

## RESEARCH COMMUNICATION

# Symptom Management in Patients with Cancer of the Female Reproductive System Receiving Chemotherapy

Yupin Phianmongkol<sup>1\*</sup>, Natthawan Suwan<sup>2</sup>

### Abstract

This study was conducted to examine the feelings, symptom management, and needs of patients with gynecological cancer receiving chemotherapy at Chiang Mai University Hospital, Chiang Mai, Thailand. During the period July 2006 and June 2007, 286 patients were recruited. The most common chemotherapeutic regimen was paclitaxel and carboplatin followed by single carboplatin and weekly cisplatin. Five severe and frequent complications were as follows: alopecia, anorexia, fatigue, nausea, and vomiting. Some 41.9% could well tolerate with such complications but 50.3% had various feelings including irritability, boredom, dejection, fear, stress, and anxiety. Anorexia was the symptom that the majority of them could best manage, 17.4% by eating as much as they can and 32.6% by selecting different foods from normal, such as fruit, sweetmeats, noodles, milk. For nausea and vomiting, 31.3% managed by eating fruit, drinking sour juice, and holding sour fruit in mouth, and 16.0% used the breathing method, eating something cold, such as ice-cream, or hot food like noodles. For health needs, 41.0% needed encouragement, care, health education, and information from doctors and nurses, and 5.0% needed care and encouragement from their family, and sympathy from neighbors and colleagues. In conclusion, gynecological cancer patients receiving chemotherapy experience a variety of feelings, symptom management, and health needs. Nurses need to explain the pathology of the occurring symptoms so that the patients can understand and accept the symptoms to lessen their negative impact.

**Key Words:** Symptom management - gynecological cancer - chemotherapy

*Asian Pacific J Cancer Prev*, 9, 741-745

### Introduction

The most common female cancers arise in the cervix and the breast. According to records taken by the Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Faculty of Medicine, Chiang Mai University during 2001-2008; incidences of gynecologic cancer were found in 706-870 female patients. The most commonly types of cancer found were cervical cancer, ovarian carcinoma, and uterine cancer, respectively. There were various treatments of cancer; i.e. LEEP, radical hysterectomy, surgical staging procedure, chemotherapy, and radiation therapy (Tangkaratt, 2004).

Chemotherapy resulted in patient's complications; i.e. neutropenia, anemia, and thrombocytopenia. The therapy also caused nausea, vomiting, fatigue, alopecia, stomatitis, constipation, and diarrhea (Kearney and Richardson, 2006; Kietpeerakool et al., 2005). It was evident that the results of cancerous condition as well as the complications both from the illness itself and the chemotherapy were serious impacts on physical, mental, emotional, and social changes.

As a result of the diseases and their impacts, the patients sought to manage such symptoms and complications resulting from the diseases and treatments

with a variety of methods according to their personal perceptions. The objective of symptom management was to prevent, mitigate, or delay the negative consequences by using medical methods, healthcare personnel, and self-care. Aspects to be considered were which method to be used, when to use it, where to use it, reason for using it, degree of application, to whom the method is suitable, and how to apply it. Advantages obtained from the efficient symptom management were improvement of symptoms, anguish abatement, no recurrence of symptoms, ability to conduct activities, and better quality of life (Dodd et al., 2001).

As a service provider, a nurse was a healthcare personnel whose duties were to take care of patients by assessing their problems and needs, or to help solve the patients' problems, or to satisfy their needs. If nurses had adequate knowledge, abilities, and experiences, were able to recognize stress-inducing situations, acquired the ability to manage the patients' symptoms efficiently, could pass on their knowledge to other nursing personnel or patients, and were well-aware of the patients' needs; they could perform efficient nursing activities, serve the patients' need, eliminate the problems, or manage such situations appropriately. Therefore, this research aimed to study various chemotherapeutic symptoms in

<sup>1</sup>Obstetric and Gynecological Nursing Department, <sup>2</sup>Fundamental Nursing Department, Faculty of Nursing, Chiang Mai University, Chiang Mai, Thailand, 50200 \*For correspondence: yupinp@mail.nurse.cmu.ac.th

gynecologic cancer patients. The research was conducted by examining all existing symptoms to learn what symptoms the patients had to suffer, which symptoms were severe, and how the patients managed such symptoms. The research also studied the patients' personal feelings toward problems and healthcare needs. This method would provide new and significant knowledge that allowed healthcare professionals to use as efficient guidelines for precisely helping patients according to the patient's problems and needs.

