Research Paper

Quality of Life in Cervical Cancer Patients who Underwent Desobstruction Procedures

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Abstract: ***Objective***: Obstructive uropathy is a common conditior hospitalized cervical cancer patients. Many patients underwent surg procedures to improve their QoL. This study was aimed to compare quality of life (QoL) and Survival Rate in cervical cancer with obstruc uropathy pre and post operative in the Urology Department at Sa Anwar General Hospital from July 2016 to August 2017.

***Materia and Method*:** 75 patients with obstructive uropathy in cerv cancer underwent desobstruction procedures. Inclusion criteria patient with bilateral or unilateral hydronephrosis. Exclusion crit where patients who loss of follow up. QoL was assessed using WHO Q BREF which has 4 domains; (I:physical health, II: physiologic health, social relationships and IV: environmental health). The results before after procedure were compared using Mann Whitney in a prospec manner.

Result: From 75 patients, 64 cases had bilateral obstruction and 11 ca had unilateral obstruction. 43 (57%) patients underwent desobstruc procedures as follows: retrograde DJ stent in 31 patients; internal uret DJ stent in 2 patients; ureterocutaneostomy in 9 patients; percutane nephrostomy in 1 patient. There are 32 patients without desobstruc procedures. Result showed that patient's QoL in the domain I to IV w significantly decreased in 6 months and 1 year follow up period. Th was no significant difference of QoL between all surgical proced (p=0.872). The survival rate between retrograde diversions and o diversions were not significantly different (p=1.356).

Concluison: Desobstructions procedure did not improve QoL in cerv cancer patients with obstructive uropathy at 6 months and one year fol up period.

Keyword: Cervical cancer, Obstructive uropathy, WHO QoL-BREF

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1. INTRODUCTION

Obstructive uropathy and hydronephrosis are the most common complications in cervical cancer, although the number of incidents that occur have not been fully understood in the literature. Obstructive Uropathy generally becomes the final manifestation of cervical cancer. The incidence of ureteric obstruction in patients with cervical cancer varies from 14% to 34%. In the study conducted by Gerry et al, it was stated that there were 78 (27%) patients who had obstructive uropathy from a total of 297 cervical cancer patients.3

To release the obstruction, a desobstruction procedure is performed through various procedures of urine diversion. Ureterocutaneoustomy and percutaneous nephrostomy have been mentioned in the several literatures, with results of improved renal function, reduction in pain, uremic symptoms and performance status, but the majority stated that the study was old-fashioned. Although the desobstruction procedure through endourology, internal or open stenting and percutaneous drainage nephrostomy has been offered with easy to do procedures that will relieve urinary tract obstruction symptoms and could prolong the survival rate, the dilemma still continues: because it states that quality of life improvement include pain, physical activity, social life after procedure is often low, we could say the benefit of the desobstruction procedure in the patient is still insignificant.1

In the recent years, measurements of clinical studies and interventions for traditional health indicators such as mortality and morbidity, and quality of life (QOL) have been carried out. The World Health Organization (WHO) has determined "QOL" (quality of life) as "the perception of each person / patient in life in the context of the cultural system and the value in which they live with their goals, hopes, standards and concerns". Recently, various instruments have been used to measure quality of life in different groups (for example, patients, workers, population and immediate). One instrument is QOL-BREF (WHOQOL-BREF) world health questionnaire which summarizes many subjective aspects of quality of life.2

The questionnaire itself consists of four domains / aspects, namely Domain 1 includes physical health (7 questions), Domain 2 includes psychological health (6 questions), Domain 3 includes social health (3 questions), and Domain 4 includes environmental health (8 question). In this study, we aimed to assess the quality of life of patients with advanced cervical cancer patients who experience obstructive uropathies who performed desobstruction and control subject with no procedure performed by using the WHO QoL BREF questionnaire.3

2. MATERIAL AND METHOD

Research Design and Research Subjects

In this study, a total of 75 patients with obstructive uropati involved. Of 75 subject, 43 of which are undergoing the procedure desobstructions (ureterocutaneostomy/UCS, percutaneous nephrostomy/civil servants, and the DJ stent insertion), divided into 2 groups that among them was a group 1 i.e. for action open versioned while for Group 2 i.e. for insertion action DJ retrograde or antegrade both stents. Criteria for inclusion include patients with a diagnosis of cervical cancer is stage IIB, IIIB, or staging a heavier with clinical manifestation of uropati

obstructive such as bilateral hydronephrosis and unilaterally. Exclusion criteria include all patients who reject all plans therapy.

