

Treatment of the Geriatric Patient with Medical Marijuana (non-CME)

Marisha Chilcott, MD

Santa Rosa, CA

Neither I, nor my spouse/partner, have/had relevant financial relationships with any commercial interest relevant to the content I am presenting for this activity within the past 12 months.



Learning Objectives

- Define “geriatric patient” – It’s not a number!
- Identify therapeutic usefulness of Medical Marijuana in the geriatric patient
- List typical formulations currently available
- Describe the contraindications for using Medical Marijuana

Who Is the Geriatric Patient?

- Just as pediatric patients are not “little adults”, geriatric patients are not “old adults”
- “Older Adults” have been arbitrarily assigned the age of “Over 65”
- Concept of Geriatric Defined By:
 - Current state of frailty
 - Vulnerability due to mobility
 - Cognitive impairment



Gray, L., and J. Newbury. "Health assessment of elderly patients." (2004).

Geriatric Patients Have Conditions or Risks Specific to Aging

- Fall risk/ Balance Disruption
- Loss of Postural Flexibility and Agility
- Osteoporosis
- Osteoarthritis
- Cognitive Impairment/Dementia
- Delirium Risk
- Poly-pharmacy Complications
- Reduced renal and/or hepatic clearance
- Frailty and Weakness
- Cumulative Sequelae of Chronic Diseases
 - CAD
 - COPD/Asthma
 - Diabetes

Formiga, F., and D. Chivite. "A geriatric assessment followed by geriatric intervention is essential for elderly hospitalized patients." (2018).

Gray, L., and J. Newbury. "Health assessment of elderly patients." (2004).

Causes of Death After Age 80

- Cardiovascular Complications

- Congestive Heart Failure
- Ischemic Heart Disease

- Cerebral Vascular Accident

- Pneumonia

- Complications of Falling

- DVT
- Pneumonia

- Cancers

- Lung
- Colon
- Breast

- Dementia

- (Debility and Decline). AKA woke up dead and we don't really know why



What are the primary goals of geriatric medicine?

- Lifespan vs healthspan?
- Quality of daily living?
- Symptom management vs disease cure?
- Who is making these choices?

Patients (Or their children) are already experimenting with marijuana...

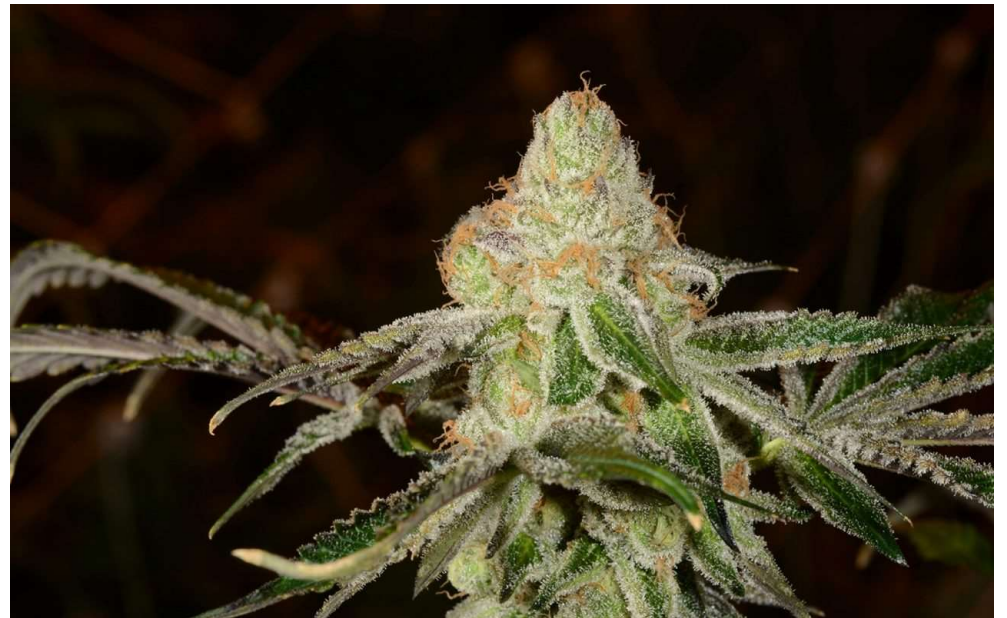
So how shall you advise them?