## Materials and Methods

### Subjects

The gynecological cancer patients referred to 286 patients diagnosed by physicians as suffering from a gynecological cancer, and recognizing herself as suffering from either cervical cancer, ovarian carcinoma, uterine cancer, carcinoma of the vulva, carcinoma of the vaginal, carcinoma of the fallopian tube, and gestational trophoblastic disease (GTD), including women experiencing molar pregnancy, and primary peritoneal adenocarcinoma; regardless of the disease stage. Admitted to the gynecological ward II, Chiang Mai University Hospital, Faculty of Medicine, Chiang Mai University, these patients were treated by at least one course of chemotherapy, regardless of the number of courses and type of chemotherapeutic agents. The patients had Thai language communication capability, a good perception, a good state of consciousness, and no serious physical complications to which their research participation could be harmful, and were willing to take part in the research. Data collection was conducted during July 2006–June 2007.

### Research instruments

1. Demographic data questionnaire: a part filled out by patients; consisting of personal data, marital and family status, and compulsory licensing entitlement.

2. Chemotherapy received and health problems record sheet: a part collected from patient's medical record by the researcher; consisting of diagnosis, stage of disease, treatment, types of chemotherapeutic agents, number of courses, complications, history of present illness and past medical history.

3. Complications of chemotherapy questionnaire: a part filled by patients, assessing by themselves the type of complications and the degree of severity on a 10-point rating scale. The scale ranged from 1-10 points; the minimum score (1 point) represented slightly severe symptom – the higher point means the more severity; while the maximum score (10 points) represented the most severe symptom. The instrument was modified from the researcher's compilation of the Oncology Treatment Toxicity Assessment Tool (OTTAT) of Youngblood & et al. (1994), a research questionnaire on a survey of common symptoms of cancer patients in southern Thailand by Ladawan et al (2005), and review of related literatures and researches.

4. Interview guideline of patients' feeling, symptom management of chemotherapy complications experience,

and health needs: a part established by the researcher from review of related literatures and researches. It consisted of questions about feelings toward the undergone complications, experiences in chemotherapeutic complication management concerning the treatment methods (how, why, who, where, and when), and results of symptom management with certain methods, as well as health needs.

## Results

It was found from the study that most subjects suffered from cervical cancer (38.8%), ovarian carcinoma (36.0%), uterine cancer (8.7%), GTD (6.3%), carcinoma of the vulva (2.1%), carcinoma of the fallopian tube (1.4%), carcinoma of the vaginal (0.3%), and primary peritoneal adenocarcinoma (4.2%), which corresponded to the theory of cancerous rate. Most subjects were treated by PT regimen (Paclitaxel + Carboplatin), by Carboplatin as the second most, then by weekly Cisplatin, and Cisplatin + 5-FU regimen respectively. The study found that the most common and severe complications were alopecia, anorexia, fatigue, nausea, and vomiting; as shown in Table 1. Furthermore, other symptoms were found; i.e. fever – probably caused by drugs itself or leukopenia, stomatitis, proctitis, and diarrhea, all of which could result in such symptoms as anorexia, fatigue, etc. Another symptom was anaphylactic-like allergic reaction that might not found so frequently as the above symptoms, but could have severe effect in some symptomatic patients, thus causing them suffering.