Quality of Life Measurements

Quality of life is measured using the WHO QoL-BREF questionnaire, where the questionnaire is divided into 4 domains: domain 1 for physical health, domain 2 for physiological health, domain 3 for social relations, and domain 4 for environmental health. We evaluate the values for each domain in the monitoring period for the 1st, 2nd, 3rd month, 6th month, 9th month and the end of the first year. The results of the assessment of this questionnaire before and after the procedure were compared using a prospective t-test. All statistical procedures were performed using SPSS for Windows version 24.0.

3. RESULT

This research is divided into 2 main groups, including the Group 1 i.e. Open actions consist of Ureterocutaneostomy Versioned and Percutaneous Nephrostomy, whereas Group 2 i.e. the DJ stent insertion. Of 75 subjects involved in this research, 43 subject diterapi procedures for open diversion and the DJ stent insertion. For Group 1 consists of 9 patients carried out action ureterocutaneostomi and 1 patient carried out the Act of percutaneous nephrostomy. For Group 2 there were 31 patients carried out retrograde insertion action DJ stent and 2 patients with internal actions performed stenting. Table 1 shows the characteristics of all research subjects based on age, stage of cancer, the disease that accompanies it, and the degree of obstruction.

Tab (1). Subject Characteristics

Characteristics	Category	n
Age	< 50 years old	37
	≥ 50 years old	38
Stage of Cervical Cancer	IIB	1
	IIIB	60
	IVA	12
	IVB	2
Degree and location of Obstruction	Unilateral Hydronefrosis Mild-Moderate	9
	Unilateral Hydronefrosis Severe	2
	Bilateral Hydronefrosis Mild-Moderate	60
	Bilateral Hydronefrosis Severe	4
Co morbids	DM type II	14
	CKD stage V	75
	Acute Kidney Injury	5
	Tuberculosis	1

