CHRD 2022: Abstract & Poster Submission Form

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Presenter Status
○ Undergraduate Students

○ Masters Student

◉ PhD Student

○ Post-Doctoral Fellows

○ Residents

○ Non-Trainee

Research Category
○ Basic Science

◉ Clinical

○ Community Health / Policy

Role in the project
☑ Design

☑ Perform Experiments

☑ Analyze Data

☑ Write Abstract

☐ _____

Title

Medical Cannabis for Symptom Management in Children with Cancer: A Systematic Literature review and Meta-analysis

Background

Despite the widespread use of medical cannabis, little is known regarding the safety, efficacy, and dosing of cannabis products in children with cancer.

Objective

Our objective is to systematically review the existing evidence base for use of cannabis products in children with cancer

Methods

This systematic review (PROSPERO ID: CRD42020187433) searched seven databases; MEDLINE (Ovid), Embase (Ovid), Cochrane Library, Scopus, Web of Science, ClinicalTrials.gov, and the ICTRP Search Portal from inception to May 2021. Abstracts and full text were screened in duplicate. Data on types-of cannabis products, doses, formulations, frequency, routes of administration, indication, type of cancer, and cannabinoid-related adverse events were extracted using the standardized data extraction form. Adverse events were pooled as Relative Risk with the help of RevMan.

Results

Of 29,906 identified citations, 19 unique studies (1,927 participants) with pediatric cancer patients were included; 8 retrospective chart reviews, 7 randomized controlled trials, 2 open-label studies, and 2 case reports. The cannabinoids studied included delta-9 tetrahydrocannabinol (THC), delta-8 THC, levonantradol, dronabinol, nabilone, and unspecified cannabis herbal extracts. The most common indications of cannabinoids were for the management of chemotherapy-induced nausea and vomiting (12/19, 63%). Withdrawal due to adverse events was more common in participants receiving cannabinoids compared to the control group (RR 3.67; CI 0.61-21.89, 2 studies, p-value <0.0001). Drowsiness, somnolence, dry mouth, fatigue, and increased appetite were the most frequently reported cannabinoid-related adverse events. No serious cannabis-related adverse events were reported in included studies.

Conclusion

There is an overall lack of thorough evidence to inform the dosing, safety, and efficacy of cannabinoids in children with cancer. Given the increasing interest in using cannabis, and the potential for drug-drug interactions; there is an urgent need for more research on medical cannabis in children with cancer.

Do you have a table/figure to upload?

⊙ Yes ○ No

Table 1.pdf

Authors

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Table 1. Comparison of adverse events between cannabinoids and control in included interventional studies

Adverse events	No of studies	Events		Test of heterogeneity			Test of association			
		Cannabinoids	Control	Chi square	P	I^2	RR	95% CI	Z	P
Withdrawal due to adverse events	2	5/123	1/123	0.02	0.88	0%	3.67	0.61-21.89	1.43	<0.0001
Somnolence	4	114/177	59/141	2.59	0.46	0%	1.51	1.23-1.84	4.03	<0.0001
Increase in appetite	2	7/50	0/50	0.49	0.49	0%	8	1.03-61.84	1.99	0.05
Development of high	3	67/221	7/221	1.52	0.47	0%	9	4.38-18.48	5.99	<0.0001
Dizziness	3	104/171	36/171	6.52	0.04	69%	5.47	1.23-24.26	2.23	0.03
Dry mouth	2	95/135	39/135	0.02	0.89	0%	2.42	1.85-3.16	6.48	<0.0001