

ASSESSMENT OF LIFE QUALITY OF CERVICAL CANCER PATIENTS DELIVERED BLEOMYCIN ONCOVIN MITOCYN PLATINUM (BOMP) CHEMOTHERAPY REGIMENS IN SANGLAH DENPASAR

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ABSTRACT

Cervical cancer disease is one of cancers that attack many women in the world and ranks second after breast cancer. Symptoms of cervical cancer may cause degradation quality of patients life. Chemotherapy is one of treatments of cervical cancer patients. Chemotherapy provides therapeutic effects, however, it can causes a decrease in life quality due to its side effects. BOMP is one of regimens that can be used as one of the management of cervical cancer. Assessment of quality of patients life with cervical cancer are needed to see the changes in the quality of life in patients besides knowing the functional status changes from time to time. Monitoring the effects of treatment, and collecting the data on quality of life can be used as initial data for consideration in formulating the appropriate action for the patient, And also assist physicians in selecting an effective and well tolerated drug for patients. The study was conducted in February to June 2014 in Obstetrics Clinic and Cempaka Timur Room General Hospital (RSUP) Sanglah in observational design with cross sectional prospective. The sample selection is done by consecutive sampling. The methods used for data collection using questionnaires EORTC QLQ with interview techniques before and after chemotherapy in patients suffering cervical cancer of squamous cell stage IIB - IIIB who had BOMP chemotherapy regimens for 3 series in RSUP Sanglah. Research for quality of life is conducted in general and the 15 domains that affect the quality of life of patients. In this study, 12 patients indicated the inclusion criteria. There were significant differences in the value of the quality of life of patients with cervical cancer squamous cell stage IIB - IIIB before and after BOMP chemotherapy with 0.001 *p* value. BOMP chemotherapy regimens can improved the quality of life of cervical cancer patients increasing from 44.833 ± 6.235 to 60.333 ± 9.168 . In 15 ratings domain included decrease the quality of life of pain domain, nausea domain, vomiting domain, decreased appetite domains, fatigue domain, physical function domain, functional role domain, social functioning domain, sleeplessness domain, constipation domain and domain of financial difficulties and on the other hand emotional domain increase.

Keywords: Cervical cancer, quality of life, BOMP regimen, the domain of quality of life.

INTRODUCTION

Cervical cancer is a type of cancer that ranks second after breast cancer that strikes women in the world. In Indonesia, according to data from the Ministry of Health, Republic of Indonesia, cervical cancer is estimated at 100 cases per 100,000 populations per year. Cervical cancer is caused by infection with the Human Papilloma Virus (HPV) and the type often

recognized and identified in cervical cancer HPV types 16 and 18. Of the 40 cases of cervical cancer occur in Indonesia, 38 of them are squamous carcinoma and 2 of them adenocarcinoma. In Bali, based on a preliminary study conducted by researchers at the Polyclinic Obstetrics RSUP Sanglah, the number of patients with cervical cancer in 2011 about 23% of 585 patients with cancer, in 2012 about 29% of 611 patients with cancer and in 2013 approximately 38% of

725 patients with cancer and most types of cancer cells are squamous cell with the most widely diagnosed stage was IIB - IIIB.

Cervical cancer in its early development does not cause symptoms. Symptoms appear when it entered an advanced stage when the cancer cells have invaded surrounding tissue and metastasis occurred (Page,2006). In the management of patients with cervical cancer that surgery can be done, radiation, chemotherapy or a combination of both. For patients with advanced cervical cancer stage IIB - IIIB the management given is the administration of chemotherapy. According to SOP of Sanglah, chemotherapy that can be given to patients with cervical cancer stage IIB-IIIB is chemotherapy regimen BOMP (Komite Medik,2004). Chemotherapy works by killing cancer cells that are actively dividing, but in normal cells that its dividing fast as on bone cells, gastrointestinal tract, reproductive system and hair follicles that will also be affected by chemotherapy, causing side effects such as nausea, vomiting, fatigue, diarrhea, constipation, hair loss, anemia and others (Rang,2007 & Saiful,2012). The effectiveness of chemotherapy for cancer patients can be seen from the increase in the quality of life of patients. Research on life quality is very important to know the functional status changes from time to time, monitor the effects of treatment, that can be used as a success reference of the therapy and the data of the quality of life can be used as initial data for consideration in formulating the appropriate action for the patient, assist physicians in selecting an effective drug regimens for patients and well tolerated by patients (Dehkordi,2008). Based on the description above, we want to know information about the quality of life of patients with cervical cancer stage IIB - IIIB who had just BOMP chemotherapy regimens.

