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A Systematic Review of Cannabidiol as an Adjunct Treatment for Pediatric Drug-Resistant Epilepsy

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Purpose:
Epilepsy is a brain disorder that causes seizures and affects more than 50 million people globally (World Health Organization, 2019). Although current anti-epileptic medications offer effective symptom management for many patients, up to 30 % of patients with epilepsy do not respond adequately to this class of pharmacological therapy (Kwan & Brodie, 2000). Drug-resistant epilepsy is defined as the unsuccessful trial of two appropriately chosen anti-epileptic drugs (used as monotherapy or in combination) to attain sustained seizure relief (Kwan et al., 2010). Epilepsy that is poorly controlled can result in stigma, discrimination, economic consequences (Guerreiro, 2016), depression, anxiety, psychosis, personality disorders, increased morbidity (Perucca, Beghi, Dulac, Shorvon, & Thomson, 2004), and increased mortality (Sander & Bell, 2004). There is increasing interest in alternative therapies for DRE, including cannabidiol. Cannabidiol is a non-intoxicating compound found in cannabis plants that has anti-convulsive, anti-inflammatory, anti-oxidant, anti-psychotic, neuro-protective (Russo & Marcu, 2017), and anxiolytic properties (Blessing, Steenkamp, Manzanares, & Marmar, 2015). The purpose of this study is to conduct a systematic review of the use of cannabidiol (CBD) for children (≤18) with drug-resistant epilepsy (DRE).

Methods:
The databases searched for this review included Scopus, PubMed, Trip, Embase, Medline, Cochrane, and PsycInfo. This review adhered to Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines (Moher et al., 2015). Distiller SR software was used to screen and extract data. The outcomes that this review focused on included decrease of seizure frequency and elimination of seizure in children with DRE.

Results:
The analysis found evidence that CBD as an adjunct therapy reduces the frequency of seizures and, in some cases, eliminates the occurrence of seizures in children with DRE.

Conclusion:
The data suggest that clinicians should consider the adjunct use of CBD in children with DRE to reduce their suffering. It is imperative for nurses and healthcare leaders to understand existing literature regarding the safety and efficacy of CBD in children with DRE to help patient and families make informed decisions regarding alternative therapies for DRE.

Title:
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Keywords:
cannabidiol, pediatric drug resistant epilepsy and systematic review

Abstract Summary:
The purpose of the systematic review is to review literature and synthesize current evidence on the use of cannabidiol in children (≤18 years old) with drug-resistant epilepsy.

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