	Hypertension	2
	Vesicovaginarectal fistula	4
Karnofsky score	<50	21
	>50	54

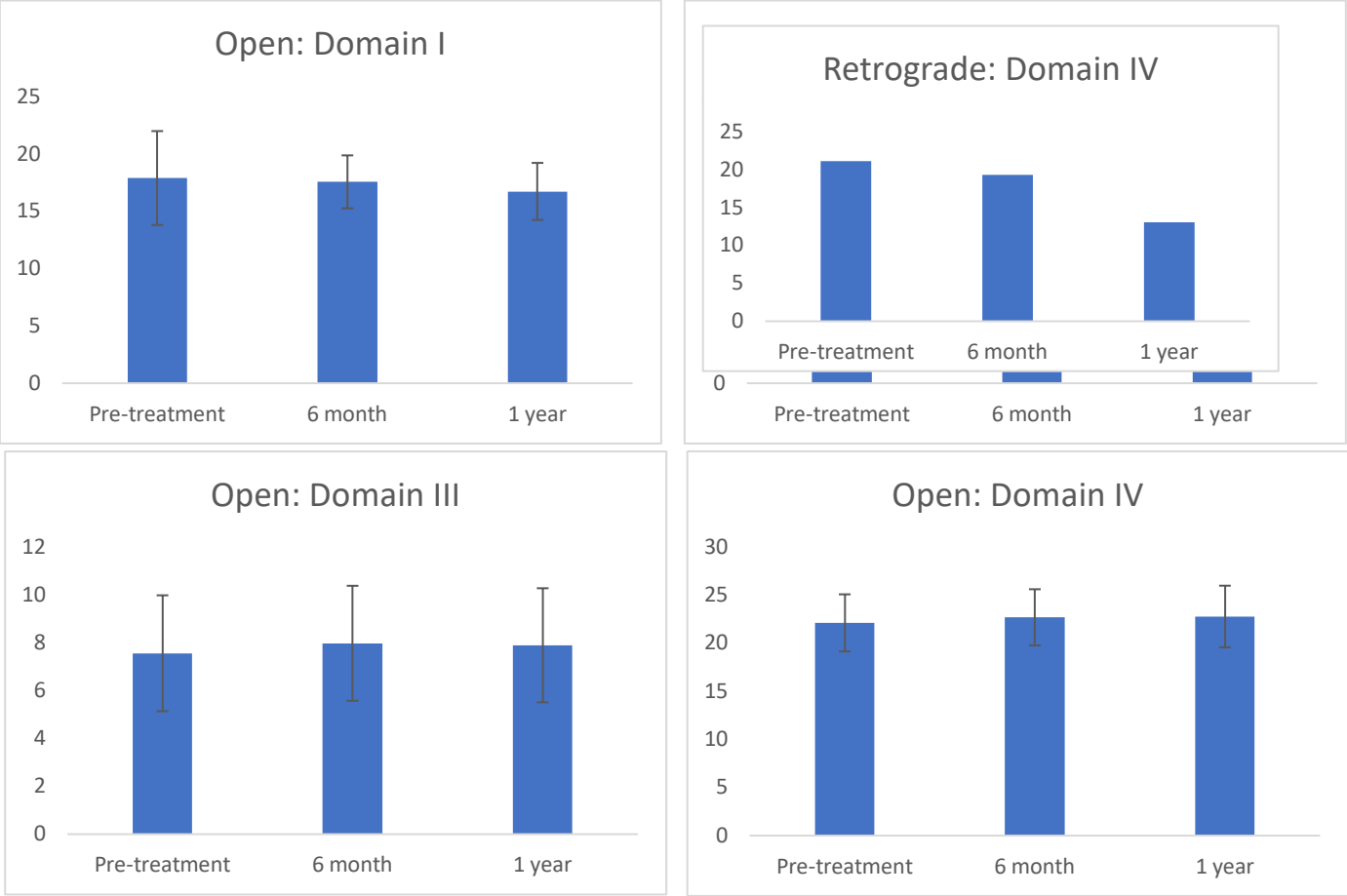

Fig (1). Quality of life in groub 1

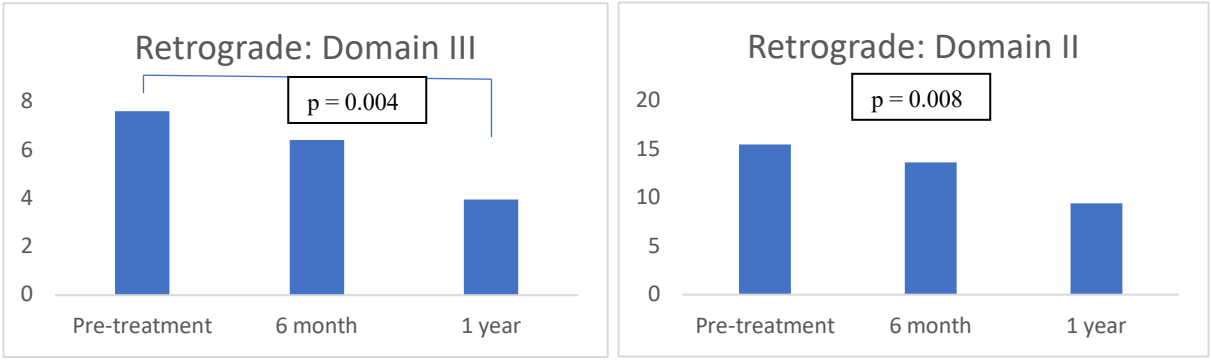

Fig (2). Quality of life in groub 2

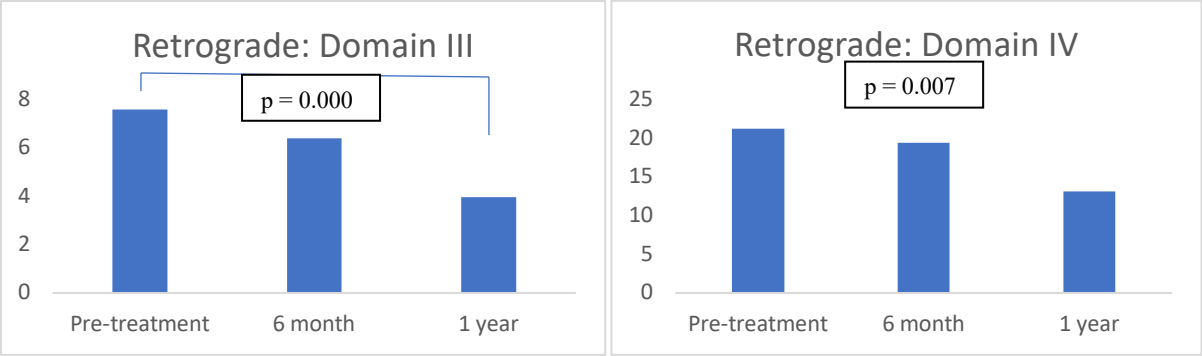

Fig (3). Quality of life in groub 3

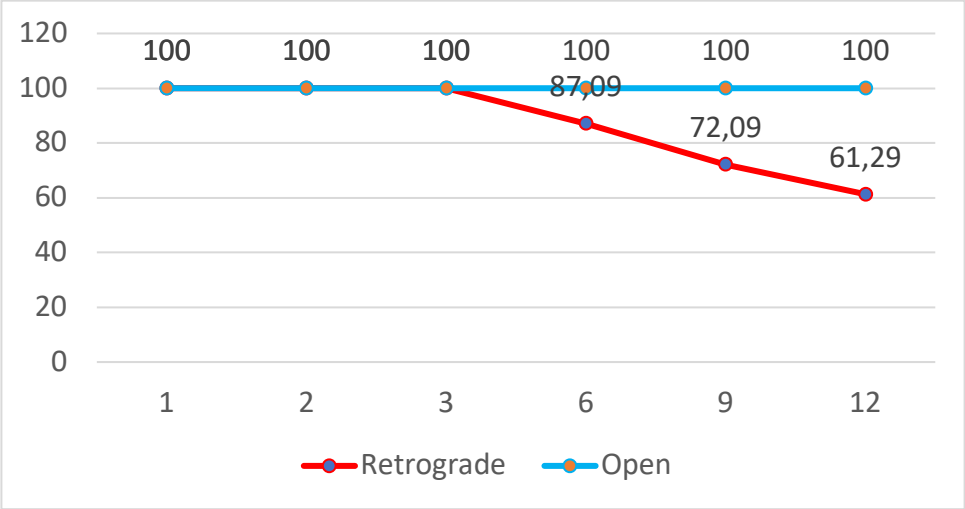

Fig (4). Survival rate (in%) in Group 1 (blue line) and group 2 (red line) on the respective period of follow-up to 1 (month-1), 2 (2nd month), 3 (3rd month), 4 (6 months), 5 (9th month), and 6 (end of 1st year).

Off the charts on the Group 1, in the period of follow-up of 6 months and 1 year, scores on a questionnaire that represent each of the domains (physical health, physiological health, social relations, and environmental health) are analyzed. The group performed on open diversion, the results showed no meaningful difference in the quality of life in the 6th month and the end of the first year compared to conditions before the action on all domains (paired t test, $p < 0,005$). Score before action, 6th month,

and end of year 1 is shown in Figure 1, 2, 3, and 4.

On the graph to Group 2 in the period of follow-up of 6 months and 1 year, scores on a questionnaire that represent each of the domains (physical health, physiological health, social relations, and environmental health) are analyzed. The group performed surgery, results show a consistent decline in the quality of life at the end of the first year compared to conditions before the action on all domains (paired t test, $p < 0,005$). Score before action, 6th month, and end of year 1 is shown in Figure 1, 2, 3, and 4.

4. DISCUSSION

Cervical cancer is the most common cancer in women with several risk factors, with the main cause is the Human Papilloma Virus. Other risk factors are sexual history <18 years, smoking, use of birth control pills, obesity, family history. Cervical cancer is also a major cause of death in women, especially in developing countries and health problems of people throughout the world. In the United States in recent decades, the incidence of cervical cancer tends to decline, but in developing countries, especially in Indonesia, the prevalence remains at a high level. There are several complications related to cervical cancer, the complication that causes the condition of cervical cancer to worsen is obstructive uropathy due to compression of the ureter by cancer, tumor invasion, retroperitoneal cavity pressure and lymphadenopathy.8,9