According to the study on the patients' feelings toward occurred complications, 120 patients (41.9%) felt that they could accept the complications and deal with the situations; while 145 patients (50.3%) felt that chemotherapy made them irritated, bored, dejected, scared, stressed, anxious, anguished, and uncomfortable - caused by the occurred complications; i.e. myalgias, jaw ache, nausea, anorexia, and fatigue. Other causes were cancerous pain, concern of being the family's burden, fear

**Table 1. Severity Averages of Complications from all Drugs given to the Subjects**

Symptom	Severity average
Nausea	2.71
Vomiting	2.13
Anorexia	3.17
Stomatitis	0.56
Tissue irritation	0.26
Rash	0.35
Hyperpigmentation	0.67
Alopecia	4.71
Diarrhea	1.12
Constipation	1.28
Fever	0.48
Fatigue	2.54
Petechiae or ecchymoses	0.20
Dysuria	0.47
Hematuria	0.03
Peripheral neuritis	1.73
Tinnitus	0.83

of death, incapability of self-care, and loss of body image due to alopecia.

According to the study on chemotherapeutic complications management, 144 patients (50.3%) had managed the symptoms. The most common symptom managed and alleviated by the patients was anorexia. In this regard, 25 patients (17.4%) attempted to eat as much as possible, while 47 patients (32.6%) chose to consume other kinds of food, i.e. fruits, sweetmeats, noodles, milk, fruit juice, and soybean milk. However, some patients still had other methods, such as eating herbs, i.e. sea holly, egg woman, and bellyache bush, or drinking orange juice; thereby increasing their appetites.

The second most symptoms managed by the patients were nausea and vomiting. Forty-five patients (31.3%) managed the symptoms by eating fruits, drinking sour juice, or holding sour fruit in mouth. Twenty-three patients (16.0%) managed the symptoms by practicing breathing techniques, drinking ginger beverage, eating cold food like ice-cream or eating hot food like noodles, and eating fruits instead of food. In addition, the patients had managed the symptoms with other methods: 19 patients (13.2%) managed fatigue by taking a rest as much as possible; 13 patients (9.0%) managed stomatitis by keeping saline in their mouth and gargling their throat very often; 17 patients (11.8%) managed alopecia by wearing wig or cap or washing their hair with baby shampoo; 12 patients (8.3%) managed peripheral neuritis by exercising and massaging hands and feet; and 30 patients (20.8%) managed constipation by eating vegetables and fruits and drinking a lot of water.

According to the study on the patient's reasons for certain symptom managing method, it was found that particular methods were used because they were recommended by physicians and nurses. The patients' data sources were primarily physicians and nurses; next were the family members, the patients themselves, and then brochures.

According to the study on the result of symptom management, it was found that most patients had their conditions improved, recovered from nausea and vomiting, got emotional improvement, and spent their money thriftily in symptom management. However, one patient who managed her diarrhea by avoiding drinking milk and Ovaltine® had not recovered from the symptom (the patient administered with weekly Cisplatin together with radiotherapy); and another patient managed her alopecia by washing her hair with baby shampoo but still suffered from it (the patient administered with Carboplatin).

According to the study on patients' health needs and their needs for help, it was found that 116 patients (41%) needed encouragement, cares, health education, information from physicians and nurses on curative treatment and chemotherapeutic agents, guidance on their conducts and self-care when certain symptoms exhibited, as well as attention on their stresses, i.e. wanting physicians and nurses to greet them with smiles, or let them listen to music or watch comedies. Furthermore, 17 patients (6%) needed non-complication chemotherapy, or assistance in avoiding or alleviating complications; 15

patients (5%) needed care and encouragement from the family member, or sympathy from neighbors and colleagues; and 21 patients (7%) needed to make a complete recovery from the disease.

## **Discussion**

From the study, the most common and severe complications from chemotherapy drugs observed in this study corresponded to those found in other studies, i.e. fatigue that was a symptom frequently exhibited in cancer sufferers and its treatments (Lawrence et al., 2004). In addition, a study by Schwartz et al (2000) found that fatigue from chemotherapy was at its peak mostly in the 2nd-5th day after administration and continued for the whole week. Alopecia was also commonly experienced in treatments by chemotherapy, radiotherapy, and hormone therapy. It was found that all chemotherapeutic agents could cause alopecia; as they not only impacted the growth and metabolism of cancer cells, but also affected normal cells, especially hair root cells. These drugs made hair root cells to wither and hair to fall out without a cause or upon combing, which led to baldness. Incidence and severity of alopecia relied on various factors, namely the biological half-life of chemotherapeutic agents, single or combination of drugs, dosage, administration period, number of course, and hair state (Kearney and Richardson, 2006).

