Safety and Efficacy of Medical Cannabis in Elderly Patients

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Objective & Study Design

Objective:

Medical cannabis (MC) has become a popular treatment option among patients with chronic disorders, with 2.1 million Americans currently utilizing MC. Research is required to observe the effect of MC in an elderly population that has an 80% prevalence of ≥1 chronic disorders. We report the results of a retrospective chart review of efficacy and adverse effects (AE) in patients 75 years of age or older utilizing MC.

Methods:

204 patients met our criteria. A retrospective chart review was conducted in patients ≥75 years of age, who utilized New York State's Medical Marijuana Program's cannabis. Patients were certified and followed for at least one follow-up visit after ≥1 month on New York State MC in a neurologic outpatient setting within a neurologic outpatient setting in Buffalo, NY were eligible. Charts were reviewed for patient-reported efficacy, AE, opioid pain medicines and MC dosing.

Inclusion/Exclusion Criteria
- Certified for New York State MC by UCNS board certified physicians or their nurse practitioner/physicians assistant team.
- Patients were on MC for at least one month treatment.
- At least 75 years of age.

Subjects
- 206 patients ≥75 years of age and were certified for MC
- Patients were excluded due to lack of follow-up or inability to initiate MC 63.2% were female, 36.8% were male
- The average age was 81 years old, between 75 and 102

Study Population
- 206 patients meet inclusion criteria and initiated MC treatment.
- Reasons for failure to initiate MC treatment included:
  - Financial barriers
  - Social stigma surrounding MC

Approved by the Western Institutional Review Board.

Results

Figure 1.

Reports of improved symptoms on MC

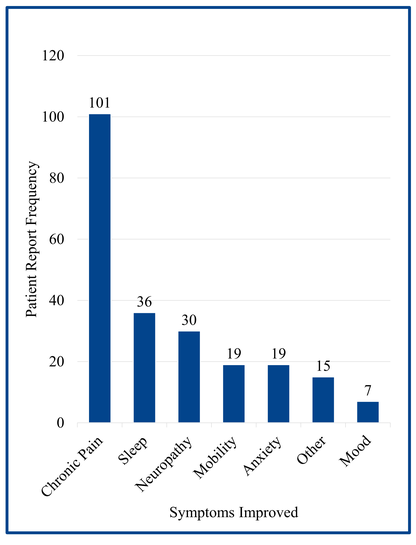
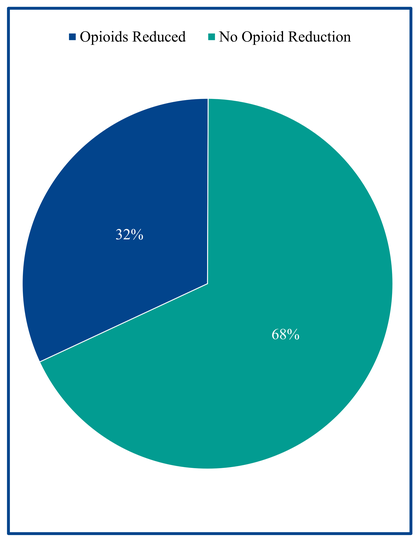


Figure 2.

Reports of opioid dosage reduction on MC



Results

Figure 3.

Patient-reported MC efficacy

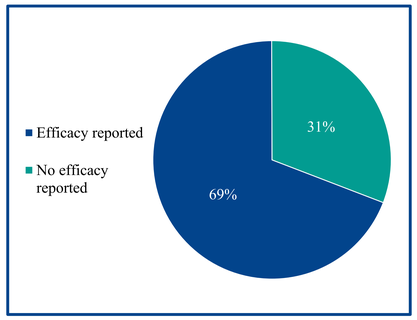


Figure 4.

Patient-reported MC AE

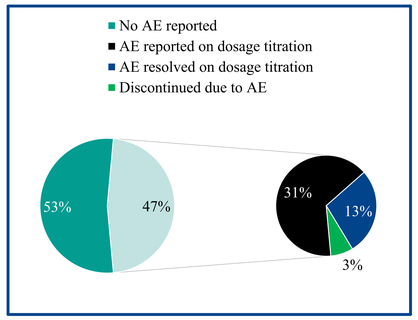


Figure 4.

