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Comorbidities in low- and high-frequency episodic and chronic migraine: A subgroup analysis of the BECOME study

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Background, Objective, Methods, and Results

Background

- BECOME was conducted in two concurrent parts in adult patients (aged 18–65 years) with migraine across 18 countries in Europe and Israel

Objective

- In the subanalysis of Part 2, we examined a broad range of comorbidities in patients with migraine and analysed HRU and HADS in the subgroups of patients with low- and high-frequency EM and CM (LFEM, HFEM, LFCM, and HFCM)

Methods

Patients were grouped based on low- and high-frequency of MMD: LFEM (4–7 MMD), HFEM (8–14 MMD), LFCM (≥15 MHD with 8–14 MMD), and HFCM (≥15 MHD with ≥15 MMD)

Results

- The proportion of patients with comorbidities was higher in the CM subgroups, with an average of 1.4 (LFCM) and 1.6 (HFCM) comorbidities per patient and 1.1 each in the LFEM and HFEM subgroups (**Table 1**)
- Psychiatric disorders (n=181[7.5%]) were the most common comorbidities in the HFCM subgroup compared with the three other subgroups
    - Depression was the most frequent psychiatric disorder across all four subgroups, followed by anxiety and insomnia

Table 1. Comorbidities across low- and high-frequencies EM and CM. Part 2 population set (N=2419)[a]

	LFEM, N=806	HFEM, N=605	LFCM, N=356	HFCM, N=651
Comorbidities per patient [b]	806, 1.1 (1.46)	605, 1.1 (1.30)	356, 1.4 (1.44)	651, 1.6 (1.89)
Patients with co-morbidities, n (%)	464 (57.6)	365 (60.3)	239 (67.1)	411 (63.1)
Psychiatric disorders, n (%)	133 (5.5)	118 (4.9)	100 (4.1)	181 (7.5)
Depression	72 (3.0)	64 (2.6)	66 (2.7)	111 (4.6)
Anxiety	23 (1.0)	32 (1.3)	14 (0.6)	28 (1.2)
Insomnia	14 (0.6)	13 (0.5)	10 (0.4)	21 (0.9)

[a] One patient with missing information on MMD was not included in the analysis
[b] The mean was calculated considering patients with zero co-morbidities
Data are presented as n, mean (SD) unless specified
Note: Comorbidities often associated with HFCM than other subgroups (top 3 migraine comorbidities listed in descending order of prevalence).

N, total number of patients in Part 2 or PPTF subgroups; n, number of patients responding to the respective questionnaire; SD, standard deviation

The broad range of comorbidities includes musculoskeletal and connective tissue disorders, vascular disorders, endocrine disorders, nervous system disorders, and psychiatric disorders (anxiety and/or depression disorders)

EM, episodic migraine; CM, chronic migraine; HRU, healthcare resource utilisation; LFEM, low-frequency episodic migraine; HFEM, high-frequency episodic migraine; LFCM, low-frequency chronic migraine; HADS, Hospital Anxiety and Depression Scale; HFCM, high-frequency chronic migraine; MMD, monthly migraine days; MHD, monthly headache days

Results

- In the 3 months prior to the survey, a higher proportion of patients in the CM subgroups consulted a neurologist and a primary care physician about their headache (**Figure 1a;** mean number of consultations **Figure 1b**)

Figure 1a. Proportion of patients who consulted any of the specialists by low- and high-frequency EM and CM (Part 2 population set)

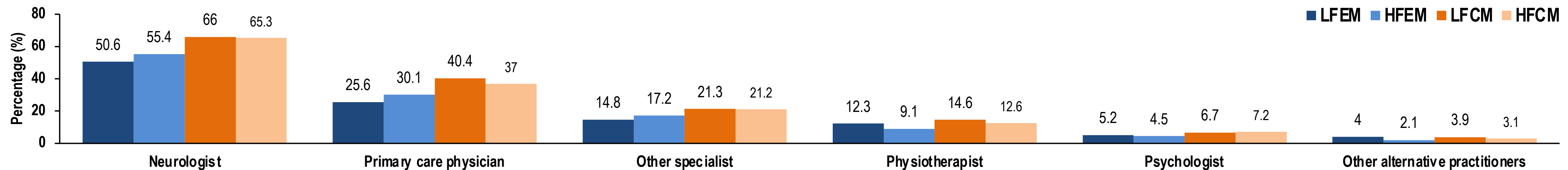
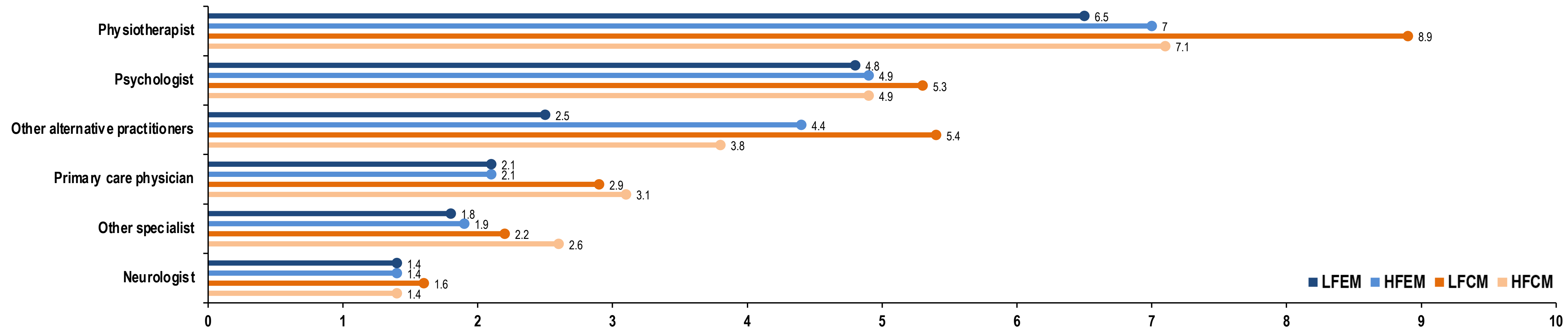