- Type or strains of marijuana?
- Mechanism of use?
 - Inhaled
 - Transmucosal
 - Transdermal
 - Ingested
- Polypharmacy issues!
 - Drugs can effect THC metabolism...
 - CBD can influence drug metabolism!



Primary Geriatric Medical Conditions Suitable for Treatment With Medical Marijuana

- Chronic, non-specific pain
- Neuropathic pain
 - Diabetic neuropathy
 - Post chemotherapy neuropathy
 - Idiopathic neuropathy
- Insomnia
- Anxiety
- Osteoporosis
- Degenerative Neurologic Conditions



Benbadis, Selim R., et al. "Medical marijuana in neurology." Expert review of neurotherapeutics 14.12 (2014): 1453-1465.

When Considering Formulation Ratios

- THC predominant

- Analgesic/"Opiate Type Pain Relief"
- Appetite Stimulant
- Nausea
- Sleep
- Muscle Relaxation

- CBD predominant

- Neuropathic Pain Relief
- Anti-Inflammatory
- Anxiolytic
- Cytotoxic
- Antispasmodic
- Anticonvulsant/Seizures

Partial List of Medications That Influence Metabolism of THC and CBC Via CYP3A4

INHIBITORS

- Clarithromycin & erythromycin
- Diltiazem
- Itraconazole & ketoconazole
- Ritonavir
- Isoniazide
- Verapamil
- Goldenseal
- Grapefruit (!)

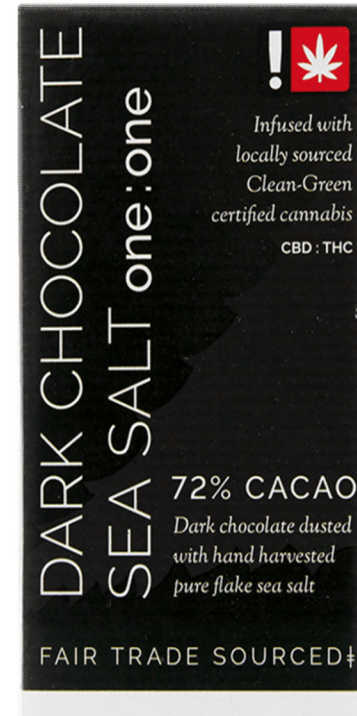
INDUCERS

- Phenobarbital & phenytoin & valproic acid
- Rifampicin
- Glucocorticoids
- Nafcillin
- St. John's Wort
- Ginkgo biloba



Chronic Pain

- Often already being treated somewhat with narcotics
 - Constipation
 - Increases risk of falls
 - Respiratory depression
- Well treated with edible THC/CBD combinations
- THC potentiates opiates without increasing respiratory depression
- May be able to taper off of narcotics



Hefter, T., Ladd, B., Magnan, R., & Fales, J. (2018). Marijuana consumption patterns in young adults with and without chronic pain. *The Journal of Pain*, 19(3), S103.

Chronic Pain

- Start with evening (HS) dosing at 2.5-5mg of THC
- Do not increase dose for at least 2 weeks
- Follow up within 4 weeks to ascertain new state of comfort and confirm *not having* psychotropic effects in AM on waking



Hefter, T., Ladd, B., Magnan, R., & Fales, J. (2018). Marijuana consumption patterns in young adults with and without chronic pain. *The Journal of Pain*, 19(3), S103.

Neuropathic Pain

- Topicals with high CBD and some, but minimal THC
- Needs to be in a greasy (lipophilic) transport vehicle to cross the dermal barrier
- Most products have other essential oils and herbals added, including lavender, calendula, and arnica



Serpell, M., et al. "A double-blind, randomized, placebo-controlled, parallel group study of THC/CBD spray in peripheral neuropathic pain treatment." *European journal of pain* 18.7 (2014): 999-1012.

Hefter, T., Ladd, B., Magnan, R., & Fales, J. (2018). Marijuana consumption patterns in young adults with and without chronic pain. *The Journal of Pain*, 19(3), S103.

Neuropathic Pain

- May also consider an oral formulation
- Again, CBD >> THC
- Or a patch form of transdermal delivery



Serpell, M., et al. "A double-blind, randomized, placebo-controlled, parallel group study of THC/CBD spray in peripheral neuropathic pain treatment." *European journal of pain* 18.7 (2014): 999-1012.

