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Original Article

Quality of Life of Patients with Permanent Colostomy after the Miles Operation for Low Rectal Cancer at Vietnam National Cancer Hospital, Hanoi

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Abstract

Objective: Long-term ostomy could impact the quality of life (QoL) of patients living with one. The aim of the present study is to evaluate QoL of patients with permanent colostomy after the Miles operation for low rectal cancer.

Patients and Methods: The present cross-sectional study included 75 patients with permanent colostomy. All patients were interviewed three months after surgery, using The City of hope - Quality of life - Ostomy Questionaire (CoH-QoL-OQ). The study was conducted from April 2018 to December 2019 at Vietnam National Cancer Hospital in Hanoi.

Results: Among 75 patients, 61% were men and 39% women. QoL in physical well-being were low in 36%, medium in 59% and good in 5%. QoL for psychological well-being were low in 33%, medium in 67% and good in none. QoL for social well-being were low in 13%, medium in 79% and good in 8%. QoL for mental well-being were were low in 9%, medium in 88% and good in 3%. There were several factors associated with QoL, including marital status ($p = 0.007$), negative thoughts ($p = 0.007$), and depression ($p = 0.028$).

Conclusion: QoL of patients with permanent colostomy after the Miles operation for low rectal cancer is low. Three factors were found to be related to the QoL, included marital status, negative thoughts, and depression.

Keywords: Colostomy, Quality of life, Miles procedure

Introduction

According to the World Council of Enterostomal Therapist (WCET), it is estimatesd that the world has nearly 2 million people with ostomies.[1] Numerous studies have shown that the quality of life (QoL) of patients is significantly reduced with the presence of ostomies. The ostomy changes the psychological well-being and social activities of patients. Psychological changes included lifestyle changes, reduced ability and desire to work, and reduced sexual activity, especially in young patients. These changes often led to self-isolation.[2,3]

After rectal amputation for rectal cancer in a Miles operation, patients have to accept living with a permanent colostomy. The patient must face the fear of leaking

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feces, or unpleasant odor from uncontrolled flatulence. Nugent in 1999 showed that over 80% of patients with a colostomy had poor QoL.[4]

In Vietnam, although there is no official statistics, the estimated number of patients with ostomy is quite large, including many cases of permanent colostomy after Miles surgery. Care for patients with permanent colostomy is often inadequate, adversely affecting QoL of patients.[5,6] We conducted the present study to evaluate the QoL of patients with permanent colostomies after a Miles operation for low rectal cancer at the Department of Surgery, Vietnam National Cancer Hospital.

Patients And Methods

The research protocol was approved by the Scientific Council of the hospital where the research was conducted. There were 75 adult patients (over 18 years of age) with permanent colostomy after the Miles operation for low rectal cancer treated at Central Surgery Department I of Vietnam National Cancer Hospital. Patients were asked to participate in answering the questionnaires 1 month or more after surgery.

A cross-sectional descriptive study was conducted from April 2018 to December 2019. Participants were interviewed by phone, using The City of hope-Quality of life-Ostomy Questionnaire (CoH-QoL-OQ) developed by Grant and Davis.[7] The questionnaire consisted of 2 parts.

Part 1 consisted of *characteristics of subject* in 4 questions: age, gender, marital status, health insurance; *characteristics of the diseases,* which included 4 questions: type of surgery, location of colostomy, time taking care of colostomy, person caring for colostomy; *life style* included 4 questions: vocation, health insurance, sexual activity, psychology and anxiety; *clothing and dietary changes* included 2 questions: dress and diet.

Part 2 consisted of QoL in 5 domains: 11 questions in the physical domain, 12 questions in the psychological domain, 11 questions in the social domain, 6 questions in the domain of mental welfare, and 6 questions of QoL overview assessed by a Likert scale of 0 to10.