For anorexia commonly found in this study could be explained as possibly arising from both chemotherapy and the illness itself. Cancer caused various physical changes: increasing basal metabolic rate; altering carbohydrate, protein, or fat metabolism; decreasing the muscle mass, increasing protein catabolism, decreasing protein synthesis, stimulating release of energy from fat. Furthermore, the disease also induced malabsorption, water and electrolyte imbalance, taste alteration, and anorexia (Chernecky and Berger, 1998; Langhorne et al., 2007). In addition, when experiencing fatigue, nausea, vomiting, stomatitis, and taste alteration as a result of chemotherapeutic agents, the patients would possibly anorexia.

Nausea and vomiting caused by illness, radiotherapy, and chemotherapy were symptoms that made cancer patients to fear and suffer. The incidence rate of these symptoms was about 30-80% of all patients. Meanwhile, 70-80% of chemotherapy-treated patients receiving low effective antiemetic drugs would undergo these symptoms. Upon receiving a high effective one, however, 10-60% of patients still experienced such symptoms. It was also found that one third of the patients exhibited anticipatory nausea and vomiting, which might occur before the 2nd or 3rd course of administration. Factors highly influencing nausea and vomiting were personal factors – females experienced nausea and vomiting more often than males; factors related to treatment, illness, and environment – the symptoms occurred less in a quiet and relaxing ward; and younger patients without domestic disputes experienced the symptoms less often. Moreover, anticipatory nausea and vomiting were stimulated by the sight of chemotherapy-administering nurses as well as the

smell of drugs (Langhorne et al., 2007).

From the study, it was found that there were symptoms other than the mentioned 5 most common and severe ones, i.e. stomatitis, proctitis, diarrhea, anaphylactic-like allergic reaction, etc. A patient treated with Cisplatin+ 5-FU for 3 courses, the last course of which caused a severe stomatitis of level-10 accompanied by dry chapped lips, lip sore, and severe pain. A patient treated with the same regimen for 1 course experienced a severe stomatitis of level-10 accompanied by tongue sores and severe pain. Therefore, nurses should pay great attention to all the symptoms, as well as reduce the seriousness of such symptoms and prevent them to occur by assessing the symptoms, assisting and taking care of patients, and giving them advice on proper conducts.

In our study, 120 patients could accept the occurred symptoms and dealt with the situations well. This could be explained to rely on personal personalities, mental and emotional conditions of the patients, hardiness, supports from family members, clarification from physicians, nurses, and other patients. This was also because the symptoms were not so severe as well. The study found that medical personnel also played a major part in reducing the patients' anxieties, by giving information concerning the treatment, side effects of the medication, and how to alleviate side effects. If receiving advice and due explanations from physicians, the patients would be confident in the treatment, thereby getting relieved and following such advice. Furthermore, another important factor was the patients' family members who looked after and gave the patients emotional supports. Also, feminine hardiness would help females to manage their diseases well, to be aware of their importance to people or things around them, thus making them to recognize that they had goals or obligations to be accomplished, to be optimistic, to gain hope, to accept their ailing situations, and to try to tolerate difficulties (Craft, 1999). In addition, it was also found that 145 patients exhibited stress, anxiety, dejection, and suffering from chemotherapy. This was explained that the symptoms were very severe and alopecia had great affect on females, both emotionally and socially. Alopecia was a symbol that emphasized the patients' cancer, ailing condition, fragility, weakness, and powerlessness in the patients' own and other people's views. Females were shamed, lacked privacy, were punished, lost self-acceptance, and felt that their sex appeal had changed. Alopecia altered their body images, took away their symbol of femininity, and decreased their self-esteem (Kearney and Richardson, 2006).

