

Medical Marijuana Use in Patients with History of Head and Neck Squamous Cell Carcinoma Treated with Radiotherapy



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Purpose

Oregon has legalized medical marijuana (MM) under Oregon's Medical Marijuana Program (OMMP). We have a group of patients with history of head and neck cancer (HNC) treated with radiotherapy that report using MM to help with long-term symptoms. The specific aim was to learn why these patients use MM.

Methods

A non-randomized, Oregon Health and Science University (OHSU) institutional review board approved, exploratory study of 15 patients diagnosed with head and neck cancer treated with radiotherapy or chemoradiotherapy at OHSU who have enrolled in the OMMP with no evidence of recurrence of metastatic disease.

Four questionnaires were sent to eligible patients, including EORTC QLQ-C30 (Version 3.0), EORTC QLQ-HN35, QOL-RTI/HN, and our own medical marijuana quality of life questionnaire (QOL-HN/MM).

The QOL-HN/MM is a patient-related outcome (PRO) tool that was developed for this study by the investigators at OHSU consisting of health care professionals well-versed in the management of head and neck cancer patients treated with radiotherapy. The questionnaire consists of 12 questions designed to verify site specific treatment and use of medical marijuana with mostly yes and no style questions. The questionnaire targets head and neck cancer specific symptoms including: pain, anxiety, appetite, sticky saliva, dry mouth, difficulty swallowing, maintaining or gaining weight and depression. Frequency and modality of marijuana use is also collected as well as open-ended questions to allow subjective feedback of use. The questionnaire is designed to objectively explore and more fully characterize their quality of life and reasons for using medical marijuana. This data was analyzed using descriptive statistics with reports including patients handwritten subjective responses to marijuana's effect on their appetite and other self-reported symptom relief attributed to marijuana use.

Each patient was contacted via telephone by the investigators prior to receiving the questionnaire to verify address. A packet consisting of a cover letter inviting them to participate in the study with assurance of anonymity, the four questionnaires and a self-addressed stamped return envelope was mailed out to each patient.

Methods

QOL-HN/MM Questionnaire

Medical Marijuana for H&N Cancer Questionnaire

Please DO NOT place your NAME on this Questionnaire

- Do you have a history of Head and Neck Cancer treated with radiation? (yes/no)
- How long has it been in months since you last received radiation? (____ months)
- To the best of your knowledge, are you cancer free? (yes/no)
- Do you use Medical Marijuana to help with side effects of your head and neck cancer or the treatment you received for your cancer? (yes/no)
 - If yes, please go to Question #6
 - If no, please go to Question #5
- Do you use Medical Marijuana for a condition UNRELATED to your head and neck cancer? (yes/no)
 - If yes, what is the condition?
 - If no, do you use Medical Marijuana at all?
- Do you use Medical Marijuana to help with any of the following:
 - Anxiety that your cancer may come back (yes/no)
 - Anxiety that you may develop another cancer (yes/no)
 - Pain (yes/no)
 - If yes, where is your pain located?
 - If yes, on a scale of 1 to 10 (1 being little pain and 10 being the worst pain you have ever had) what is your pain level?
- Do you ever use Medical Marijuana for NON-Medical Recreational use (i.e., to get "high")? (yes/no)
- Did you ever use marijuana prior to having a medical reason? (yes/no)
 - If yes, how often:
 - Less than 1 day per month
 - 1-5 days per month
 - 6-10 days per month
 - 10+ days per month
- Do you use other medicines for your pain?
 - If yes, what medicine do you use?
- Dry mouth (yes/no)
- Sticky saliva (yes/no)
- Difficulty chewing (yes/no)
- Painful mouth opening (yes/no)
- Difficulty swallowing (yes/no)
- Painful swallowing (yes/no)
- Painful neck or jaw spasms (yes/no)
- Lack of appetite/anorexia (yes/no)
- Lack of sense of taste or altered sense of taste (yes/no)
- Trouble gaining/maintaining weight (yes/no)
- Depression (yes/no)

Thank You

Please DO NOT sign this questionnaire or place any identifying information on these forms to maintain your Privacy

Results

Table 1. Patient characteristics

	N=15
Median Age, years, (R)*	64 (52 - 69)
Male, no. (%)	15 (100)
Follow up, median, mths (R)	45 (21 - 136)
Treatment	
Chemoradiotherapy (%)	10 (66)
Radiotherapy Alone (%)	2 (13)
Surgery/Chemoradiotherapy (%)	2 (13)
Re-Irradiation (%)	1 (7)
Subsite	
Oropharynx (%)	12 (80)
HPV (% of oropharynx)	7 (58)
Not tested for HPV	4 (33)
Oral Cavity	1 (7)
Larynx	2 (13)
Histology	
Squamous cell carcinoma (%)	15 (100)

