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DESCRIPTION OF ORAL MUCOSITIS EVENTS IN CHEMOTHERAPY PATIENTS

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ABSTRACT

Abstract

Cancer patients undergoing chemotherapy treatment will experience various effects. One effect is a disruption in the oral cavity that is often known as oral mucositis. Oral mucositis is a collection of symptoms that can be observed by nurses. Side effects of oral mucositis can cause further infections in the oral cavity, decreased appetite, and will later affect quality of life. The purpose of this study was to determine the description of oral mucositis that occurs in patients undergoing chemotherapy at PKU Muhammadiyah Hospital in Yogyakarta. This research is a descriptive study with a cross sectional study design. Sampling was done with a purposive sampling technique with a sample size of 20. The results showed that the cancer most experienced was mamae cancer and the most respondents were female. The maximum age of patients is in the 54-59 years age. The incidence of symptoms of oral mucositis in patients undergoing chemotherapy include erythema in the mouth 13.79%, patients experiencing ulceration, 6.89% experiencing pain in the mouth, 58.64% eating disorders.

Abstrak

Pasien kanker menjalani pengobatan kemoterapi akan mengalami berbagai dampak. Salah satu dampaknya adalah gangguan pada rongga mulut yang sering dikenal dengan mukositis oral. Mukositis oral merupakan kumpulan gejala yang dapat diamati oleh perawat. Efek samping dari mukositis oral antara lain dapat menimbulkan infeksi lebih lanjut di rongga mulut, penurunan nafsu makan, dan nantinya akan mempengaruhi kualitas hidup. Tujuan dari penelitian ini yaitu untuk mengetahui gambaran mukositis oral yang terjadi pada pasien yang menjalani kemoterapi di RS PKU Muhammadiyah Yogyakarta. Jenis penelitian ini ialah penelitian deskriptif dengan desain cross sectional study. Pengambilan sampel dilakukan dengan teknik purposive sampling dengan jumlah sampel 20. Hasil penelitian menunjukkan bahwa kanker yang paling banyak dialami adalah kanker mamae dan yang paling banyak responden berjenis kelamin perempuan. Umur pasien paling banyak berada pada rentang usia 54-59 tahun sebanyak 35%. Angka kejadian gejala mukositis oral pada pasien yang menjalani kemoterapi antara lain terjadi eritema di bagian mulut 13.79%, pasien mengalami ulserasi 13.79%, 6.89% mengalami nyeri pada mulut 6.89%, 58.64% gangguan makan.

1. INTRODUCTION

Cancer patients undergoing chemotherapy can experience various side effects, one of which is oral mucositis. These side effects can cause physical, psychological and economic impacts. Oral mucositis can affect patient's the quality of life, increase the risk of infection, cause delays and even failure of cancer treatment itself, and result in the need for hospitalization and increased care costs. Research conducted on 57 patients who received chemotherapy for at least 2 cycles in 12 months obtained the results

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of oral mucositis as much as 75.4%, 54.1% dry mouth, 87.5% ulceration. (Tarigan and Wimardhani, 2010). The impact of delayed cancer treatment due to mucositis is the occurrence of infection which is a further complication of oral mucositis being a condition that affects the patient's health, due to the presence of septicemia in patients who are currently in a state of immune suppression. Severe pain and significant weight loss due to difficulty in eating cause patient comfort problems. Therefore, oral mucositis is recognized as a toxic effect of chemotherapy and radiation which is closely related to the therapeutic dose and is directly related to patient safety (Peterson and Roila, 2011).

Oral mucositis is a diagnosis that can be seen from the signs and symptoms. Erythema mucositis usually appears 3-7 days after the initiation phase of chemotherapy. The potential for increased toxicity when increasing the dose or duration of therapy must be considered because in clinical trials the emergence of toxicity from the gastrointestinal mucosa (Karagozoglo and Ulusoy, 2005). The purpose of this study was to determine the description of the incidence of mucositis in patients undergoing chemotherapy at PKU Muhammadiyah Hospital in Yogyakarta.

2. RESEARCH METHODS

This research is a descriptive study with cross sectional research design which was carried out in the chemotherapy service unit (one day care) at PKU Muhammadiyah Hospital Yogyakarta. The sample of this study were patients undergoing chemotherapy in the one day care (ODC) room at PKU Muhammadiyah Hospital Yogyakarta. This type of sampling is done by unprobability sampling with purposive sampling technique in accordance with the inclusion criteria set by researchers. The inclusion criteria in this study were patients undergoing chemotherapy in PKU Muhammadiyah Hospital Yogyakarta, aged 19-55 years and were willing to become research respondents by signing informed consent.

3. RESULTS AND DISCUSSION

a. Patient Demographics

Table 1. Demographic data of patients undergoing chemotherapy at PKU Muhammadiyah Hospital Yogyakarta

Variable	Total (n)	%
1. Gender		
a. Male	3	15
b. Female	17	85
2. Age		
a. ≤ 35	0	
b. 36-41	3	15
c. 42-47	2	10
d. 48-53	3	15
e. 54-59	7	35
f. ≥ 60	5	25
3. Cancer Type		
a. Ca colon	1	5
b. Ca mamae	12	60
c. Ca melanoma	2	10
d. Ca paru	5	25
4. Duration of chemotherapy		
a. Cycle 1	4	20
b. Cycle 2	8	40
c. Cycle 3	2	10
d. Cycle 4	2	10
e. Cycle ≥5	4	20

The number of cancer patients who underwent chemotherapy and entered the inclusion criteria in this study was 20 people. Demographic data based on sex, more female patients than male patients, namely 17 people (85%), while male patients numbered 3 people (15%). This is in accordance with the type of cancer most commonly suffered is breast cancer (cancer mamae) which does occur in women. Based on the age group, at most 54-59 years with a percentage of 35% (7 people), followed by the age group ≥ 60 years totaling 25% (5 people), while the age group of at least 42-47 years totaling 10% (2 people)). The age group 36-41 years and 48-53 years have the same number of 3 people (15%). There were no patients in the age group ≤ 35 years who were cancer patients with chemotherapy in this study.

