

# Symptom Management and Quality of Life of Palliative Cancer Patients After Being Administered with Thai Medicinal Cannabis

Ranee WONGKONGDECH<sup>a,b</sup>, Narisara PANSILA<sup>d</sup>, Pichit NONETOOM<sup>c</sup>,  
Niruwan TURNBULL<sup>b,c</sup> and Adisorn WONGKONGDECH<sup>b,c,1</sup>

<sup>a</sup>*Faculty of Medicine, Mahasarakham University*

<sup>b</sup>*Public Health and Environmental Policy in Southeast Asia Research Cluster (PHEP-SEA), Mahasarakham University*

<sup>c</sup>*Faculty of Public Health, Mahasarakham University*

<sup>d</sup>*Chiang Kwan Hospital, Roi-et Province*

<sup>e</sup>*Sawang Dandin Crown Prince Hospital, Sakhon Nakhon Province*

**Abstract** This cross-sectional aimed to; 1) to explore the symptom management and quality of life (QoL) of palliative cancer patients, 2) to compare the perceived QoL outcomes between the patient who received standard treatment (ST) and who were treated with Cannabis treatment (CT). The study was carried out between 1<sup>st</sup>February to 30<sup>th</sup> September 2021 from two hospitals in Roi-Et Regional Hospital and Sawang Dandin Crown Prince Hospital in Thailand. Using the EORTCQLQ-C30 and PPS assessment form, analysing with descriptive statistics, comparing mean scores for two patient groups by Independent T-test. The results found that patients of CT groups had a very high level of QoL while ST group had a high level. The consistency was statistically significant for overall QoL scores of CT higher than ST group (P-value < 001.0) both Cognitive functioning and Dyspnea symptoms (p-value=.05). However, the insomnia symptom indicated ST scores was higher than CT (P-value < 001.0). The results confirm that established the efficacy and safety of medical use of cannabis was benefit for patients. Therefore, it will be enhancing healthcare professionals to take opportunities for treatment for palliative patients' care.

**Keywords** Quality of life, QOL, Palliative Cancer patients, Cannabis, Medical use, alternative medicine

## 1. Introduction

Medical cannabis has been used in palliative care to mitigate pain, relieve nausea and stimulate appetite (1) and has been shown to attain good symptom control and reduce the number of palliative care drugs used (2)(3). World Health Organization indicated that “an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness (4). Thailand was the first country in Southeast Asia to approve cannabis for medical treatment (4). There are two palliative

<sup>1</sup>Corresponding author, Adisorn Wongkongdech, Faculty of Public Health, Mahasarakham University, Kham Rieng, Kantharawichai, Maha Sarakham, Thailand 44150; E-mail: adisorn.w@msu.ac.th.

care treatment protocols allowed for cancer patients; standard treatment regime, and medical cannabis treatment. However, no studies investigate the comparative on Health-Related Quality Life (HRQoL). This study has explored and comparison of the perceived quality of life outcomes between the two treatment protocols, both the Standard treatment (ST) and the Cannabis treatment (CT).

## 2. Methods

A cross-sectional study using a face-to-face interview questionnaire of out-patients (120 cancer patients) who received ST (80) and CT (40) regimens. Participants were recruited between 1<sup>st</sup> February to 30<sup>th</sup> September 2021 in Roi-Et Regional Hospital and Sawang Dandin Crown Prince Hospital, Thailand. All participants were recruited into the study upon late-stage all cancer diagnosis, who had PPS (Palliative performance scale) (score  $\geq 50$ ), was informed of the treatment plan, such as chemotherapy, surgery, radiation therapy, morphine/other pain relief, or medical cannabis treatment. The patients have to choose their treatment protocol.

The medical cannabis treatment protocol had 3 regimens: 1) THC (1 ml = THC 12.5 mg), 2) THC: CBD 1:1 (1 ml = THC 27mg: CBD 25mg), 3) DTAM GANJA OIL (DEJA) (1 ml = THC 2 mg  $\pm$  CBD 0.5 mg) (5). The HRQoL data was collected using the 30-item version of EORTC QLQ-C30 (version 3.0), which contains five functional scales (physical, role, cognitive, emotional, and social functioning), a global QoL scale, three symptom scales (fatigue, nausea and vomiting, and pain), and six single items (appetite loss, diarrhea, dyspnea, constipation, insomnia, financial impact). The questionnaire has a 1-week time frame and uses a four-point response format (not at all, a little, quite a bit, and very much). The exception of the global QoL scale has a seven-point response format (score between 0 and 100). The QoL scales are divided into four groups; 1) Low level (mean = 1.0-2.5), 2) Medium level (mean= 2.51-4.01), 3) High level (mean= 4.02-5.52), and 4) very high level (mean = 5.53-7.0). The details of five functional and symptom scores are defined as 1) Low level (mean=1.0-2.0), 2) Medium level (mean=2.01-3.01), 3) High level (mean= 3.02- 4.02, and 4) very high level (mean=4.03-5.00). (6) This research was reviewed and approved by the Maha-Sarakham University Human Research Ethics Committee (Reference NO.105/2564) and Roi-Et Regional Hospital (Reference NO. RE 064/2563 105/2564) and Sawang Dandin Crown Prince Hospital (Reference No. SWDCPH 2021-002), based on the Declaration of Helsinki and the ICH Good Clinical Practice Guidelines (Reference No. GCP0066/2563). Written informed consent was obtained from all patients, or, their relatives.