For the assessment of the quality of life of patients with cervical cancer in this study, it is used a questionnaire EORTC QLQ C30 which has been translated and validated by Aryani, *et al.*, (2011). EORTC QLQ C30 questionnaire contains 30 questions grouped into 15 domains used to assess the quality of life of patients with cervical cancer that the overall quality of life domains, domains of physical functioning, role functioning domains, emotional functional domains, social function domains, fatigue domain, nausea domain, vomiting domain, pain domain, dyspnea domain, insomnia domains, decreased appetite domain, constipation domains, diarrhea domain and financial difficulties (Aryani,2009).

Based on this background research on the quality of life of patients with cervical cancer and is expected to be obtained an overview of the differences in the quality of life in patients with cervical cancer before and after BOMP chemotherapy regimen in Sanglah Hospital.

MATERIALS AND METHODS

This study is an observational study with a prospective cross-sectional design and sample selection done by consecutive sampling to assess the quality of life of patients with squamous cell cervical cancer patients with stage IIB - IIIB. The methods used for data collection was a questionnaire EORTC QLQ C30 with interview techniques before and after chemotherapy in patients with squamous cell cervical cancer stage IIB -IIIB that just getting BOMP chemotherapy regimens for 3 series in RSUP Sanglah. The inclusion criteria of this study were patients suffering from cervical cancer stage IIB - IIIB squamous cell type and does not suffer from any other cancer in Sanglah Hospital, undergoing chemotherapy for the first time

and just get BOMP chemotherapy regimens, patients with non-operabel and completed 3 series chemotherapy regimen of paclitaxel - carboplatin.

Assessment of quality of life is done in general and toward 15 domain comprising domains of overall quality of life, physical functioning, role functioning, emotional functioning, cognitive functioning, social functioning, fatigue, nausea, vomiting, pain, dyspnea, insomnia, decreased appetite, constipation, diarrhea and financial difficulties.

The data obtained in the data collection sheets are processed with statistical analysis. It is done for normality testing using the Shapiro-Wilk test. The data having normal distribution with $p > 0.05$ will be analyzed using paired T test. If the data are not normally distributed, it is conducted transformation to normalize the data with log function. If the data is not normally distributed, so it is applied Wilcoxon test.

RESULTS AND DISCUSSION

1. Characteristics of Patients

Total patients obtained in this study were 12 patients who had met the inclusion criteria. The following are the general characteristics of the patients were used in the study of quality of life with EORTC QLQ C30 questionnaire at Sanglah Hospital. Characteristics data of the patients are shown in Table 1.

2. Quality of Cervical Cancer Patients Given BOMP Chemotherapy Regimen in General

BOMP is one of the regimens used in the procedure of chemotherapy for cervical cancer in Sanglah Hospital. Here is the assessment of the value of the quality of life of patients with cervical cancer in general

before and after administration of BOMP chemotherapy regimens 3 series at Sanglah Hospital.

Based on Table 2, chemotherapy can improve the quality of life seen from:

1. There are significant differences in the value of the quality of life of patients with cervical cancer stage IIB - IIIB squamous cell before and after BOMP chemotherapy regimen given with p value 0.001.
2. Giving BOMP regimen can improve the quality of life of cervical cancer patients seen from the increase in the mean value namely 44.833 ± 6.235 to be 60.333 ± 9.168 .

