Patients with dementia frequently suffer from symptoms of agitation and aggression. Clinicians have begun looking to alternative forms of treatment for these symptoms in the adult population. Some researchers have begun to look to tetrahydrocannabinol (THC) as the medical marijuana industry continues to grow. The results from these studies demonstrate promising efficacy with the use of THC, but there is small evidence of a decrease in adverse events. More research is needed to fully reach a conclusion on the clinical significance of using THC over traditional pharmacotherapy, and to change the way clinicians currently practice.

Introduction

Dementia is a disease that affects the brain and can cause serious deficits in the life of the patient and their family or caregivers. Many of the symptoms can take a toll on these patients, notably agitation and aggression. The current mainstay of treatment for these symptoms is atypical antipsychotics, and occasionally off-label SSRI's. Though these methods have shown good efficacy, the number and severity of adverse events that occur with these medications is concerning to patients, families, and providers. Due to the high side-effect profile, many clinicians are looking for an alternative approach with more safety and potentially more efficacy. Among the candidates is THC. Some preliminary trials have been done to evaluate the efficacy and safety of THC in these patients. This paper investigates the efficacy and safety of THC compared to traditional pharmacotherapy in treating agitation and aggression symptoms of dementia.

Methods

A literature search was conducted in November 2019 using Google Scholar and PubMed to find qualifying research articles to analyze. A total of seven articles were chosen based on publication date, recruitment criteria, and study design. Only studies directly studying the use of antipsychotics, SSRIs like citalopram, or THC as a treatment for agitation and aggression were used. RCT’s were favored, but retrospective analyses and retrospective studies were also accepted.

Abstract

The Efficacy and Safety of Tetrahydrocannabinol (THC) Compared to Traditional Pharmacotherapy in Treating Agitation and Aggression Associated with Dementia

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Results

   - RCT of 109 patients taking synthetic THC vs placebo for agitation/aggression.

   - RCT of 54 patients taking THC vs placebo for agitation/aggression

   - Retrospective analysis of 40 patients given THC for agitation/aggression in hospital stay.

   - Retrospective analysis of 27 patients given clozapine for agitation/aggression.

   - RCT of 186 patients taking citalopram vs placebo for agitation/aggression

   - Open-label pilot study of 11 patients given synthetic THC vs antipsychotics for agitation/aggression

7. Ahmed AIA, Geke A. H. Van Den Else, Colbers A,
   - RCT of 10 patients given THC vs placebo for agitation/aggression

Table 1: Comparison of Study Results

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<thead>
<tr>
<th>Study</th>
<th>NPI/NPI-NH</th>
<th>CGI/CGIC</th>
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References:


Discussion

The results seen from these seven studies are promising. The studies somewhat lack in sample size and direct comparison between THC and other medications, but much of the data shows a lack of bias due to double-blinding. The recruitment criteria for five of the studies was marginally adequate, showing good inclusion criteria but room for improvement, where two showed adequate recruitment criteria. Most of the studies used common outcome measures like NPI-NH, CGI, MMSE, and number of adverse events. More research is needed to overcome the faults of the present studies available.

Conclusion

There is not sufficient evidence to suggest that THC is more effective or safer than other medications like atypical antipsychotics and citalopram. The results from these studies demonstrate promising efficacy with the use of THC, but there is small evidence of a decrease in adverse events. More research is needed to fully reach a conclusion on the clinical significance of using THC over traditional pharmacotherapy, including more double-blind RCTs with higher sample sizes. More trials directly comparing the two treatment methods are also needed to better analyze the difference in efficacy and safety before changing practice.