Orthopedic Pain – Osteoarthritis, Joint Trauma or Rheumatic Discomfort



- Topicals work well, but must be reapplied several times per day
- May consider a longer-acting edible
- Consider a topical that also makes use of the efficacy of Menthol and Camphor

Jensen, Bjorn, et al. "Medical marijuana and chronic pain: a review of basic science and clinical evidence." Current pain and headache reports 19.10 (2015): 50.



Insomnia and/or Anxiety

- Edible or Inhaled (Much faster acting)
- 1:1 Ratio of THC:CBD
- Administer 20-30 minutes before bed



Blessing, Esther M., et al. "Cannabidiol as a potential treatment for anxiety disorders." *Neurotherapeutics* 12.4 (2015): 825-836.

MacCallum, Caroline A., and Ethan B. Russo. "Practical considerations in medical cannabis administration and dosing." *European journal of internal medicine* (2018).

Insomnia and/or Anxiety

At follow-up appointment, be sure to assess for psychoactive components of “stoney-ness.”



Green Tea Mango
Serving contents
2.5mg THC
2.5mg CBD
10 calories

Blessing, Esther M., et al. "Cannabidiol as a potential treatment for anxiety disorders." *Neurotherapeutics* 12.4 (2015): 825-836.

MacCallum, Caroline A., and Ethan B. Russo. "Practical considerations in medical cannabis administration and dosing." *European journal of internal medicine* (2018).

Osteoporosis – Pre- and Post-Fracture

- Sublingual or tonics at low dose with multiple times per day dosing
- There is evidence that indicates because of the CB2 receptors, osteoclasts are upregulated and osteoblasts are down regulated.
- THC is a CB1 and CB2 agonist
- Be sure to also supplement with Ca²⁺, Magnesium and Vitamin D3

Kogan, Natalya M., et al. "Cannabidiol, a Major Non-Psychotropic Cannabis Constituent Enhances Fracture Healing and Stimulates Lysyl Hydroxylase Activity in Osteoblasts." *Journal of Bone and Mineral Research* 30.10 (2015): 1905-1913.

Moon, Andrew S., et al. "Marijuana use and mortality following orthopedic surgical procedures." *Substance abuse* (2018): 1-5.

Parkinson's Symptoms of Stiffness

- THCa:CBD 1:1
- Tincture under the tongue or in water
- Crystalline THCa and CBD



Balash, Yacov, et al. "Medical Cannabis in Parkinson Disease: Real-Life Patients' Experience." *Clinical neuropharmacology* 40.6 (2017): 268-272.

Cognitive Decline with Depression/Anxiety

- Tincture or Edible
- CBD predominance (little to no THC)
- Also give SQ Methylated Vitamin B12 (Methylcobalamin)



Elcombe, Emma L., et al. "Hippocampal volume in older adults at risk of cognitive decline: the role of sleep, vascular risk, and depression." *Journal of Alzheimer's Disease* 44.4 (2015): 1279-1290.

McKetin, Rebecca, et al. "A longitudinal examination of the relationship between cannabis use and cognitive function in mid-life adults." *Drug and alcohol dependence* 169 (2016): 134-140.

Contraindications

- Dementia with psychotic features
- Orthostatic hypotension (beware in Parkinson's)
- Tachyarrhythmias – especially with edible products, and especially on rate-controlling medications
- Vestibular disruptions (BPV, Meniere's, geriatric vertigo)
- Dose-dependent caution for patients on ketoconazole, macrolide antibiotics, diltiazem and verapamil

Wetherill, Reagan R., et al. "Sex differences in associations between cannabis craving and neural responses to cannabis cues: Implications for treatment." *Experimental and clinical psychopharmacology* 23.4 (2015): 238.

A Brief Word About Cancer and Cannabis in the Elderly

- RSO = Rick Simpson Oil
- General chemotherapy-related symptom amelioration

TO DATE, THERE ARE NO DEFINITIVE HUMAN TRIAL RESULTS THAT INDICATE CANNABIS CURES ANY CANCER

Questions or Comments?

For copies of these slides, please email me at mchilcott@yahoo.com