3. Quality of Cervical Cancer Patients Given BOMP Chemotherapy Regimen

In cervical cancer patients given BOMP chemotherapy regimen to assess the quality of life of these patients can be seen from each domain and then grouping of the 15 domains namely the overall quality of life, physical function domain, role function domain, emotional function domain, cognitive functioning domain, social functioning domain, fatigue domain, nausea domain, vomiting domain, pain domain, dyspnea domain, insomnia domain, decreased appetite domain, constipation domain, diarrhea domain and subsequent financial difficulties domain based on the value of p and differences in the mean values obtained an idea of the quality of life of these patients shown in Table 3.

Table 1: General Characteristics of Patients

	N = 12	(%)
Stadium		
IIB	8	66.67
IIIB	4	33.33
Age		
26-35	3	25
36-45	7	58.34
46-55	1	8.33
56-65	1	8.33
Preliminary age of marriage		
17-20	8	66.67
21-24	3	25
25 above	1	8.33
Area of origin		
Denpasar	1	8.34
Gianyar	1	8.34
Badung	2	16.67
Tabanan	3	25
Buleleng	2	16.67
Klungkung	1	8.4
West/East NT	2	16.67
Level of Education		
No education	0	0
Elementary School	2	16.67
Junior High School	5	41.67
Senior High School	4	33.33
College	1	8.33
Type of Health Service		
General BPJS	4	33.33
JKBM	5	41.67
BPJS Jamkesmas	2	16.67
BPJS Akses Wajib	1	8.33
Type of Profession		
Housewife	4	33.33
Merchant	2	16.67
Labour	1	8.33
Employee	2	16.67
Farmer	3	25

Table 2. Differences in Quality of Life Cervical Cancer Patients Before and After BOMP Chemotherapy regimens

	n	Value of Quality Life		P
		Mean	SD	
Before chemoteraphy	12	48,833	6,235	0,001
After chemoteraphy	12	60,333	9,168	

Specification:

Mean : Average Value SD : Standard Deviation
n : Total Sample P : Signifinacy value
P <0.05 : there is a meaniful difference

DISCUSSION

Quality of life is a conceptual measure that is often used to assess the situation and the impact of chronic illness therapy given to patients and the conceptual measurements include welfare, survival, the ability to independently perform daily activities (Brooker,2008). Quality of life is a situation that is perceived by the patient in the context of the culture and value system that was followed, including life goals, expectations and intentions In life quality there are many dimensions of quality such as physical symptoms, functional ability

(activity), family welfare, spiritual, social functioning, satisfaction with treatment (including financial matters), future orientation, sexual life, including a picture of yourself, functions in working (Nur,2010).

In cervical cancer patients given BOMP chemotherapy regimen to assess the quality of life of patients can be seen from the assessment of life quality in general and 15 domains of quality of life, respectively each domain and then do the next grouping based on the value of p and the difference in mean values obtained an idea of the quality of the patient's life.

Tabel 3. Domain value EORTC QLQ C30 to patients given BOMP Regimen Chemoteraphy

Domain	Question Items	Before chemoterahpy (Mean)	SD	After Chemoterap hy 3 series (Mean)	SD	P
1. Total Quality of life	29 & 30	5.500	1.446	7.083	1.564	0.071
2. Functional domain						
Physical function	1-5	7.666	1.775	11.333	2.269	0.001
Role function	6 & 7	3.166	0.834	3.833	0.937	0.021
Emotional function	21 – 24	6.583	2.234	5.750	1.912	0.418
Cognitive function	20 – 25	2.250	0.621	2.421	0.668	0.480
Social function	26 – 27	3.667	0.778	5.250	1.055	0.007
3. Symptom domain	10, 12 & 18	5.583	1.311	8.00	1.758	0.001
Fatigue	14 & 15	2.500	0.797	4.416	1.676	0.016
Vomitting	9 & 19	4.333	1.161	6.333	1.230	0.004
Pain	8	1.083	0.288	1.166	0.389	0.564
Insomnia	11	1.500	0.522	2.583	0.514	0.004
Decrease of appetite	13	1.250	0.621	2.083	0.792	0.046
Constipation	16	1.333	0.492	2.00	0.603	0.033
Diarrea	17	1.083	0.288	1.250	0.621	0.414
Difficulty of financial	28	0.208	0.792	2.833	0.577	0.014