Based on table 1 shows that most respondents suffer from cancer mammary, as many as 12 people (60%) of the total number of respondents. This is consistent with data from the Indonesian Ministry of Health (2008) which states that the 10 main ranks of malignant neoplasm or cancer inpatients in hospitals since 2004-2008 have not changed much. The three main ranks are breast malignant neoplasms followed by malignant uterine cervical neoplasms and malignant neoplasms of the liver and intra hepatic channels. Breast cancer continued to increase during the 4 years with the incidence of 5,297 cases in 2004, 7,850 cases in 2005, 8,328 cases in 2006, and 8,277 cases in 2007.

Data from the Indonesian Cancer Registry of the "Dharmais" Cancer Hospital, Jakarta, shows an increase in the number of breast cancer sufferers in Indonesia from 1995-2004. There was a change in the trend of cancer types in Indonesia from cervical

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cancer, which initially was the first in the period 1995-2000, changed to second in the 2001-2004 period. In the 2001-2004 period, breast cancer ranked first. Even more narrowly highlighted in Yogyakarta in 2007 the highest cancer incidence rate was breast cancer, then followed cervical cancer and soft tissue cancer. (Riskesdas, 2007).

From table 1 it appears that respondents were studied evenly in undergoing the chemotherapy cycle, the most was in cycle 2 which was 8 people (40%). According to research conducted by Pandelaki (2013), states that most oral complications are found in patients who have undergone 4 cycles of chemotherapy compared to other cycles with a prevalence of 86%, while the least is patients who have undergone 1 cycle of chemotherapy with an incidence rate as much as 52%.

b. Overview of oral mucositis in chemotherapy patients

Table 2. Symptoms of mucositis in chemotherapy patients at PKU Muhammadiyah Hospital Yogyakarta

Type of symptoms	Total (n)	%
1. No symptoms	2	6.89
2. Ulceration		
a. None	0	0
b. Erythema	4	13.79
c. Ulceration	4	13.79
3. Pain in the mouth	2	6.89
4. Eatung disorders	17	58.64

Based on the results of research at PKU Muhamadiyah Hospital Yogyakarta in table 2, the incidence rate of mucositis symptoms in patients undergoing chemotherapy included erythema in the mouth 13.79%, patients experiencing ulceration 13.79%, 6.89% had pain in the mouth 6.89%, and 58.64% eating disorders. Chemotherapy has a real impact on the oral mucosa where disruption of salivary secretions leads to dry oral mucosa thus increasing the risk of infection, erythema, ulceration, and impaired speech, chewing and swallowing (Toscano, 2009). Oral mucositis is inflammation of the oral mucosal lining that can cause ulceration and is the most common oral complication associated with the use of chemotherapy agents (Wafaa, 2010).

There were 13.79% of respondents who experienced erythema and ulceration. Symptoms of mucositis that occur in respondents are erythema, ulceration, pain in the mouth, and eating disorders. There are 6.89% no symptoms of mucositis because the respondent is undergoing chemotherapy in cycle 1 and cycle 2. In patients who are still in cycle 1 and cycle 2 it is possible that the immune factor that plays a role in the presence or absence of symptoms of mucositis. The initial phase of mucositis is the initiation phase which is the stage where chemotherapy causes DNA damage in basal epithelial cells, tissues, and blood vessels (Tarigan, 2010). The first sign of mucositis is erythema. The area of erythema that has formed will then be desquamated and turned into ulceration. Ulceration that occurs not only can cause secondary infections but also affects the disruption of food and drink intake which results in the occurrence of malnutrition and dehydration which will affect the regeneration of oral mucosa.

6.9% of respondents experienced pain in the mouth. Symptoms of mucositis include pain in the mouth or throat and difficulty swallowing or talking. Another symptom that can be felt is that when eating the patient will feel dry, mild burning, or pain. The use of cytostatica drugs can cause damage to the mucous membrane, causing pain in the mouth (Bradey, 2010).

Eating disorders caused by chemotherapy in this study were 58.64% and it is the most common symptom of mucositis in cancer patients undergoing chemotherapy. Eating disorders in chemotherapy patients are very common and cause decreased appetite (Kamarudin, 2009). Eating disorders experienced by respondents in this study are usually dry mouth, swallowing disorders, food eaten can feel as if tasteless. This change occurs because of damage to the taste buds of the tongue, dryness of the mouth, infection and cavities. Usually this sense of taste returns to function properly after 6-8 weeks after cancer treatment is finished (Boltong, 2010).

4. CONCLUSION

The complications of mucositis and the most common symptoms in patients who have undergone chemotherapy are eating disorders including decreased appetite, swallowing disorders, and dry mouth. The most chemotherapy cycle is in cycle 2. The most common type of cancer is breast cancer and the most respondents are female. The maximum age of patients is in the 54-59 years age range of 35%.

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