The score for each domain was defined as the sum of points of all questions divided by the number of questions in that domain. Total QoL score is the sum of scores of all questions divided by the total number of questions. Thus, the highest total score is 46 points. Low QoL is defined as < 5 points, average QoL, ≥ 5-7 points, and high/good QoL, > 7 points.[8]

The reliability of the scale calculated using Cronbach's alpha was 0.76, based on variables/indicators measured with the Likert scale from 0 to 10 in a sample of 20 patients. Association between QoL and sex, age, marital status, care of colostomy, life style, sexual activity, depression, negative thoughts, joining a support group, location of colostomy, dietary changes, and time taking care of colostomy, were examined as well.

Odds ratios were used to determine the association between QoL and various factors mentioned, along with exact p-values and 95% confidence intervals (95% CI). The QoL was categorized as a binary outcome for this analysis (low and not low QoL). Stata v. 14 was used for data analysis. Statistical significance was defined as a p value of < 0.05.

Results

There were 75 patients with permanent colostomy after the Miles operation for low rectal cancers in the present study. Characteristics of patients are presented in **Table 1**.

Table 2 shows proportions of patients with low, average or good QoL for 5 domains. Very few patients had good QoL in any domain.

Table 3 shows factors potentially associated with QoL. Factors significantly associated with low QoL on univariable analysis included marital status ($p = 0.007$), negative thoughts ($p = 0.007$), and depression ($p = 0.028$).

Discussion

Of the 75 patients, there were more men than women due to the high prevalence of rectal cancer in men. In a report by Nguyen Ba Duc, et al[9] in 6 regions of North of Vietnam, rectal cancer was more common in men than in women. The incidence of colorectal cancer in 2010 was 19/100,000 for men vs. 14.7/100,000 for women.

Rectal cancer is more common in the age group above 40 years. According to Le Huy Hoa (2002) and Tran Thang (2003)[10,11], the proportion of cancer patients under 40 years old is relative low. This explains why in our study patients in the age group above 40 years accounted for 92% of all patients.

Because the colostomy is permanent, 81% of patients care for the colostomy themselves, with 17% cared by family members and only 1% cared by health workers. This is consistent with a study by Nguyen Ngoc

Thuc (2019)[6] showing that the majority of patients took care of the ostomy by themselves, with only a few cared for by health workers.

The majority of patients (96%) had health insurance in our study. This rate is in line with the rate of having health insurance in Vietnam, at 89%, as reported by Vietnam Social Insurance in May 2019. Having health insurance can make the life of patients much easier in general, especially for the patients with a colostomy.[11,12]

Up to 60% of patients in our study are retired, a finding similar to that of of Nguyen Ngoc Thuc and Luu Thi Bich Thuy.[5,6] However, none of the patients who were working had to change jobs due to the presence of a colostomy.

The majority of existing studies show a deterioration of sexual function in patients with a colostomy. According to Digennaro (2013) and Fucini (2008)[13,14], post-surgical sexual intercourse is feared by patients. Our study is consistent with those studies. The proportion of sexually active patients in our study was only 29%. Gemmill et al[15] reported that 70% of patients had some sexual activity before a colostomy, while only 55% of patients continued sexual activity after surgery.

In our study, the majority of patients with a colostomy (71%) received psychological support through discussion with people will have or have had a colostomy. However, some patients suffered from depression after having a colostomy, accounting for 11%, the same proportion as those with negative thoughts. Therefore, patients with colostomies require better psychological support.