It was found that having high hardiness, having social support, and receiving proper advice from medical personnel would help the chemotherapy-treated patients to be less stressed and to accept their conditions and treatments well. In addition, the patients' body image was the significant factor causing them to be anxious and decreased their self-esteem. Apart from physical care, nursing personnel should foster the patient's body image.

The study on symptom management showed that most patients consumed sour and cold food; some drank ginger beverage and the nausea and vomiting were alleviated. This corresponded to result of other studies establishing

that eating sour or cold food could alleviate nausea and vomiting; whereas sweet, fatty, salty, and spicy food would intensify the symptoms (Langhorne et al., 2007); and that drinking ginger beverage helped relieve nausea in some cases (Whitney et al., 2001). Furthermore, this study found no certain kinds of food that could alleviate nausea and vomiting; it depended on patients' needs. Consequently, nurses should recommend various types of food for patients and let them choose the food they could take. The study also observed that one patient, upon drinking orange juice, felt sour taste and gained more appetite. This corresponded to an appetite promoting approach, which treated anorexia by drinking fruit juice before meal (Chernecky and Berger, 1998).

Management against anorexia, nausea, and vomiting most concerned with types of food. Nurses should take part in relieving nausea and vomiting, and reducing factors that induced the symptoms, by instructing the patients and their relatives not to use strong-smell spices like garlic in cooking, and to enhance the food flavor with patients' favorite seasonings. Apart from that, nurses could cooperate with the dietetics unit in improving the flavor, smell, and appearance of the food; in order to reduce nausea and vomiting, and also to enable the patients to eat more food. This showed that nurses not only had a role in giving medicine against nausea and vomiting, but they should take another role in improving the ward environment, taking care of patients' food and mental conditions, and seeking for causes and solutions of the problems, if patients exhibited anticipatory nausea and vomiting.

The study also found that the patients dealt with fatigue by taking a sufficient rest. Nurses should take active part in encouraging the patients to rest and sleep, and identifying causes and solutions of the fatigue. A study by Nail (2002) established that a cause of patients' fatigue was anemia, and treated the condition with erythropoietin to stimulate the production of red blood cells. Another study established that aerobic exercise, stress management, mental care, and malnutrition prevention could alleviate fatigue. Also, a study by Mock et al (2005) established that breast cancer patients treated with chemotherapy or radiotherapy would have their fatigue relieved in a statistically significant degree, when they exercised by walking for 15-30 minutes for 5-6 times per week, at an intensity of 50-70% of maximum heart rate. Some had conducted a study on other types of aerobic exercise, i.e. working out with cycle ergometer, treadmill, elliptical 3 times per week for 18 weeks – 15 minutes in 1st-3rd weeks and increasing by 5 minutes every 3 weeks, and for 45 minutes in 18th week. It was found that although fatigue condition did not decrease, the patients gained higher self-esteem and restrained level of their body fat (Courneya et al., 2007). Thus, exercising was extremely useful to patients. Although some types of exercise did not make fatigue alleviate, they were useful in other aspects. Nurses should encourage the patients to exercise, so as to help them relieve their fatigue, gain physical strength, raise their self-esteem, and be mentally healthy. Methods of exercise depended on the patients' readiness. Walking was an appropriate and inexpensive

exercise.

From the study, it was found that treatment of patients' chemotherapeutic complications could ameliorate, alleviate, or cure some symptoms. However, some symptoms were difficult to treat, but could help alleviate other symptoms that might follow. For example, diarrhea was difficult to treat. When it occurred, it made patients fatigued from dehydration and loss of electrolyte. This could be helped by drinking Oral Rehydration Salts (ORS) Solutions. Therefore, nurses should explain to the patients the symptomatic pathology, to make them understand and accept the occurred symptoms.