Specification:

- Mean : Average Value
SD : Standard Deviation
n : Total Sample
P : Signifinacy value
P <0.05 : there is a meaningful difference.

In the overall assessment showed the results, namely :

1. There are significant differences in the value of the quality of life of patients with cervical cancer stage IIB - IIIB squamous cell before and after administration of BOMP chemotherapy for p value 0.001.
2. Giving BOMP chemotherapy regimens can increase the quality of life of cervical cancer patients seen from the increase in the mean value of 44.833 ± 6.235 to be 60.333 ± 9.168 .

Based on the results it takes place for decrease the quality of life in patients given chemotherapy. To determine which domain the change it will be given a more detailed explanation of the results obtained in Table 3:

1. Domain which has a value of $p < 0.05$ and increased the mean value is the pain domain, nausea domain, vomiting domain, decreased appetite domain, fatigue domain, physical functioning domain, role functioning domain, social functioning domain, insomnia domain, constipation domain and financial difficulties domain. Based on this can be said to be a decline in the quality of life in patients with cervical cancer in these domains.

In the domain of pain decreased quality of life. This is due to cervical cancer patients still feel pain in the lower abdomen after the administration of 3 series BOMP chemotherapy. Pain arising due to the drug regimen namely Oncovin® (vincristine) causing adverse effects on abdomen (Page,2006). In the domain of nausea vomiting decreased quality of life. This is because the drug cisplatin in combination BOMP cause symptoms of nausea and vomiting side effects. In general, chemotherapy can cause side effects of nausea and vomiting about 10% even though

the patient given anti-nausea and anti-emetics (Cancer Care,2012). Nausea and vomiting caused by stimulation of the gastrointestinal receptors and receptors in the CTZ (Chemoreceptors Trigger Zone) which sends a message to the solitaries tract nucleus in the brain that stimulates salivation, contraction of the diaphragm, respiratory muscles, abdominal muscles (Hawkins,2009). In the domain of decreased appetite it takes place for quality of life. This is because patients experienced side effects of nausea and vomiting thereby reducing appetite. To reduce these symptoms it is prescribed 3 x 4 mg ondansetron orally (Komite Medik,2004). Chemotherapy can reduce the appetite called anorexia, causing a decrease in nutrition in patients followed by weight loss drastically. In the domain of fatigue it decreased quality of life. This is because many patients who still feel the side effects of chemotherapy more than one week after the administration of 3 series BOMP chemotherapy. Fatigue caused by chemotherapy causes anemia. To reduce the symptoms of anemia it has been done ferrous sulfate administration of 2 x 300 mg orally (Komite Medik,2004). Symptoms of fatigue reported 40% in cancer patients and 80% caused by chemotherapy. In the domain of physical function it declines quality of life. This is because most patients given BOMP chemotherapy regimens experiencing symptoms of tingling, numbness in the legs and thick taste in the legs (peripheral neuropathy), causing difficulty walking so that patients spend more time with the rest. The patients need families assistance in doing things that are simple one, for example to walk to the bathroom. Drugs that cause the symptoms of peripheral neuropathy in BOMP regimen namely oncovin and siplatin (Page,2006 &

