Palliative Care and the Evolving Role of Cannabis

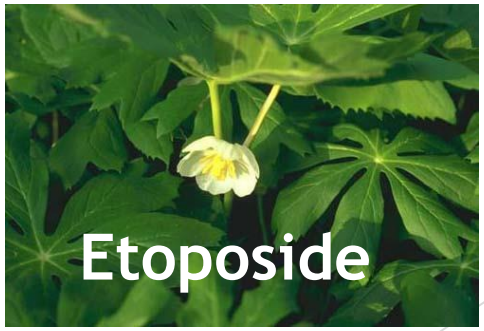
Disclosures

- Funding from Aurora for COPE study
- No speakers fees
- No consulting fees
- No investments

What’s new in Symptom Management?

Marijuana Is Natural: It Must Be Better For Me?

Poisonous



Cannabis and Cancer Symptoms

- Background information on medicinal cannabis
- Review of efficacy for 3 common symptoms
- Questions & Answers

What Is Marijuana?

- Comes from leaves, stems, and dried flower buds of the cannabis plant.
- 2 main species:
  - Sativa (THC dominant)
  - Indica (higher in CBD, more balanced CBD/THC)
  - Each species has several different strains
  - Hybrids of the 2 plants have been bred
- >700 chemicals in the whole marijuana bud
- ~70 active cannabinoids
  - **Delta-9-Tetrahydrocannabinol (THC)**
  - **Cannabidiol (CBD)**

	Onset	Peak	Duration	Bioavailability	Comments
Inhaled Vapourized/ ~~Smoked~~	5-10 minutes	10-15 minutes	2-4 hours	10-35% Depends on depth of inhalation, puff, breath-holding, temp of vaporization	Actively discourage smoking marijuana
Oral	30-60 minutes	60-180 minutes	6-8 hours Longer time if user has a full stomach	20% Significant first-pass metabolism when ingested → 2.5g oral is equivalent to 1g inhaled	If baking thorough mixing so there is equal distribution of the throughout the batch Generally safer because there are fewer effects on memory, awareness and perceptions
Sublingual/ Buccally	15-45 minutes	60-120 minutes	6-8 hours	Bit higher than oral	Directly apply a few drops under the tongue or in the cheek Hold in mouth until absorbed…about minute

Adverse Effects

No deaths have been reported from overdose

Smoking 800 “joints” (est.) are required to kill

Death is from carbon monoxide poisoning, not cannabinoid poisoning

Adverse effects are within the range tolerated for other medications

Adverse Effects

Cognitive

Dizziness

Mental slowness

Drowsiness

Slowed reaction time

Feeling Intoxicated

Lung

Mostly related to smoking or vapourizing

Chronic cough, bronchitis, COPD, lung cancer

GI

↑ Appetite, weight gain

Constipation

*****Cannabis Hyper Emesis Syndrome****

Cardiac

Tachycardia

↑BP or postural hypotension

Irregular heartbeats

Psychological

Euphoria

Dysphoria

Anxiety

Psychosis

Distortion of senses, space, and time

Hallucinations

Gateway Drug: Addiction

- Potential for dependence
  - Less than with benzodiazipines, opiates, cocaine or nicotine
- 9% lifetime addiction risk
- 16% risk of addiction for those who start in their early teens
- 25-50% of daily users addicted
- Addiction comes on insidiously
- Risk of new onset of addiction is very low after the age of 25

Why Medical Grade Cannabis Over Home Grown or Dispensary

Medical Cannabis

- Subject to strict growing and labeling regulations
- Prescriber input for strain/dose/duration
- Opportunities for education about benefits/side effects

Why Medical Grade Cannabis Over Home Grown or Dispensary

Home Grown/dispensary/recreational

- Many products tested do not meet the claims for those products
  - Study of edibles from Toronto dispensaries contained **20-50%**THC claimed
  - None of the edibles contained significant levels of CBD even when label indicated they contained CBD
  - all strains dried marijuana that claimed to have 30 per cent THC were found, when tested, to 19.6 per cent or less.
  - Requested a strain rich in CBD, compound was undetectable in the product
- Little control over presence of contaminants: insecticides, bacteria and molds/fungus
  - ? Safety for immune compromised pts

Other Information

Travel

- Ok within Canada only, do not take with you if travelling outside of Canada

- Driving
  - risks of impaired driving

- Storage
  - Out of the reach of children/animals

Synthetic Cannabinoids

- **Nabilone (Cesamet)**
  - Synthetic THC
  - Lack the balancing chemicals of the plant that boost beneficial effects and temper some of the adverse effects
  - Some find too strong/weak
  - covered by ODB
  - Usually dosed 2-3 times per day
  - Recommend starting at night and then adding daytime dose
  - Starting dose based on recent cannabis usage, age

Synthetic Cannabinoids

Sativex: (Nabiximols)

- Sublingual spray contains THC and CBD
- Approved for MS patients and palliative cancer pain
- Not covered by ODB
- Covered by some private insurance plans
- Expensive: $300/month

Effectiveness of Cannabis for Cancer Symptoms

- Chemotherapy induced nausea/vomiting
- Anorexia and weight loss
- Cancer Pain

- All info from the National Academy of Sciences Engineering and Medicine , which is a consensus guideline based on a comprehensive and extensive literature review

Chemotherapy Induced Nausea and Vomiting

- CONCLUSION There is conclusive evidence that oral cannabinoids are effective antiemetics in the treatment of chemotherapy induced nausea and vomiting.

Anorexia and Weight Loss

- CONCLUSION There is insufficient evidence to support or refute the conclusion that cannabinoids are an effective treatment for cancer-associated anorexia-cachexia syndrome and anorexia nervosa.

