Summary of Disability, Treatment and Healthcare Utilization Differences between Chronic Migraine and Episodic Migraine Populations

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BACKGROUND

- Differences in symptom profiles suggest that chronic migraine (CM) and episodic migraine (EM) populations may differ in levels of headache-related disability, productivity, and patterns of treatment and healthcare utilization.
- CM patients have been recognized as the segment of the migraine population suffering the most from headache.

OBJECTIVE

To compare disability, productivity, treatment and healthcare utilization between the CM and EM populations in a large population-based sample.

METHODS

The American Migraine Prevalence and Prevention (AMPP) study is a longitudinal, prospective, population-based, mailed questionnaire survey. Respondents were identified by screening 120,000 US households to identify 24,000 individuals with severe headache who have been followed on an annual basis since 2004.

Results of the American Migraine Prevalence and Prevention (AMPP) study were analyzed to assess differences in ictal disease burden (MIDAS score), treatment utilization, healthcare utilization, and effect on productivity between two groups of respondents: CM with or without medication overuse (reported migraine; ≥15 days of headache/ month), and EM (reported migraine; 0-8 days of headache/month).

RESULTS

- Of 24,000 individuals with severe headache surveyed in 2005, 16,573 returned complete questionnaires (69.0% response rate).
- Results are based on 655 CM respondents and 9,494 EM respondent; analyses controlled for age, gender and income.

Disability & Productivity

- CM respondents who were employed fulltime or part-time had lost more than twice the productive time than the EM respondents (7.9 versus 3.4 hours per week, p<0.001).

RESULTS (continued)

- Within the past 3 months, CM respondents were more likely than EM respondents to have:
  - missed 5 or more days of work or school (8.2% vs. 2.2%)
  - experienced reduced work productivity on five or more days (33.8% vs.12.3%)
  - missed or were impaired on 5 or more days of household work (57.4% vs. 24.3%)
- Within the past 3 months, CM respondents reported that because of their headaches they had:
  - missed an average of 2 days of work
  - reduced productivity in household work school on average of 10 days
  - missed an average of 21 days of household work
  - missed an average of 17 days of family, social or leisure activities

Table 1: Impact of headache of daily activities for CM and EM

Variable	CM Mean (SD)	EM Mean (SD)	CM vs. EM
# of days missed work or school because of HA	2.4 (10.2)	0.54 (2.6)	p ≤ 0.001
# of days that productivity at work or school was reduced by half because of HA	10.4 (18.1)	1.7 (3.7)	p ≤ 0.001
# of days did not do household work because of HA	21.4 (23.3)	3.5 (5.4)	p ≤ 0.001
# of days that productivity in household work was reduced because of HA	18.7 (19.8)	2.6 (4.4)	p ≤ 0.001
# of days missed family, social or leisure activities because of HA	10.5 (17.4)	1.7 (3.6)	p ≤ 0.001

* All results were statistically significant for between group comparisons (CM vs. EM) after controlling for age, gender & income

Treatment Utilization

Table 2: Percent reported use of treatment for most severe headache by CM and EM

Type of treatment	CM %	EM %	CM vs. EM
No treatment	2.1	3.8	OR(95%CI)=0.54(0.32,0.93)
Over-the-counter meds.	74.4	78.0	OR(95%CI)=0.83(0.69,1.00)
Prescription meds.	57.1	42.3	OR(95%CI)=1.85(1.58,2.18)
"Natural" treatments (herbal/ alternative treatments)	12.0	8.3	OR(95%CI)=1.51(1.18,1.93)
Ever used prophylactic medication to prevent HA	48.7	34.8	OR(95%CI)=1.79(1.52,2.09)
Diagnosed with Medication Overuse/ Rebound HA	12.6	4.6	OR(95%CI)=2.86(2.19,3.75)

* All results were statistically significant for between group comparisons (CM vs. EM) after controlling for age, gender & income

CM respondents were more likely than EM respondents:
- to overuse medications (12.6% vs. 4.63%)
- to treat their severe headaches using natural, over-the-counter and/or prescription medications

Use of medication for headache prevention was almost twice as likely in the group of CM respondents (OR= 1.79; p≤0.001).

Resource Utilization

- Over one year, CM respondents reported more frequent visits to a physician, hospital or emergency department for the treatment of headache and for any reason other than headache.

Table 3: Summary of reported resource utilization for CM and EM

Variable	CM Mean (SD)	EM Mean (SD)	CM vs. EM
Age for first visit to a physician for HA	27.9 (14.0)	27.9 (12.5)	NS
Visits to the ED for severe HA in past 12 months	0.5 (1.5)	0.22 (1.4)	p≤0.001*
Visits to ED not b/c of severe HA in past 12 months	0.6 (1.4)	0.4 (3.6)	p=0.01*
Visits to primary care physician for severe HA in past 12 months	2.5 (6.5)	0.8 (2.4)	p≤0.001*
Visits to primary care physician not due to severe HA in past 12 months	4.5 (6.0)	3.0 (4.3)	p≤0.001*
Visits urgent care center for severe HA in past 12 months	0.1 (0.5)	0.05 (0.4)	p=0.02*
Visits urgent care center not due to severe HA in past 12 months	0.22 (0.8)	0.18 (0.7)	NS
Mean $ amount paid out of pocket for all prescription medication per month	$75.20 (111.8)	$58.03 (123.3)	p=0.01*

* Indicates statistical significance for between group comparisons (CM vs. EM) after controlling for age, gender & income
NS= not significant

CONCLUSIONS

- CM is associated with higher levels of impairment, lost productivity, and utilization of healthcare services when compared to EM.
- These differences may reflect clinically and biologically important distinctions between CM and EM.
- Knowledge of these differences will help to inform treatment decisions and may help to improve treatment outcomes.

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