



## Case Report

**Effects of oriental medicine music therapy in an ovarian cancer patient with So-Eum-type constitution: a case report**Seung-Hyun Lee<sup>a,\*</sup>, Eunhye Song<sup>b</sup>, Seul-Ki Kim<sup>c</sup><sup>a</sup> Oriental Medicine Music Therapy Center, Kyung Hee University Hospital at Gangdong, Seoul, Korea<sup>b</sup> Korea Institute of Oriental Medicine, Daejeon, Korea<sup>c</sup> Internal Medicine of Korean Medicine, Kyung Hee University Hospital at Gangdong, Seoul, Korea

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## ABSTRACT

The cancer incidence in Korea has been increasing, although there is a serious lack of supportive care for the treatment and management of the rapidly increasing number of cancer patients, and there is an immense need for therapeutic interventions to support cancer patients. A 47-year-old So-Eum-type Korean female patient, who was diagnosed with ovarian cancer, had been receiving chemotherapies. She was experiencing pain due to swelling of her hands and feet, and under extreme stress due to hardships of life. During the patient's fourth chemotherapy treatment, she received oriental medicine music therapy twice per week for 2 weeks, for 1 hour each time (4 sessions in total). A self-administered questionnaire and the visual analog scale were used to assess and determine the level of negative and positive feelings. After receiving the oriental medicine music therapy, her negative and positive feelings as well as the visual analog scale score that reflects subjective health conditions have improved and stabilized. This case report suggests the potential of oriental medicine music therapy as a complementary and alternative medical treatment method to promote and enhance quality of life and health conditions of cancer patients in postsurgical care and chemotherapy treatment.

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**1. Introduction**

Cancer is the leading cause of death in many developed nations. It is responsible for one in four deaths in Korea, and about 200,000 new cancer cases are diagnosed each year in Korea.<sup>1</sup> A study on cancer statistics between 1999 and 2011 in Korea indicates that the cancer incidence rates increased by

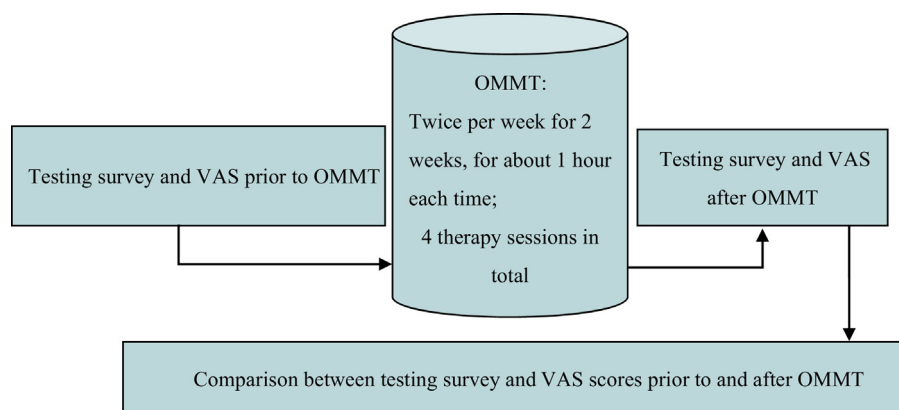
3.4% per year.<sup>2</sup> A report by the National Cancer Information Center also reveals that the crude incidence rate of cancer in Korea was 435.1 individuals (439.2 males and 431.0 females) per 100,000 people in 2011.<sup>3</sup> In comparison to 2001, the rate has sharply increased by about 48% in a decade. The number of cancer patients is growing rapidly, but cancer therapeutics and care are limited.

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**Fig. 1 – Workflow and timeline of OMMT.**

**OMMT, oriental medicine music therapy (Korean medicine music therapy); VAS, visual analog scale.**

Although cancer can be cured by surgery and chemotherapy, the treatment for cancer is not complete. There is a need for therapeutic interventions to manage and care cancer patients who experience depression, anger, and/or tiredness due to pain, psychological anxiety, declined physical strength, etc. However, supportive treatments to improve unstable health conditions of cancer patients are lacking in Korea. Recently, in the United States, patient-centered therapeutic services for cancer patient care are thought to be indispensable.<sup>4</sup> For the same reason, the importance of supportive care or complementary medicine to support insecure cancer patients has lately been recognized in Korea and are being introduced in large hospitals, and many integrative and complementary medicine centers have been established in Korea.

