Topiramate Versus Amitriptyline for Migraine Prophylaxis: A Multicenter, Randomized, Double-Blind, Parallel Treatment Group Trial

Objective: Compare the relative efficacy and safety profiles of topiramate and amitriptyline for migraine prophylaxis.

Background: Topiramate has U.S. regulatory approval for migraine prophylaxis in adults. Amitriptyline is also used for migraine prophylaxis, but without U.S. regulatory approval.

Methods: Eligible subjects (≥18 years) with episodic migraine (ICHD) were treated with topiramate 100mg/d or amitriptyline 100mg/d (26 weeks). A non-inferiority analysis using migraine episode rate reduction as a primary outcome variable was performed to establish parity on efficacy as a basis for conducting additional pre-specified secondary analyses.

Results: Mean monthly migraine episode rate reductions were similar in intent-to-treat subjects receiving topiramate (n=172: 2.6 days) or amitriptyline (n=159: 2.7 days; *P*=0.877). Mean weight change from baseline: topiramate -2.38±4.21kg; amitriptyline +2.37±3.90 kg. Percentage of subjects having weight increases of 5 to <10% were 3.4% and 18.3% for topiramate and amitriptyline respectively; increases ≥10% were 0.6% and 8.3%. Topiramate resulted in statistically significant improvements in all 3 domains of the Migraine-Specific Quality-of-Life Questionnaire (MSQ) compared to amitriptyline. Improvements in the Quality of Life–Enjoyment and Satisfaction Questionnaire–Short Form (Q-LES-Q-SF) and Migraine Disability Assessment (MIDAS) were similar for both treatments. The most commonly reported treatment related AEs: topiramate -- paresthesia (30%), fatigue (17%), somnolence (12%), hypoesthesia (11.0%), nausea (10%); amitriptyline -- dry mouth (35%), fatigue (24%), somnolence (18%), weight gain (14%), dizziness (11%).

Conclusions: Mean monthly migraine episode rate reductions for topiramate and amitriptyline were comparable, but topiramate significantly improved MSQ compared to amitriptyline and was less often associated with weight gain.

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