**INTRODUCTION**

Dravet syndrome is a rare, severe, treatment-resistant, developmental disorder of epilepsy. This condition, which primarily affects infants and young children, is characterized by a sudden onset of severe, frequent, prolonged seizures that can be life-threatening. Over 90% of patients with Dravet syndrome have a mutation in the SCN1A gene, which encodes a sodium channel.

**METHODS**

**Subjects**

A total of 76 pediatric and young adult patients with Dravet syndrome whose seizures were not completely controlled by their current treatment were enrolled in two Phase 3, randomized, placebo-controlled, double-blind clinical trials (NCT02803927, NCT03386551). Patients were at least 6 months old and had a body weight ≥5 kg and ≤130 kg. Exclusion criteria included previous treatment with ZX008 (Fenfluramine HCl Oral Solution) and concomitant use of other investigational agents.

**Study Design**

In both studies, patients were randomized 1:1:1 to receive multiple doses of ZX008 or placebo during a 14-week titration and maintenance period. The primary endpoint was the reduction in convulsive seizure frequency by week 14 and was compared between ZX008 groups and placebo. Additional safety assessments included vital signs, laboratory tests, and ECGs.

**Results**

**Safety**

ZX008 was generally well tolerated at doses ≤30 mg/kg/day, with most adverse events (AEs) being mild or moderate. The most common AEs were decreased appetite and weight loss. There were no cardiac safety issues reported.

**Efficacy**

The percent reduction in convulsive seizure frequency during treatment compared to baseline was significantly greater in the ZX008 0.2 mg/kg/day group compared to placebo (p=0.001). The median percent reduction from baseline to the combined 14-week titration and maintenance periods was 46.1±40.7% for ZX008 0.2 mg/kg/day and 17.5±31.4% for placebo.

**CONCLUSIONS**

ZX008 (Fenfluramine HCl Oral Solution) represents a significant advance over existing treatments for Dravet syndrome. Further studies are needed to evaluate its long-term safety and efficacy in this patient population.