Figure 1b. The mean number of consultations by low- and high-frequency EM and CM (Part 2 population set)



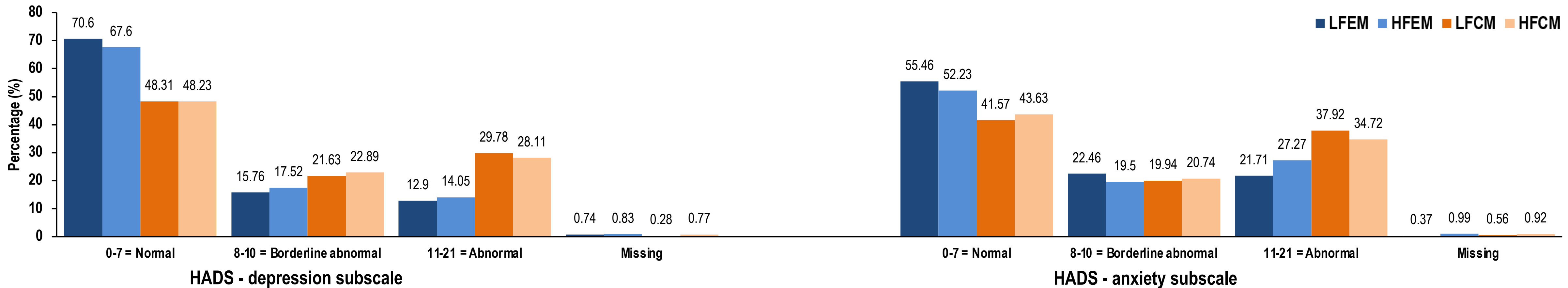
The mean number of visits excludes patients with zero visits
LFEM: N=806; HFEM: N=605; LFCM: N=356; HFCM: N=651
EM, episodic migraine; CM, chronic migraine; HRU, healthcare resource utilisation; LFEM, low-frequency episodic migraine; HFEM, high-frequency episodic migraine; LFCM, low-frequency chronic migraine; HADS, Hospital Anxiety and Depression Scale; HFCM, high-frequency chronic migraine; MMD, monthly migraine days; MHD, monthly headache days

Results and Conclusion

Results

- The proportion of patients with HADS-A and HADS-D scores in the abnormal range (11–21) was greater in the CM subgroups than the EM subgroups (**Figure 2**)

Figure 2. Proportion of patients with ranges of HADS by low- and high-frequency EM and CM (Part 2 population set)



Conclusion

- In migraine, comorbidities per patient increased with an increase in disease severity
- The prevalence of psychiatric comorbidities increased as the severity of the disease increased, with depression being the most frequent and highly prevalent in the HFCM subgroup
- Regardless of the healthcare system, high HRU indicates a need for improved treatment options for patients with difficult-to-treat migraine patients
- A greater proportion of patients had HADS-A and -D scores within the abnormal range (11–21) in the CM subgroups than the EM subgroups

HADS-D: LFEM (N=806); HFEM (N=605); LFCM (N=356); HFCM (N=651); missing (N=1)
HADS-A: LFEM (N=806); HFEM (N=605); LFCM (N=356); HFCM (N=651); missing (N=1)
Ranges for HADS are as follow: 0–7 = normal; 8–10 = borderline abnormal (borderline case); 11–21 = abnormal (case)
EM, episodic migraine; CM, chronic migraine; LFEM, low-frequency episodic migraine; HFEM, high-frequency episodic migraine; LFCM, low-frequency chronic migraine; HADS, Hospital Anxiety and Depression Scale; HFCM, high-frequency chronic migraine; A, anxiety; D, depression