The study on healthcare need and assistance need of the patients showed that the patients needed both mental and physical cares, including information. This corresponded to various studies. One was a study by Tamburini et al (2003), which established that 61% of cancer patients at a hospital in Milan, Italy needed to know about their future conditions; 59% needed better food, lavatories, and hygiene; 45% needed to discuss with cancer-specialized physicians; 39% needed to discuss with patients of the same conditions. A study by Arantzamendi and Kearney (2004) established that nurses tending to chemotherapy-treated cancer patients at a cancer center in Scotland were aware that patients needed mental care; that some drug complications affected mental conditions of the patients. In addition, the patients needed a closer attention on their feelings in the first and final phases of the administered treatment.

In conclusion, this study could be used in helping the patients as nurses should pay attention to the overall symptoms by assessment, caring, helping, and suggesting the patients to correctly manage themselves to reduce the severity of symptoms and prevent the increase of severity. Nurses should explain the pathology of the occurring symptoms so that the patients could understand and accept the symptoms and lessen the forthcoming symptoms. In addition, nurses should foster the patient's body image and promote relationship among family members.

## References

- American Joint Committee on Cancer Breast (2002). In: AJCC  
Arantzamendi M, Kearney N (2004). The psychological needs of patients receiving chemotherapy: An exploration of nurse perceptions. *Eur J Cancer Care*, **13**, 23-31.
- Chernecky CC, Berger BJ (1998). *Advanced and critical care oncology nursing: Managing primary complications*. Philadelphia: W. B. Saunders.
- Courneya KS, Segal RJ, Mackey JR, et al (2007). Effects of aerobic and resistance exercise in breast cancer patients receiving adjuvant chemotherapy: A multicenter randomized controlled trial. *J Clin Oncol*, **25**, 4396-404.
- Craft CA (1999). A conceptual model of feminine hardiness. *Holist Nurs Pract*, **13**, 25-34.
- Dodd M, Janson S, Facione N, et al (2001). Advancing the science of symptom management. *J Adv Nurs*, **33**, 668-76.
- Kearney N, Richardson A (2006). *Nursing patients with cancer: Principles and practice*. Edinburgh: Elsevier Churchill Livingstone.
- Kietpeerakool C, Suprasert P, Srisomboon J (2005). Adverse affects of paclitaxel and carboplatin combination chemotherapy in epithelial gynecologic cancer. *J Med Assoc*

*Thai*, **88**, 301-6.

- Ladawan A, Petpichetchian W, Wiroonpanitch W (2005). A survey of common symptoms of cancer patients in southern Thailand. *Songkla Med J*, **23 (Suppl 2)**, 285-95.
- Langhorne ME, Fulton JS, Otto SE. (2007). *Oncology Nursing* (5th ed.). St. Louis: Mosby.
- Lawrence DP, Kupelnick B, Miller K, et al (2004). Evidence report on the occurrence, assessment, and treatment of fatigue in cancer patients. *J Natl Cancer Inst Monographs*, **32**, 40-50.
- Mock V, Frangakis C, Davidson NE, et al (2005). Exercise manages fatigue during breast cancer treatment: A randomized controlled trial. *Psychooncology*, **14**, 464-77.
- Nail LM (2002). Fatigue in patients with cancer. *Oncol Nursing Forum*, **29**, 537-46.
- Schwartz AL, Nail LM, Chen S, et al. (2000). Fatigue patterns observed in patients receiving chemotherapy and radiotherapy. *Cancer Invest*, **18**, 11-19.
- Tamburini M, Gangeri L, Brunelli C, et al (2003). Cancer patients' needs during hospitalization: A quantitative and qualitative study. *BMC Cancer*, **3**, 12.
- Tangkaratt S (2004). Mammographic findings in breast cancer patients, who were treated with breast conserving therapy. *J Med Assoc Thai*, **87**, 1439-43.
- Whitney EN, et al. (2001). *Nutrition for Health and Health Care* (2nd ed.). Australia: Wadsworth.
- Youngblood M., Williams PD, Eyles H, et al (1994). A comparison of two methods of assessing cancer therapy-related symptoms. *Cancer Nurs*, **17**, 37-44.