The authors have also recognized the need for therapeutics that enhance the immune system of cancer patients, and manage their physical and psychological health. Oriental medicine music therapy (OMMT) is a new musical therapy intervention based on theories and therapeutics of traditional Korean medicine (TKM) in the treatment and prevention of various diseases and in health promotion.<sup>5</sup> OMMT has been reported to be effective in Tae-Eum-type patients with cerebral infarction who displayed fast recoveries and increases in cerebral blood flow.<sup>6</sup> This report suggests OMMT as one of the supportive treatments for cancer by studying a *So-Eum* (SE)-type Korean female with ovarian cancer and the changes in her negative feelings in daily life, such as depression, fatigue, despondency, pain, and exhaustion, prior to and after the OMMT interventions. In addition, the report explores various options to assist cancer patients who may not be fully satisfied by surgeries or treatments.

## 2. Case Report

### 2.1. Patient information

A 47-year-old woman was diagnosed with stage 2 ovarian cancer and had a total abdominal hysterectomy in 2005 at Hallym University Medical Center, Seoul, Korea. In the following year, recurrent and peritoneal seeding of ovarian cancer was

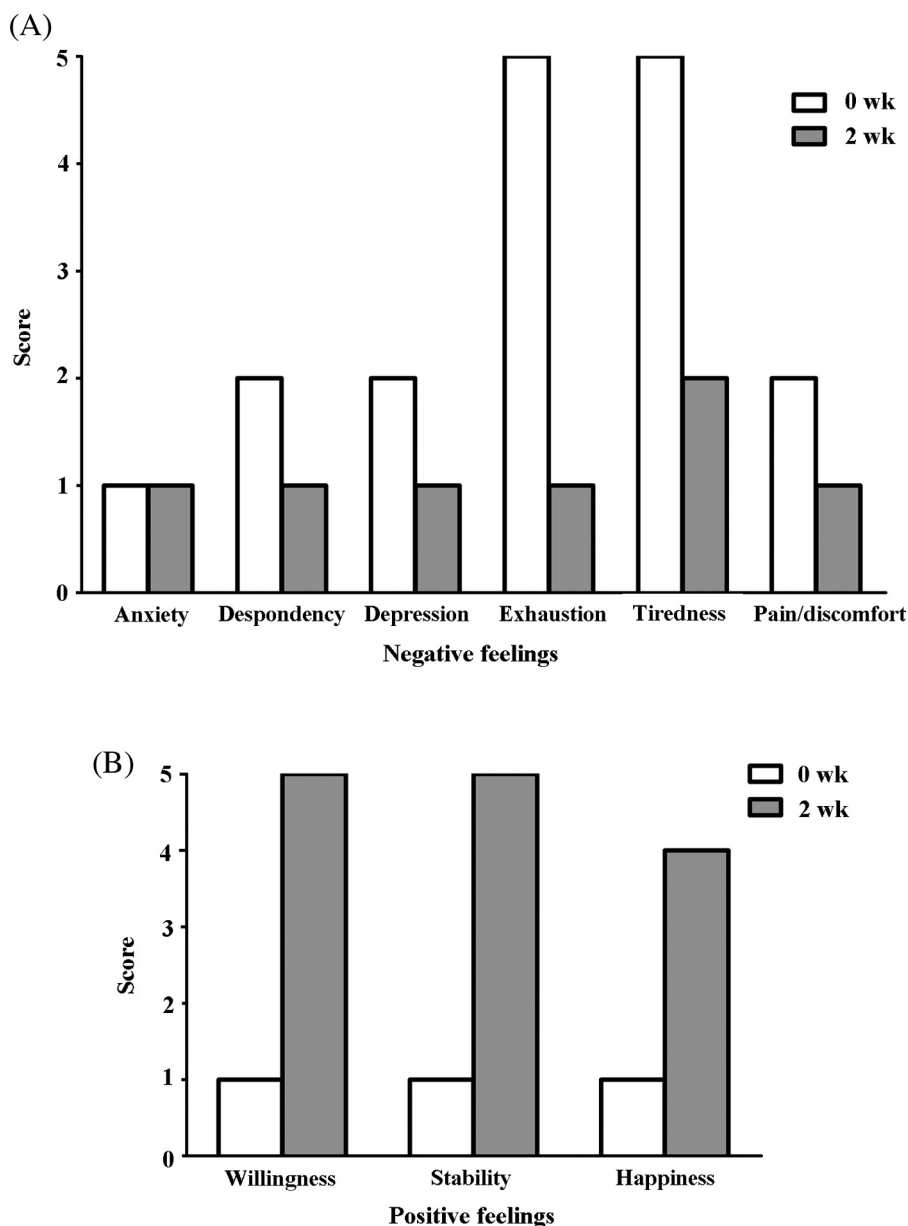
observed during the follow-up by computerized tomography scan, so she had been receiving chemotherapies at Kyung Hee University Hospital at Gangdong, Seoul, Korea. Her chief complaints were numbness on her hands due to weight gain after chemotherapy, swelling and pain in her hands and feet, and extreme stress coming from hardships of life. She was classified as an SE type at the Oriental Cancer Center of Kyung Hee University Hospital at Gangdong. The patient started receiving OMMT at the Oriental Medicine Music Therapy Center of the same hospital as an inpatient prior to the initiation of her fourth chemotherapy treatment, as her legal guardian recommended it to her. Informed consent was received prior to beginning the OMMT.