Rosemary,2003). Toward role function domain, it declines in the functional domain of quality of life. This is due to the side effects of chemotherapy such as nausea and vomiting, fatigue and pain that caused the physical state of the patient lowered, causing the patients impaired in performing activities of daily. Active role of family in providing support and assistance in cervical cancer patients needed to improve the quality of life of patients with chemotherapy led to a negative impact on the patient's physical activity. In the domain of social functions it decreases the quality of life of patients. This is due to the administration of chemotherapy causes side effects such as fatigue that causes the patient becomes weak and difficult to move, causing social activity becomes disturbed. In the domain of insomnia, it decreases quality of life. Difficulty sleeping can interfere with the treatment of cancer patients and these symptoms cause a decrease in the quality of life of patients. In women, the symptoms of insomnia are problems experienced as a result of chemotherapy. According to research Ray, *et al.*, (2008), cancer patients often report a change in the rhythm of sleep and at night and patients can only be slept 3 or 4 hours and patients sometimes woke up at night.

In the domain constipation decreased quality of life. It is caused due to many patients experiencing symptoms of constipation. The cause of constipation is a disorder caused by chemotherapy on the gastrointestinal tract. Oncovin® (vincristine) in BOMP regimens have side effects causing symptoms of constipation.

In the domain of financial difficulties it decreases quality of life. This is because the length of which is undertaken by the patient. According to SOP Sanglah, BOMP chemotherapy takes 5 days (Komite

Medik,2004). Although health insurance covers the cost of chemotherapy, but there are other costs incurred by patients undergoing chemotherapy for non-medical expenses that will be financially burdensome patient. Chemotherapy treatment takes a long time and enormous costs, both medical costs and also non-medical costs, these costs will burden the patient while undergoing treatment.

2. Domain which has a value of $p > 0.05$ and increased the mean value of domains such as domain of cognitive function, dyspnea domain and the domain of diarrhea. Based grouping on mean value of p it can be said to be a decline in the quality of life in patients with cervical cancer in this domain group but not significantly. In the cognitive domain, a decline in quality of life but not significant. In this study, only a few patients who have difficulty in concentrating and difficulty in remembering things. Oncovin (vincristine) and cisplatin in BOMP chemotherapy regimens can cause specific neurological complications such as neuropathy in cancer patients.

In the domain of dyspnea decreased quality of life but not significantly. This is because only a few patients who have symptoms of dyspnea. According to the research of Thomas and Charles (2003), chemotherapy is one of the causes of dyspnea and may degrade the quality of life of patients.

In the domain of diarrhea decreased quality of life but not significantly. This is because few patients who have symptoms of diarrhea caused by BOMP chemotherapy regimens. Based on research conducted by Katsumata, *et al.*, (2013) BOMP chemotherapy only causes diarrhea grade 3 and grade 4 about 3% of the 67 patients given chemotherapy regimen.

3. Domain which has a value of $p > 0.05$ and decreased the mean value is emotional function domain. Based grouping and the mean value of p can be said to be an increase in the quality of life in patients with cervical cancer in this domain group but not significantly. In cancer patients emotional state is very unstable and causing any feelings of shock, fear, anxiety, feelings of sadness, anger, and sadness. In patients who have received chemotherapy 3 series has a little emotional situation stabilizes and begins to accept the circumstances that suffering from cancer and need chemotherapy.

4. Domain has a value of $p > 0.05$ and decreased the mean value is the overall quality of life domain. Based on this study, bleeding and vaginal discharge symptoms experienced by patients after chemotherapy 3 series has been nothing but appear side-effects of BOMP chemotherapy such as nausea, vomiting, loss of appetite, constipation, and fatigue felt by the patient until one week after hospital discharge. This is why the quality of life of patients is not too good so that statistical analysis is said that an increase in quality of life were not significant.

CONCLUSION

In research conducted quality of life in general and to the 15 domains. There is a significant difference in the value of the quality of life of patients before and after chemotherapy BOMP regimen 3 series. An incline in the quality of life in patients with cervical cancer were given BOMP chemotherapy regimens.

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