The safety, tolerability, and effectiveness of PTL-101, an oral cannabidiol formulation, in pediatric intractable epilepsy: A phase II, open-label, single-center study

Background Information

The results of the trial showed Satipharm CBD Capsules were safe and tolerable for use and demonstrated a potent seizure-reducing effect among pediatric patients with TRE.

Specifically, the results of the trial included:

- The median reduction of monthly seizures was -82% in the 12-week treatment period in treatment-resistant children when added to current medications.
- 9/16 patients (56%) who started the treatment had a reduction of at least 50% in total number of seizures during the entire treatment period, compared to observation.
- Following 12 weeks of treatment, 8/11 patients (73%) were rated as “very much improved/improved” in overall condition on the Caregiver Global Impression of Improvement scale and 9/11 patients (82%) were rated as “very much reduced/reduced” on that scale.
- A mean 73.4% reduction from baseline monthly seizure frequencies was observed.
- Two patients were fully seizure-free within 5 weeks of treatment.
- An additional seven patients reported >50% seizure frequency reduction.

The research*, entitled **‘The safety, tolerability, and effectiveness of PTL-101, an oral cannabidiol formulation, in pediatric intractable epilepsy: A phase II, open-label, single-center study’**, was conducted by Alexis Mitelpunkt, Uri Kramer, Moran Hausman Kedem, Efrat Zilbershot Fink, Rotem Orbach, Veronika Chernuha, Aviva Fattal-Valevski, Lisa Deutsch, Daphna Heffetz, Hagit Sacks and published on 5th August by Elsevier in the **Journal of Epilepsy & Behavior**.

Commenting on Satipharm CBD Capsules, the authors of the research said: “This work demonstrated the potent seizure-reducing effect of relatively low PTL-101 doses among pediatric patients with TRE over a 12-week period.”

“The convenient drug form fostered patient adherence, which brought to a high responder rate and considerable overall improvements. Moreover, the novel formulation was associated with a safety profile superior to those of standard oral CBD preparations, with no reports of psychotropic effects or other severe adverse effects” the authors also commented.

The authors recommended additional controlled and blinded studies with larger patient cohorts, to further establish the effectiveness of PTL-101, including its long-term efficacy and safety.

*** Research reference:**

The safety, tolerability, and effectiveness of PTL-101, an oral cannabidiol formulation, in pediatric intractable epilepsy: A phase II, open-label, single-center study by Alexis Mitelpunkt a,b,*, Uri Kramer a,b, Moran Hausman Kedem a,b, Efrat Zilbershot Fink a, Rotem Orbach a, Veronika Chernuha a, Aviva Fattal-Valevski a,b, Lisa Deutsch d, Daphna Heffetz c, Hagit Sacks c

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Trial Overview and Results

This phase II, prospective study was open to pediatric patients with TRE on stable antiepileptic drugs' (AEDs) doses, who experienced ≥ 4 seizures within four weeks of enrolment and with a history of ≥ 4 AEDs failing to provide seizure control.

Following a 4-week observation period, patients began a 2-week dose-titration phase (up to ≤25 mg/kg or 450 mg, the lower of the two), followed by a 10-week maintenance treatment period. Care-givers recorded seizure frequency, type, and severity and ranked their global impressions after 7 and 12 weeks of treatment. Responders were those showing a ≥50% reduction from baseline monthly seizure frequency. Safety assessments monitored vital signs, adverse effects, physical and neurological exams, and laboratory tests.

Results: Sixteen patients (age: 9.1 ± 3.4) enrolled in the study; 11 completed the full treatment program. The average maintenance dose was 13.6 ± 4.2 mg/kg. Patient adherence to treatment regimens was 96.3 ± 9.9%. By the end of the treatment period, 81.9% and 73.4 ± 24.6% (p b 0.05) reductions from baseline median seizure count and monthly seizure frequency, respectively, were recorded. Responders' rate was 56%; two patients became fully seizure-free. By study end, 8 (73%) caregivers reported an improved/very much improved condition, and 9 (82%) reported reduced/very much reduced seizure severity. Most commonly reported treatment-related adverse effects were sleep disturbance/insomnia, (4 (25.0%) patients), followed by somnolence, increased seizure frequency, and restlessness (3 patients each (18.8%)). None were serious or severe, and all resolved.

About Treatment Resistant Epilepsy (TRE)

Epilepsy encompasses a wide range of chronic syndromes characterized by recurrent, unprovoked, and unpredictable seizures. The disease is estimated to affect over 65 million people worldwide, including approximately 0.6% of children under the age of 18 [1], 82% of whom will be under the age of 10 [2]. Treatment-resistant epilepsy (TRE), defined as failure to achieve sustained seizure remission after appropriate calibration of at least two antiepileptic drugs (AEDs), affects approximately 30% of patients with epilepsy [3]. Apart from the severe morbidity and significantly increased mortality among patients with TRE [4], [5], early onset

comes along with high incidence of cognitive, behavioral, motor, and neurodevelopmental delays [6].

References

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