### 2.2. Therapeutic intervention

OMMT is a new approach of musical therapy that involves active participation of participants and utilizes theories and therapeutics of TKM. It facilitates the treatment and prevention of various diseases and promotes one's health by adjusting unbalanced *qi* and stabilizing an unstable mind and weak body.<sup>5,7,8</sup> Unlike the common music therapies based on behavioristic psychology that have only been used in the treatment of psychological or emotional illnesses, OMMT is concerned about the holistic health. When it is complementarily practiced with other treatments such as herbal remedy or acupuncture, faster recovery and improvement can be expected.<sup>7</sup>

Prior to the implementation of OMMT, the patient's symptoms and psychological states in her everyday life for the past week were assessed through a self-administered questionnaire. The questionnaire consisted of questions on nine items of feelings: anxiety, despondency, depression, exhaustion, tiredness, pain/discomfort, willingness, stability, and happiness. The items were sorted into categories of negative and positive feelings. The questionnaire scores were calculated on a five-point measurement scale: a score of 1 indicating never; 2, sometimes; 3, often; 4, almost always; and 5, always.

In addition, the patient's subjective health condition was self-checked using the visual analog scale (VAS) before the OMMT was carried out. The VAS is a 100 mm scale in which

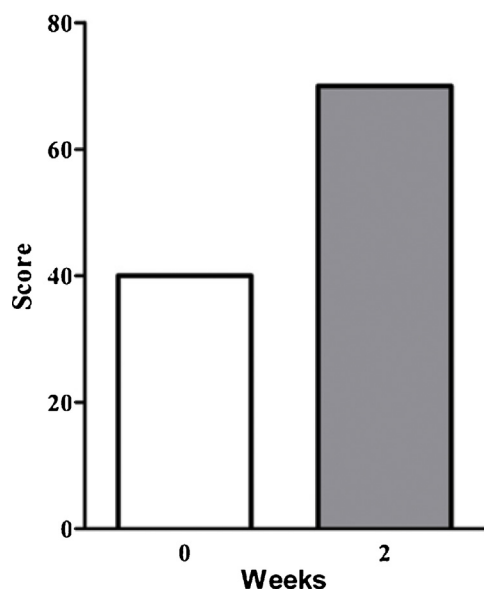


**Fig. 2 – Changes in scores based on the patient's feelings. (A) Negative feelings and (B) positive feelings.**

patients mark on the continuous line and indicate their subjective perception of their condition. It is a measurement tool that measures various subjective phenomena that cannot easily be measured directly and are useful in assessing internal changes.<sup>9,10</sup> For this case, the overall condition was marked on the VAS, with “the worst condition” at 0 mm and “the best condition” at 100 mm.

Through the patient's pulse diagnosis along with the patient's *Sasang* typology information, types and frequency of OMMT therapies to be administered were determined. Starting on August 29, 2014, the patient received a total of four sessions of OMMT. In this case, OMMT was implemented twice per week for 2 weeks, for about 1 hour each time, with several intervals in between and within the procedures depending on the patient's condition. The procedures of each session, which consisted of prescribed personalized therapies, are as follows (Fig. 1)<sup>7</sup>:

- (1) Start with abdominal breathing for 5 minutes in accordance with *Jinyangjo*, the slowest folk music rhythm that has four sets of six-beat cycles, 24 beats in total, played by *Daegeum*, a traditional Korean transverse flute made of bamboo.
- (2) Implement *Hae-Ul* (relieving stasis) music therapy, which releases stagnated energy, for 10 minutes using maracas, a type of idiophones originated from Latin America.
- (3) Implement *O-Haeng* (the 5 phases: wood, fire, earth, metal, and water) rhythm therapy, which is playing the rhythms for *qi* (energy) of liver, heart, spleen, lung, and kidney to keep the body balance, for 10 minutes using *Janggu*, a double-headed hourglass-shaped traditional Korean drum.
- (4) Implement colored keyboard therapy, which is playing a colored keyboard piano designed for anyone to play



**Fig. 3 – Change in the VAS score of the patient's overall health condition.**

**VAS = visual analog scale.**

easily by looking at a specially adapted color score, for 10 minutes.

