note – Treatment classes are not mutually exclusive

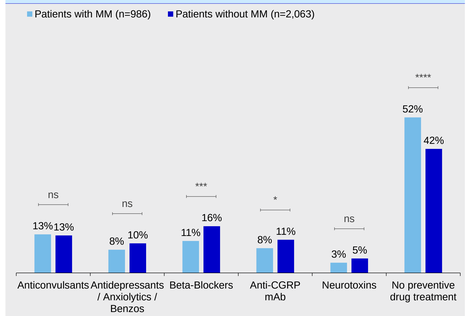
Currently prescribed treatments

- Patients without MM were more likely than patients with MM to be receiving no prescribed acute drug currently (p<0.05) (**Figure 2**).
- There was no differences between both groups for most acute treatments prescribed, with the exception of NSAIDs (p<0.05) (**Figure 2**).
- Patients with MM were more likely than patients without MM to be receiving no prescribed preventive drug currently (p<0.05) (**Figure 3**).
- Beta blockers and anti-CGRP mAbs were more likely to be prescribed for patients without MM (p<0.05) (**Figure 3**).

Treatment satisfaction

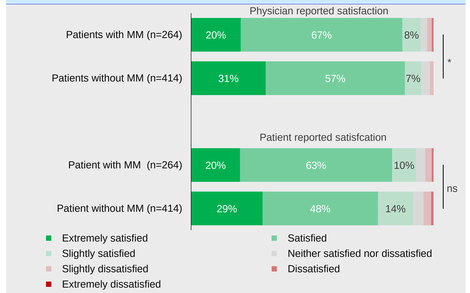
- Patients and physicians both reported a high level of satisfaction with treatment.
- Physicians reported a lower proportion of MM patients were extremely satisfied with their acute treatment compared to non-MM patients (**Figure 4**).
- Both physicians and patients reported a lower degree of satisfaction with preventive treatment for patients with MM. (**Figure 5**).

Figure 3. Physician-reported current prescribed preventive treatment



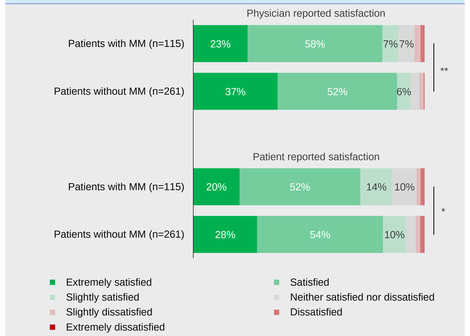
Abbreviations: MM; menstrual migraine, CGRP; Calcitonin-gene related peptide, mAb; monoclonal antibodies, Benzos; Benzodiazepines. *; p<0.05, **; p<0.01, *** p<0.001, ns; not significant.
Note – Treatment classes are not mutually exclusive

Figure 4. Physician and patient-reported satisfaction with acute treatment



Abbreviations: MM; menstrual migraine, *; p<0.05, ns; not significant.
Note – data reported on patient/physician pairs, where patients had fully completed the patient-reported questionnaire and full physician-reported data were concurrently available. Percentages <4% not shown.

Figure 5. Physician and patient-reported satisfaction with preventive treatment



Abbreviations: MM; menstrual migraine, *; p<0.05, **; p<0.01.
Note – data reported on patient/physician pairs, where patients had fully completed the patient-reported questionnaire and full physician-reported data were concurrently available. Percentages <4% not shown.

Limitations

- MM was estimated by physicians and patients but not objectively assessed by a validated headache diary.
- While the study design required physicians to recruit consecutive patients and complete the physician survey on the day of the visit to mitigate against selection and recall bias. However, some selection bias remains as more frequently consulting patients and those with more severe disease activity were more likely to be captured.
- Disease severity data was for overall migraine severity, and not specifically within the perimenstrual window.

CONCLUSIONS

- While patients with and without menstrual migraine were prescribed similar treatment regimens, physicians estimated migraine attack severity to be worse and satisfaction with acute treatment lower in patients with MM.
- Education of physicians and their female patients is recommended to ensure optimal treatment for patients with MM and to improve satisfaction with therapy received.

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CONFLICTS OF INTEREST

JA: Consulting (Honoraria): AbbVie, Aeon (2023), Dr. Reddy, Eli-Lilly, GlaxoSmithKline (2023), Lundbeck, Linpharma, Ipsen (2024), Merz, Miravio (2023), Pfizer, Neurolief, Gore, Satsuma (2024), Scilex, Theranica, Tonix. Clinical Trials (Grant to institution): Parema, Ipsen. Editorial Boards/Steering Committee: Current Pain and Headache Reports (2022), Medscape, SELF magazine (medical editor) GT: consultancy or industry support from AbbVie, Lilly, Lundbeck, Novartis, Pfizer, Teva, and Interactive Studios BV, and independent support from the European Community, Dutch Heart and Brain Foundations, Dutch Research Council, Dioraphte, and the Clayco Foundation. BG, JC, AJ, LA, KHB: employed by and holds stock/options in Pfizer. JJ, SB, WW, LH: employees of Adelphi Real World, Bollington UK.

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