A PILOT STUDY OF TACTILE CARE COMBINED WITH AROMATHERAPY IN PATIENTS WITH INCURABLE CANCER

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1.Introduction

Tactile care alleviates psychological distress and total pain of cancer patients. We hypothesized that aromatherapy might further enhance the efficacy of tactile care.¹⁻³⁾

2.Objectives

The aim of this study is to evaluate feasibility of this strategy on incurable cancer patients. We will also assess psychological status and biomarkers before and after the procedure by questionnaire, heart rate variability, stress makers in saliva, and emotional evaluation of the voice.

3.Methods

Hospitalized patients with incurable cancer submitted informed consent are eligible. Patients who have wounds in their soles, unstable psychological disorder, and difficulty in position change are not eligible. Registered therapist performs tactile care twice during hospitalization. Aromatherapy with essential oils of *Citrus aurantium* (Daidai) or *Lindera umbellate* (Kuromoji) are concurrently used according to patient's likings.

Tactile care (touch care from Sweden)

Promotion of secretion of oxytocin
"a happiness hormone substance"
by touching softly envelop the back
and limbs by hand

Stress reduction

Expectation:
Mitigation effect of various
and mental stress

Tactile care with
Aroma

How about?
Synergistic effect

this study

Protocol of this treatment

<TC. with aroma and no aroma>

- ① collecting saliva (before TC.)
- ② questionnaire survey and voice recording (before TC.)
- ③ attachment of heart rate (HR) sensor
- ④ start rest before TC. (start providing aroma)
before 5 min.
- ⑤ end of ④
- ⑥ start TC. treatment of the legs
during 20 min
- ⑦ end of ⑥
- ⑧ start rest after TC.
after 5 min.
- ⑨ end of ⑧ (stop providing aroma)
- ⑩ removal of HR sensor
- ⑪ questionnaire survey and voice recording (after TC.)
- ⑫ collecting saliva (after TC.)

* TC. : tactile care

Patients information

		persons	%
Patients	Ovarian cancer	1	4.2
	lung cancer	23	95.8
Performance Scale	0	11	45.8
	1	3	12.5
	2	3	12.5
	3	6	25
	4	1	4.2
Japan Coma Scale	0	22	91.7
	1	2	8.3
Numerical Rating Scale	0	16	66.7
	1	3	12.5
	2	0	0
	3	3	12.5
	4	2	8.3

(N=24, male 17, female 7)

4.Results

- HR(Heart Rate) : The effect of the tactile care treatment with aroma would continue to be longer than no aroma, and HR tends to decrease. (Fig.1).
- HF(High Frequency) : HF tends to be activated more when used in combination with aroma. (Fig.2)
- Stress reduction effect : Amylase(Amy) and Chromogranin A(CgA) in saliva tend to decrease with and no aroma. (Figs.4A and 4B)

Fig.1 HR

Fig.2 HF

Fig.3 LF/HF

no aroma
with aroma

Fig.4A Amy

Fig.4B CgA

Voice analysis was done by two different methods.

- Questionnaire results : Sleeping and Relaxing effect tends to increase with the combination of tactile care with aroma.(Fig.5)
- Voice emotional analysis :These results are expressed peace and rest, because "Anger" and "Joy" are falling, and "Calmness" and "Sorrow"tend to rise.(Fig.6)

Fig.5 Questionnaire results

Fig.6 Voice emotional analysis

As the results, tactile care with aroma would be effective for improving the QOL of the cancer patients shown in Figs.1~6. And, it was suggested that our initial hypothesis proved to be correct.

5.Conclusions

This study plans to recruit 70 patients in 5 years from April 2016 to Dec 2021. So far, 24 patients are recruited. No serious adverse events were reported.

6.References

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