

THE INFLUENCE OF COFFEE MOUTHWASH ON ORAL MUCOSITIS DEGREE ON PATIENTS WITH CHEMOTHERAPY

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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 the quality of life. The purpose of this study was to determine the degree of oral mucositis that occurs in patients undergoing chemotherapy at PKU Muhammadiyah Hospital in Yogyakarta before and after using coffee mouthwash. This research is a quasi study. Sampling was done with a purposive sampling technique with a sample size of 15. The results showed that The degree of oral mucositis mostly experienced by chemotherapy patients in this study was grade 1. There was a decrease in the degree of oral mucositis in patients after giving coffee mouthwash. The average degree of oral mucositis after the use of coffee mouthwash is 0.40. There was a significant change between before and after giving coffee mouthwash with p-value <0.05.

KEYWORDS cancer patient, coffee mouthwash, oral mucositis

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 the quality of life of patients, 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.[1] 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 immunosuppression. 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.[2] The study was conducted on 57 patients who received chemotherapy for at least two cycles in 12 months to get the results of 75.4% oral mucositis, 54.1% dry mouth, 87.5% ulceration.[3]

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 toxicity of the gastrointestinal mucosa is found. The purpose of this study was to determine the effect of coffee mouthwash solution on the degree of mucositis in patients undergoing chemotherapy at PKU Muhammadiyah Hospital Yogyakarta.

Methods

The study is a descriptive study with a cross-sectional research design conducted in the chemotherapy service unit (one day-care) at PKU Muhammadiyah Hospital Yogyakarta. The sample of this study were patients undergoing chemotherapy in the

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Table 1 Overview of Degree of Mucositis in Cancer Patients before Use of Coffee Mouthwash.

Level of Mucositis	Amount (n)	%
1	13	86.7
2	2	13.3

Table 2 Overview of Degree of Mukositis Degree in Cancer Patients after Use of Coffee Mouthwash.

Level of Mucositis	Amount (n)	%
0	10	66.7
1	4	26.7
2	1	6.7

Table 3 Effect of Coffee Mouthwash on the Degree of Mucositis.

Comfort level	Mean	Sig.
Before	1.13	0.0
After	0.40	

one daycare (ODC) room at PKU Muhammadiyah Hospital in Yogyakarta. This type of sampling is done by non-probability sampling with purposive sampling technique according to the inclusion criteria set by researchers. Criteria for inclusion in this study were patients undergoing chemotherapy in one daycare unit of PKU Muhammadiyah Hospital in Yogyakarta, aged 19-55 years, experience oral mucositis and willing to become respondents research with informed consent. 15 patients experienced mucositis from a total of 20 patients who were respondents in this study. The data collection was carried out from June-September 2019.

Results and Discussion

The number of cancer patients who underwent chemotherapy and entered the inclusion criteria in this study was 20 people. Demographic data based on gender, more female patients than male patients, namely 17 people (85%), while male patients amounted to 3 people (15%). This is in accordance with the type of cancer most commonly suffered is breast cancer (cancer mammae) 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 totalling 25% (5 people), while the age group of at least 42-47 years totalling 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.

The data above shows that before giving mouthwash, the highest degree of coffee mouthwash is at level 1 (86.7%) after gargling with coffee mouthwash the degree of mucositis has decreased at most at level 0 (66.7%). This shows that there was a decrease in the degree of mucositis in respondents before and after gargling the mouth with coffee mouthwash.

The table above indicates that before treatment, the average degree of mucositis is 1.13, and after treatment, the degree of

mucositis becomes 0.40. The degree of mucositis before and after the intervention p value <0.05 so that the data is said to be a significant change before and after treatment with coffee mouthwash on the degree of mucositis.

The occurrence of mucositis is a mucositis condition that is described in degrees 0 to 4. An assessment is carried out with an instrument from WHO that sums up the ratings of the four items then the sum of the ratings of the four items divided by 4 if the rounding results values 0.5 then rounded up and if the assessment results <0.5 not rounding up (0). The results show a difference in the mean degree of mucositis after treatment 0 with the mean degree of mucositis before treatment 1. The results also show a decrease in the mean degree of mucositis after an intervention of 1 degree. The mean degree of mucositis after rounding.

The results of this study are in line with existing research abroad by Raessi et al. where there are differences in the mean degree of mucositis after treatment in the intervention and control groups of 1 degree mucositis.[4] Oral hygiene with coffee mouthwash affects the degree of mucositis. Coffee contains caffeine which is useful for anti-inflammatory in various types of wounds, including the incidence of mucositis.[5] Research conducted on the occurrence of mucositis consists of 4 assessment items. The four assessment items are the number of ulcerations, the extent of ulcerations, pain in the mouth, and the ability to eat. In the study it was found that the patient experienced; stage 1 when ulcers occur but there was no pain, erythema or mild sensitivity, stage 2 when erythema or ulceration with pain; stage 3 when ulcerated and having difficulty eating solid food and; stage 4 when severe symptoms develop that require enteral or parenteral nutrition.[6]

Oral hygiene is one of the nurses' independent actions to maintain oral hygiene by gargling to prevent and control plaque on the teeth, prevent inflammation and infection and improve comfort, nutritional intake, and verbal communication. The method used to make coffee mouthwash solution is a decoction extraction method that is looking for simplicity with water at 90 °C for 30 minutes. Every oral hygiene uses 30 mL, and 1 patient washes the mouth once a day for 5 days.

Conclusion

The degree of oral mucositis mostly experienced by chemotherapy patients in this study was grade 1. There was a decrease in the degree of oral mucositis in patients after giving coffee

mouthwash. The average degree of oral mucositis after the use of coffee mouthwash is 0.40. There was a significant change between before and after giving coffee mouthwash with p-value <0.05.

Conflict of interest

There are no conflicts of interest to declare by any of the authors of this study.

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