Pain

- There is substantial evidence that cannabis is an effective treatment for chronic pain in adults.

- HOWEVER NASEM did not do a section on cancer pain perhaps because there a few specific studies to review

Pain

- JAMA 2015 systematic review and meta-analysis
- 28 studies, 2454 pts
- Included different cannabanoids
- Generally showed improvement in pain measures OR 1.4 vs placebo
- Only 3 of the studies included cancer patients

Cancer Pain

- 2 randomized double blind controlled studies

1. 10 cancer patients (Noyes et al, 1975)
   - Some of the studied doses of THC were associated with significant pain relief
2. 36 cancer patients (Noyes et al, 1975)
   - Compared delta-9-THC with codeine
   - doses were equianalgesic to the codeine and only the higher doses of either drug produced statistically significant reductions in pain

- Limiting factor: higher doses of delta-9-THC associated with somnolence, dizziness, ataxia and blurred vision

Cancer Pain

- Portenoy et al, Journal of Pain 2012
- Multicenter randomized double-blind placebo controlled graded dose sativex study in advanced cancer patients
- Avg daily pain between 4 and 8 for at least 3 days during run in period on max tolerated opioid dose
- Randomized to one of three groups 1-4 sprays per day or 6-10 or 11-16 and could be either placebo or sativex
- 263 patients completed study

Cancer Pain

- In the high dose group only 64% were able to take the scheduled doses compared to 85 and 90% in the other groups
- Primary endpoint of 30% reduction in pain was not statistically significant
- Secondary endpoint of continuous responder rate was statistically significant in two lower dose groups as was mean average pain score and worst pain scores
- Low dose group showed a 26% change in pain score
- Sleep disturbance scores and opioid use show non-stat significant improvement in the low dose group
- Approx 20% of patients on study died from their disease while on study

Cancer Pain

Johnson et al (2012)

- 177 Terminal cancer related pain refractory to strong opioids
- 2 week trial comparing:
  - THC:CBD (60 pts)
  - THC (58 pts)
  - Placebo (59 pts)
- THC:CBD
  - produced statistically significant reduction in pain compared to placebo (-1.37 vs. -0.69)
  - Twice as many patients achieved a 30% reduction in pain over placebo (42% versus 21%)
- No statistically significant difference between THC and placebo groups in either of the above measures

Cannabis Oil for Pain Effectiveness (COPE)

PI- M. Slaven

Sponsor- Aurora

Monitor- OCOG

COPE Study Objectives

- Objective is to improve the management of cancer pain by administering cannabis oil.

- **Secondary Objectives**

- To assess toxicity, functional status, anxiety, neuropathic pain, overall wellbeing and QOL.
- To determine the feasibility of taking cannabis oil for at least 4 weeks as assessed by compliance.

COPE Study - Inclusion

Men and women with breast, prostate, lung, GU or GI cancers
Ages 25-70
ESAS pain score >2
Poorly controlled pain defined as 3 or more prn doses per day for 3 or more days per week
Estimated prognosis > 6 months

COPE Study - Exclusion

people currently on cannabis (if they are on it and willing to stop for 30 days then they can be enrolled)
Patients who are changing treatment plan whether chemo or radiation at study entry or anticipated in the near future
ECOG performance >2
MME 15< or >120

Perceptions of Cannabis by Urologic Cancer Patients

- One time survey
- Over 18 years old
- Using cannabis for > 2 months
- Did not use cannabis before cancer diagnosis

Questions?

Marissa Slaven MD

Juravinski Cancer Centre

Cannabis Cures Cancer??

- "Rick Simpson Oil"
- Numerous websites and videos that declare that "Cannabis kills Cancer"
  - Exaggerate claims
  - Omit key facts
  - Professional presentation with scientific images showing cells can be very misleading
  - Promote conspiracy theories: Big Pharma/"Cancer Care Industry" does not want people to know that Cannabis can cure cancer

Cannabis Cures Cancer??

- There are a number of preclinical studies looking at the role of cannabis in prevention and treatment of cancer
- **Only 1 pilot phase 1 trial** that looked at the safety of administering THC intratumourly to 9 pts with GBM who had failed treatment with surgery/radiation +/- temazolamide
  - Eight people's cancers showed some kind of response to the treatment initially, and one didn't respond at all.
  - All the patients died within a year, as might be expected for people with cancer this advanced
- **Reality is that cancer is a complex family of disease, and it is unlikely that there will ever be a single cure.**
- **??? About interactions with chemotherapy and immunotherapy are unknown**
- Good site to look at to review the debate: Https://www.Iflscience.Com/health-and-medicine/cannabis-cannabinoids-and-cancer-%e2%80%93-evidence-so-far/

A Palliative Approach to Care

- Includes attention to the biopsychosocial and spiritual needs of patients living with life threatening illnesses and their families
- Seeks to maximize quality of life
- Is delivered by an interdisciplinary care team which can include doctors (both primary care and specialist), nurses, social workers, chaplains/spiritual support, bereavement councilors, child life councilors, nutritionists, occupational and physical therapists

The Physician Role in a Palliative Approach to Care

- Help patients and families to access appropriate services
- Provide pain and symptom management
- Facilitate serious illness conversations and advanced care planning

Dosing

- Patient determined self-dosing model
- Highly individualized
- Always start low and go slow!
- Titrate slower for products containing more THC
- Search for symptom relief with no adverse side effects
- Tolerance does not develop to benefits meaning that over time dose escalation is generally not observed
- “More is not always better” (eg. Sm/mod dose can help reduce anxiety, big dose can cause more anxiety)