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FULL LENGTH ORIGINAL RESEARCH

Epilepsia®

Open-label study to investigate the safety and efficacy of adjunctive perampanel in pediatric patients (4 to <12 years) with inadequately controlled focal seizures or generalized tonic-clonic seizures

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Abstract

Objective: Study 311 (NCT02849626) was a global, multicenter, open-label, single-arm study that assessed safety, tolerability, pharmacokinetics, and pharmacokinetics/pharmacodynamics of once-daily adjunctive perampanel oral suspension in pediatric patients aged 4 to <12 years with focal seizures (FS) (with/without focal to bilateral tonic-clonic seizures [FBTCS]) or generalized tonic-clonic seizures (GTCS).

Methods: In the 311 Core Study, a 4-week Pre-treatment Period (Screening/Baseline) preceded a 23-week Treatment Period (3-week Titration; 12-week Maintenance) and 4-week Follow-up. Endpoints included safety/tolerability (primary endpoint), median percent change in seizure frequency per 28 days from Baseline (Treatment Period), and 50% responder and seizure-freedom rates (Maintenance Period). Patients were stratified by age (4 to <7; 7 to <12 years) and concomitant enzyme-inducing anti-seizure drug (EIASD) use.

Results: One hundred eighty patients were enrolled (FS, n = 149; FBTCS, n = 54; GTCS, n = 31). The Core Study was completed by 146 patients (81%); the most common primary reason for discontinuation was adverse event (AE) (n = 14 [8%]). Mean (standard deviation) daily perampanel dose was 7.0 (2.6) mg/day and median (interquartile range) duration of exposure was 22.9 (2.0) weeks. The overall incidence of treatment-emergent AEs (TEAEs; 89%) was similar between patients with FS (with/without FBTCS) and GTCS. The most common TEAEs were somnolence (26%) and nasopharyngitis (19%). There were no clinically important changes observed for cognitive function, laboratory, or electrocardiogram (ECG) parameters or vital signs. Median percent reductions in seizure frequency per 28 days from Baseline were as follows: 40% (FS), 59% (FBTCS), and 69% (GTCS). Corresponding 50% responder and seizure-freedom rates were as follows: FS, 47% and 12%; FBTCS, 65% and 19%;