According to the degree of TNM, cervical cancer with degree 3b which includes extension of the tumor to the pelvic wall and / or causes hydronephrosis or decreased kidney function. Actions of desobstruction of the urinary tract both retrograde or internal antegrade of ureteral stenting and nephrostomy. Both methods are said to be effective in improving kidney function, low morbidity, and improving quality of life. Treatment options at Stage IIB-IV are a combination of chemotherapy / radiotherapy. Kidney function is an important determinant in determining treatment protocols. Other factors, such as patient status performance, relapse and / or metastatic sites, previous levels of treatment for metastatic disease are also taken into account. The prognosis in patients with cervical cancer depends on the stage of the disease. In general, a 5-year survival rate is around 57% when the cancer has spread regionally, while 17% when cancer has spread far.8,9,10

The pathological process in cervical cancer at stage IIIB is a blockage in the urinary tract (obstructive uropathy) with complications in the form of hydronephrosis. Hydronephrosis may worsen the patient's condition because it is accompanied by a decrease in kidney function in the form of CKD and AKI. In this study, we found that in some patients with cervical cancer have found functional abnormalities (CKD and AKI) and structural abnormalities (hydronephrosis). The decrease in kidney function will cause various clinical manifestations such as hypoalbuminemia due to chronic proteinuria, anemia due to erythropoetin (Ref) deficiency, and hypertension due to RAA system hyperactivation (renin angiotensin aldosterone).5,6

Quality of life in patients can be assessed using the WHO standard questionnaire, QoL BREF. Based on previous research, this questionnaire is good enough in assessing the quality of life in patients with cervical cancer. Specific assessment of quality of life in patients with cervical cancer with various

urine diversion measures still does not exist, therefore in this study we used a questionnaire from WHO. WHO's own questionnaire itself is usually used in cancer patients in general, cervical cancer patients by using the WHO questionnaire.3,7

The results of this study indicate that there is a decrease in quality of life in groups of patients with surgical therapy, especially at the end of the first year in all domains of physical, physiological, social, and environmental health. This is because some patients die, especially in the 9th month. These findings indicate that the quality of life in patients with cervical cancer who have experienced obstructive uropathy is not affected by surgery. The results of previous studies from Domingo et al. Showed that there was no significant difference in survival rates between patients undergoing urine diversion and those who did not. Associated with patient characteristics, it can be assumed that the likelihood of quality of life of patients does not experience significant improvement because it has acquired comorbidities related to decreased kidney function in patients.11,15

The results of this research show that the decline in quality of life it brings in a group of patients with either stent insertion action DJ retrograde or antegrade especially at the end of the first year in all domains of good physical health, physiological, social relations, and environmental health. This is because some of the patients died, especially in the ninth. These findings suggest that the quality of life in patients with cervical cancer that is already experiencing obstructive uropati not affected by surgery. However, the choice between stents and percutaneus approach should also determined by the success rate of these procedures. Feng et al in 1999 reported that the failure rate of stents insertion for advanced cervical cancer was 89%, and 92% ultimately require percutaneous drainage. Hsu et al, in 2016 recommended that PCN was the treatment of choice for advanced malignancy in pelvic region. Associated with the characteristics of the patient, it can be assumed that the possibility of the quality of life of patients do not experience improvement means having already obtained companion diseases related to decreased renal function in patients.11,15

Research results also showed that there was no meaningful difference in the patient's life quality score based on open diversion therapy on all domains on the 6th month and the end of the first year. Interestingly, the results of this research show that there are no meaningful differences among groups with the action open and the DJ stent insertion versioned views of the survival rate and quality of life score. Mentioned in the literature, that the majority of patients whose advanced cervical cancer who have undergone urine diversion has a poor survival rate, 50% of patients spent time in hospital in 5 months post surgery, as well as the prevalence of the procedure endourology has a high number of failures.15,16

The limitation in this study is the WHO QoL BREF questionnaire which covers the overall health aspects. There are many factors that affect the quality of life of patients ranging from nutritional status, economic status, social life, sexual life, and so forth. Until now there has been no literature that mentions questionnaires about the focus on pain and complaints of micturition related to urine diversion.

5. CONCLUSION

There was no significant difference of QoL between surgical-treated (urinary diversion) and non surgical treated group, but in surgical treated group have survival rate, higher than non surgical treated in

cervical cancer patients complicated with obstructive uropathy.

CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

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