*Age at the time of survey

Table 2. Current and Previous Marijuana Use

Marijuana Use	Number of patients
Recreational Use - To get "High"	6 (40%)
Prior Use	12 (80%)
Frequency of prior use*	
<1/month	3 (20%)
1-5/month	2 (13%)
6-10/month	2 (13%)
10+/month	4 (27%)
Frequency of current use	
<1/month	1 (7%)
1-5/month	0
6-10/month	0
10+/month	2 (13%)
Once Daily	7 (47%)
More than once daily	5 (33%)
Preferred Modality**	
Smoke	12
Eat	4
Vaporize	3
Other †	1

*One patient didn't quantify previous use patterns
** Some preferred multiple modes of use
†One patient made his own concentrated oil to take orally as drops

Patient	QOL-RTI/HN Mean +/- SD	Anxiety	Pain	Other Narcotics for Pain Management	Xerostomia	Sticky Saliva	Difficulty Chewing	Trismus	Dysphagia	Odynophagia	Muscle Spasm	Lack of Appetite	Altered Sense	Weight	Depression
1	5.2 +/- 3.6	N	*	N	N	N	N	N	N	*	Y	N	N	Y	N
2	5.1 +/- 3.9	N	Y	Y	Y	N	Y	N	Y	N	Y	Y	Y	Y	Y
3	4.6 +/- 3.5	N	N	N	N	N	N	N	N	N	N	Y	N	Y	N
4	4.8 +/- 2.7	N	Y	N	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y
5	6.2 +/- 1.9	N	*	N	Y	Y	N	N	N	N	N	N	Y	Y	*
6	4.6 +/- 3.3	Y	Y	Y	Y	Y	Y	N	Y	N	N	Y	Y	Y	Y
7	6.4 +/- 2.0	N	Y	N	N	N	N	N	N	Y	Y	Y	Y	N	Y
8	5.0 +/- 3.7	N	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N
9	7.9 +/- 2.7	N	Y	N	*	*	*	*	*	*	*	*	*	*	Y
10	5.9 +/- 3.3	Y	*	N	N	N	N	N	N	N	N	N	Y	Y	Y
11	4.8 +/- 3.3	Y	Y	Y	Y	Y	N	Y	Y	N	Y	Y	Y	Y	Y
12	3.8 +/- 4.5	N	Y	*	N	N	N	N	Y	N	Y	Y	Y	Y	Y
13	4.4 +/- 3.4	Y	Y	N	N	N	Y	N	Y	N	N	Y	N	Y	Y
14	7.6 +/- 3.6	Y	Y	N	Y	Y	N	N	Y	N	Y	N	Y	N	N
15	5.1 +/- 4.8	N	Y	Y	Y	Y	N	N	Y	N	Y	Y	Y	N	Y
Totals (%)		5 (33)	10 (67)	5 (33)	8 (53)	7 (47)	5 (33)	2 (13)	9 (60)	2 (13)	7 (47)	9 (60)	11 (73)	11 (73)	10 (67)

Table 3. Individual patient responses describing symptoms improved with medicinal marijuana use as well as the use of other narcotics. QOL-RTI/HN individual mean score is reported, a Likert scale of 1-10 is used, a higher value corresponds to better quality of life. Y- MM used to help manage symptom. N- MM not used to manage symptom. * - No answer.

Results

- 15 patients with a 100% response rate
- 12 patients (80%) reported previous use of marijuana. Six patients (40%) reported the use of marijuana recreationally, or to get "high"
- MM use was mostly daily or more than once daily
- Most common mode of use was smoking. Patients also consumed marijuana orally and used vaporizers. A single patient reported that he made his own "concentrated" oil to use as oral drops
- Ten patients reported pain as a symptom managed by medical marijuana with five (50%) of those patients currently using a secondary narcotic to assist with pain management.
- Odynophagia was not a common symptom reported (13%)
- Pain, depression, weight, dysphagia, lack of appetite, altered sense were all common symptoms patients reported improved by medical marijuana use
- Of this cohort, twelve patients (80%) were treated for oropharynx squamous cell carcinoma and seven patients had a known association of HPV. One of the five remaining patients had a negative p16 immunostain; the other four patients had an unknown HPV status.

Conclusion / Discussion

- Medical marijuana is used by patients successfully treated by radiotherapy for head and neck cancer to manage long-term symptoms of pain, depression, weight, dysphagia, altered sense and for appetite stimulation.
- The PRO metric (QOL-HN/MM). created by the authors may prove useful in further investigation in the use of medicinal marijuana and its effects on quality of life in head and neck cancer patients.
- As medical marijuana use continues to increase, further investigation of its benefits and shortcomings is warranted. In our small cohort, patients express a subjective improvement in symptom management of expected side effects following radiotherapy.