Patient-reported MC AE

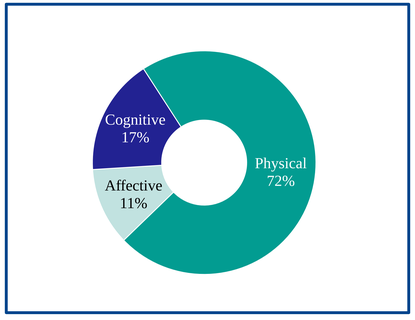


Table 1.

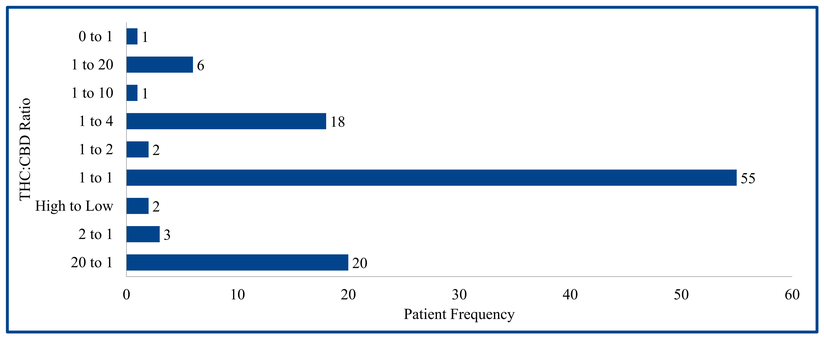
Patient-reported MC AE Breakdown

Physical AE (64 reports)	
Somnolence	*Increased Appetite
Disequilibrium	*Low Blood Pressure
Gastrointestinal Disturbance	*Slurred Speech
*Headache	*Bedwetting
*Blurry Vision	
Cognitive AE (15 reports)	
Confusion	Memory impairment
Concentration difficulties	
Affective AE (10 reports)	
*Anxiety	*Decreased Motivation
*Euphoria	*Hallucinations
*Depression	*Discomfort

* <2% of reported AE

Figure 5.

MC ratios of patients without AE



Discussion

The results of this study indicate that incorporation of MC into a comprehensive geriatric care plan from a board-certified neurologist may be beneficial for patients 75 years of age or older, particularly for opioid pain medication reduction, chronic pain, and sleep. The study population reported these changes with an average of 16.8±12.1 week use of MC. All MC use was an out-of-pocket expense, effectively excluding MC as a treatment for low socioeconomic status patient populations. In addition to cost, social stigma surrounding cannabis was a concern amongst patients who were certified for MC, but never began treatment. Both of these factors must be considered in future studies and clinical care.

MC has several known mechanism of actions, including inhibition of cyclooxygenase-2 enzyme, increase in serotonin, inhibition of L-type calcium voltage-gated channel, increase in GABA, supplementation for AEA, and prevalence of CB1R within the nervous system. However, the absence of guidelines forces physicians to practice within a large clinical evidence gap or to avoid both risks and benefits associated with MC.

This study shows that a correlation exists between geriatric efficacy and safety with MC treatment. Efficacy was appreciated over multiple indications, including pain, neuropathy, sleep, mobility, and mood. Patients using balanced tetrahydrocannabinol (THC) and cannabinol (CBD) ratios were the largest group of patients who did not report AE. Of the 45% of the study population who initially reported AE, 28% were able to eliminate AE on personalized dosage titration.

Similar to previous patient survey investigations in Europe, the three most common AE were somnolence, disequilibrium, and gastrointestinal disturbance. Future studies and clinical care should be aware of these reports and consider appropriate investigations and measures. 3% of the total study population discontinued due to AE. No severe AE were reported.

Conclusion

MC is a well-tolerated treatment with improvement noted in chronic pain, sleep, neuropathy, and anxiety in patients 75 years of age and older. AEs that resolved on dosage adjustment were noted in 13% of patients. A balanced 1:1 THC to CBD oral tincture was most commonly used in achieving these results. Randomized, placebo-controlled studies are required to further investigate optimal dosing, tolerability, efficacy, and objective AE reporting, with an emphasis on somnolence and disequilibrium.

Acknowledgements & References

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Author Disclosures:
Dr. Mechtler: Speaker for Allergan, Amgen, Avanir, Promius, and Teva
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All other authors report no disclosers.

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