Migraine can be classified into 3 distinct transition stages based on attack frequency: low episodic migraine (LFEM), high frequency episodic migraine (HFEM) and chronic migraine (CM) as depicted in Figure 1. Transitions occur in the direction of increasing and decreasing frequency and are influenced by both modifiable and non-modifiable risk factors (Lipton RB. 2009). Each year, approximately 2.5% of EM sufferers develop CM (Bigal et al., 2008). Though predictors of migraine progression have been studied, data are limited on the rates and predictors of CM remission and persistence.

METHODS

The AMPP study is a longitudinal, prospective, population based, mailed questionnaire survey. The survey included questions regarding but not limited to headache frequency, severity, and symptomology, demographics, common comorbidities, medication taking habits, health care utilization, and the Migraine Disability Assessment (MIDAS).

In 2005, questionnaires were sent to 24,000 severe headache sufferers identified in a previous US population survey and followed annually in 2006 and 2007. CM subjects (ICHD-2 migraine; ≥15 headache days/month) were identified in 2005 and had to have 3 consecutive years of follow-up to be included in this analysis.

RESULTS

Rates of remission and persistence were calculated. Body mass index (BMI), depression (PHQ-9), age of headache onset, allodynia (ASC), medication utilization, MIDAS, headache day frequency and current preventive therapy were examined as potential predictors by assessing both between and within group effects.

The subject pool included 383 individuals with CM in 2005 and who contributed 3 years of data. Of subjects with CM in 2005, 52.7% (n=2038) had CM in at least one year of follow-up and 64.6% (n=292) had either CM or HFEM in at least one year of follow-up. Approximately 22% (n=442) had CM in all 3 years (ie. persistent CM) while 26% (n=100) had CM in 2005 but had either LFEM or no headache or probable migraine, or episodic tension-type headache, or other episodic headache in both 2006 and 2007 (ie. remitted CM). (Figure 2)

With regard to predictors of remission, all models were adjusted for age, sex, race, population density, geographic region and household income. Exploratory analysis suggests that the depression, MIDAS, BMI, age of headache onset, allodynia, medication utilization by class did not significantly predict remission of CM.

Headache day frequency did predict remission with the more headache days per month a CM sufferers had, the less likely they were to remit. (OR=0.80 (0.75, 0.85), P≤0.001).

In addition, the current use of preventive therapy did predict remission; however, those CM sufferers utilizing a preventive therapy were half as likely to remit [OR=0.45 (0.24, 0.84), P≤0.01].

With regard to predictors of remission, all models were adjusted for age, sex, race, population density, geographic region and household income. Exploratory analysis suggests that the depression, MIDAS, BMI, age of headache onset, allodynia, medication utilization by class did not significantly predict remission of CM. (Figure 2)