- (5) Implement *Yang-Nan-Ji-Gi* (warm *yang qi*) therapy, which is suitable for SE type, as SE type has insufficient warm *yang qi*, the healthy energy for SE type, for 10 minutes using a music or instrumental tune that emanates *Yang-Nan-Ji-Gi*.

### 2.3. Outcomes

After the completion of OMMT, which consisted of four therapy sessions, the patient's symptoms and psychological states in her everyday life were once again assessed through the same questionnaire and the VAS she had completed prior to the implementation of OMMT. Then, changes in the patient's daily life and health condition were analyzed retrospectively through the pre- and post-questionnaire and the VAS.

The analysis on the negative feelings showed a decrease from a score of 17 to 7 (41% improvement), and the analysis on the positive feelings showed an increase from a score of 3 to 14 (more than a quadruple improvement). The results on the nine items of feelings, including anxiety, despondency, depression, exhaustion, tiredness, pain/discomfort, willingness, stability, and happiness, are shown in Fig. 2.

Moreover, there was an improvement in the VAS score of the patient's subjective overall health condition. Prior to OMMT, the patient marked at 40 mm on the scale, but after OMMT, the patient marked at 70 mm on the scale, indicating 75% improvement in the changes within the patient (Fig. 3).

## 3. Discussion

Although developing new cancer treatment methods is imperative following the recent trends of rapidly increasing cancer incidence, it is even more crucial to implement and

practice supportive treatments or therapies to improve the quality of life of cancer patients who have undergone or are going through surgeries and chemotherapies. Supportive treatments that have encouraging effects on negative feelings of cancer patients may be essential for maximizing the effectiveness of cancer treatments, as a previous study on OMMT revealed its positive effects on the immune system of blood cancer patients, as verified by their absolute neutrophil counts.<sup>11</sup> OMMT was also found to be effective in treating elementary school children,<sup>12</sup> chronic fatigue of ordinary adults,<sup>13</sup> emotions of middle-aged women,<sup>14</sup> and *hwa-byung* (fire illness or anger syndrome) patients.<sup>15</sup>

OMMT is not just listening to music, as it is a music therapy developed on the basis of holistic approaches of TKM.<sup>7</sup> TKM emphasizes and values restoration and strengthening of the balance of the five viscera (heart, liver, spleen, lungs, and kidneys) and seven emotions (happiness, anger, anxiety, thought, grief, fright, and fear).<sup>5</sup> Although OMMT is based on the seven emotions of TKM, the emotions considered in OMMT are not exactly the same. OMMT also considers one's *Sasang* typology in its prescription and intervention. *Sasang* typology is a useful tool in personalizing medical treatment and providing tailored medicine with four constitution types in relation to the concept of *yin* and *yang*.<sup>16,17</sup> OMMT therapists prescribe patient-tailored therapy interventions through pattern identification and *Sasang* constitutional medicine of TKM, and administer three to four individualized therapies out of 17 existing OMMT therapies. Therefore, as seen in this case, individually differentiated OMMT seems to have positive outcomes on the cancer patient's negative feelings.

Limitations of this case report include the lack of standardized and commonly used questionnaires such as Self-Esteem Scale, the World Health Organization Quality of Life-100, State-Trait Anger Expression Inventory, and Beck Depression Inventory. We used a simple and short questionnaire, which allowed us to conveniently and quickly carry out a subjective assessment of the patient's physical and psychological health condition according to her judgment or opinion. The questionnaire that we chose for the patient is considered to place less stress on the patient. In addition, as the case report involves only 1 patient, the outcome can only suggest the possibility of its clinical application for cancer patients, as seen in this ovarian cancer patient. Clinical trials on cancer patients are necessary for validating and investigating the effectiveness of OMMT in improving cancer patients' emotional health in general, and then on cancer patients with different *Sasang* typologies for determining the effectiveness of OMMT according to *Sasang* typology of cancer patients.

In conclusion, the patient demonstrated stability in psychological perspective. The patient's negative feelings turned positive, and her positive feelings increased even more after the implementation of OMMT. The patient's VAS scores verified a positive impact on her overall health condition after OMMT. Apparent changes included color change of her hands due to increased flow of *qi*, warmth of her hands, and improved physical movement and breathing. The patient also expressed satisfaction in her experience of OMMT. Although only one case has been discussed here, this case report supports the efficacy of OMMT. We, therefore, suggest that OMMT may be a therapeutic option in supportive cancer treatment and that

it can efficiently and safely be used to enhance the quality of life for cancer patients.

### Conflicts of interest

The authors declare no conflicts of interest.

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