The data was analysed with descriptive statistics and performed to compare the quality of life scores between the CT group and ST groups using Independent t-test with SPSS statistical programme (v.18). The statistically significant test with p-value<0.05.

## 3. Results

Forty participants were in the CT group (male=65%) and 80 participants in the ST group (male =62.0%). The mean ages of CT group was  $56.2 \pm 10.7$  (32-79 years) and ST group was  $63.5 \pm 9.9$  (31-71 years), most married (70%), worked in agriculture (50%), and an average monthly family income (CT=15,000 baht, ST=8,000 baht) (range from 5,000-30,000 baht) and most finished in primary school (CT=47.5%, ST=59.5%). The mean

PPS scores were  $86.5 \pm 7.7$ , and  $75.1 \pm 10.9$ , respectively. Type of cancer found as Cholangiocarcinoma (CT=30%, ST=34%), Breast cancer (CT=20%, ST=7.5%) and Colon cancer (CT=15%, ST=18.8%). They were realised that cannabis use was illegal (83.3%), they thought the opportunity to be survived (74.2%), stimulated appetite (91.7%), and sleeping comfort (35.8%). A 49.2% were previously used cannabis and used cannabis oil for convenience life. PPS scores were high level in both groups CT and ST group. The overall global health status/QoL was very high level for CT group and high level for ST group, and were statistically significant. The Functional scales were statistically significant, physical functioning, Cognitive functioning. The Symptom scales were found in Dyspnoea, and Insomnia while the average score of ST group had lower score for insomnia than CT group (see Table 1).

**Table 1.** Quality of Life level between the CT group and ST group in EORTC QLQ-C 30 measurement (n=120)

Variables	Health related treatment				
	Cannabis treatment (n=40) Mean±SD (range=70-100)	Level	Standard treatment (n=80) Mean±SD (range= 50-90)	Level	p-value
PPS score	$86.5 \pm 7.7$	High	$75.1 \pm 10.9$	High	
Global health status/QoL	$5.63 \pm 0.10$ (range=2-6)	Very High	$4.8 \pm 0.11$ (range=4-7) t=6.2, Mean diff.=0.84 95%CI=0.50-1.17	High	<0.001
<i>Functional scales</i>					
Physical functioning	1.70(0.75)	Low	1.64(0.57)	Low	0.016*
Role functioning	1.53(0.47)	Low	1.47(0.68)	Low	0.630
Emotional functioning	1.31(0.45)	Low	1.38(0.47)	Low	0.404
Cognitive functioning	1.18(0.35)	Low	1.35(0.48)	Low	0.043*
Social functioning	1.51(0.64)	Low	1.62(0.57)	Low	0.349
<i>Symptom scales</i>					
Fatigue	1.79(0.48)	Medium	1.72(0.60)	Low	0.493
Nausea & vomiting	1.08(0.27)	Low	1.11(0.28)	Low	0.563
Pain	1.83(0.81)	Medium	1.61(0.61)	Low	0.111
Dyspnoea	1.15(0.81)	Low	1.46(0.62)	Low	0.04*
Insomnia	2.68(0.92)	High	2.03(0.73)	Medium	<0.01*
Appetite loss	1.68(0.86)	Low	1.63(0.74)	Low	0.741
Constipation	1.55(0.82)	Low	1.54(0.64)	Low	0.927
Diarrhea	1.05(0.22)	Low	1.17(0.41)	Low	0.099
Financial difficulties	1.60(0.71)	Low	1.75(0.65)	Low	0.248

#### 4. Discussion

The results indicated that both ST patient group and CT patient group were high level of PPS scores as well as the QoL scores of CT group was very high versus with high level of ST group. The consistency was also statistically significant for overall QoL scores of CT higher than ST group in both Cognitive functioning and Dyspnea symptoms. The previous studies were indicated that the consistency with previous improvements seen in pain reduction, better quality of life, social life, and activity levels with chronic pain patients (6). However, in the case of symptom occurrences found ST group was accreted with CT group, this indicated that cannabinoids could also stimulate a therapeutic response via immune response enhancement (7). Particularly, the ST group who was treated with chemotherapy may feel refreshed, less fatigue, and have fewer side effects, such as nausea, vomiting, and loss of appetite from the treatment (8). Some studies argued that the patients were considered cannabis to be more effective than other drugs

(9). This cross-sectional study was conducted at the time, it was limited to contamination variables such as the amount and frequency of cannabis in the duration of their use. The palliative therapies should be available channels for alternative care, this found in Narisara et al. (10) expressed that using cannabis in CT group improved QoL and survival rate (5.66 months, 95CI=1.94-9.38). The opinions of CT patients point out that using cannabis oil dropped in their mouth were benefit the sleeping time and encourages the appetite. This will give opportunity for the survival rate.

## 5. Conclusion

The results confirmed that medicinal cannabis treatment may increase QoL for advanced of cancer patients. The finding supports the importance of early access to a palliative cannabis service, before the terminal stage of cancer. It would benefit the patient for the acceleration phase to the end of their life. However, the study has limitations on the research design as the cross-sectional study was a simple survey, it was not included for specifically topics, such the different types of cancer, stage of disease, different symptoms treatment, and the different of duration and dosage of cannabis.

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