In our study, colostomy affects clothing and diet. Up to 71% of patients had clothing affected by the colostomy, of which 22% had to change their dressing style. This may affect their quality of life.[16,17]

Most patients (99%) had to adjust their diet after surgery, mostly to avoid flatulence. Common dietary changes included avoidance of carbonated drinks (99%) and dairy products (21%). According to Dabirian,[18] dietary measures after surgery may be effective for controlling flatulence. Luu Thi Bich Thuy finds preoperative dietary counseling to be important.[5]

On average, patients took 30 minutes caring for

Table 1 Characteristics of patients (n = 75)

Characteristic	Number	%
Gender		
Male	46	61
Female	29	39
Age (years)		
18-40	6	8
≥ 41-60	36	48
> 60	33	44
Marital status		
Single	2	3
Married	66	87
Widowed	5	7
Separated	2	3
Health insurance		
Yes	72	96
No	3	4
Time with colostomy (months)		
1 to 3	2	3
4 to 6	13	17
7 to 12	25	33
≥ 12	35	47
Working		
Yes	40	53
Not working	35	47
Person caring for colostomy		
Patient	61	81
Family	13	18
Health staff	1	1
Dress Changes (yes)	33	44
Dietary Changes (yes)	72	99

Table 2. Showing proportions of low, average and good quality of life (QoL) for each domain of QoL

Domain of QoL	Low (%)	Average (%)	Good (%)
Physical	36	59	5
Psychology	33	67	0
Social	13	79	8
Welfare	9	88	3
General	87	13	0

Table 3 Factors potentially related to low quality of life (QoL)

Factor	Quality of life		*p*	OR (95% CI)
	Low (%)	Not low (%)		
Gender			0.496	1.71 (0.35-8.21)
Male	41 (89)	5 (11)		
Female	24 (83)	5 (17)		
Aged group			0.858	NA
18-40	5 (83)	1 (17)		
41-60	32 (89)	4 (11)		
≥ 60	28 (85)	5 (15)		
Marital status			0.007	8.29 (1.45-45.2)
Married	58 (92)	5 (8)		
Single or divorced	7 (58)	5 (42)		
Someone to assist ostomy care			0.999	0.91 (0.15-9.83)
Yes	12 (86)	2 (14)		
No	53 (87)	8 (13)		
Negative thoughts			0.007	0.04 (0.001-0.57)
Yes	1 (25)	3 (75)		
No	64 (90)	7 (10)		
Health insurance			0.511	NA
Yes	62 (84)	9 (12)		
No	3 (100)	0 (0)		
Sexuality function			0.999	0.83 (0.08-4.86)
Yes	50 (86)	8 (14)		
No	15 (88)	2 (12)		
Depression			0.028	0.113 (0.02-0.67)
No	62 (90)	7 (10)		
Yes	3 (50)	3 (50)		
Joining support group			0.999	1.09 (0.11-54.3)
No	58 (87)	9 (13)		
Yes	7 (88)	1 (12)		
Location of ostomy			0.309	2.25 (0.47-11.8)
No	26 (81)	6 (19)		
Yes	39 (91)	4 (9)		
Changing diet			0.521	1.69 (0.03-19.8)
No	4 (80)	1 (20)		
Yes	61 (87)	9 (13)		
Duration of ostomy care (minutes)			0.133	NA
≤ 60	65 (88)	9 (12)		
> 60	0 (0)	1 (100)		

NA: not estimable/not calculated

their colostomy every day. This may be a relatively long time for some. Therefore, patients may require guidance to help minimize time spent on colostomy care.

In our study, only 5% of patients had a good physical QoL and none had a good psychological QoL. About a third, or 36 % of patients had a low physical QoL, 33% had low psychological QoL. A study by Nguyen Ngoc Thuc found low physical QoL in 62% and low mental QoL in 51% of patients.[6] These studies clearly demonstrate the adverse impact of ostomies on these domains of QoL.

Having a colostomy also affects the social well-being. In our study, only 8% patients had a good social QoL, the majority of patients had average social QoL (79%). The QoL of patients in terms of welfare appeared to be better. Only 9% of patients had a low welfare QoL. In a study by Nguyen Ngoc Thuc[6], however, 43% of patients reported low welfare QoL, and for 40% it was average.

Overall, in the present study 87% patients had low QoL. No patient had a good QoL. According to Nguyen Ngoc Thuc[6], QoL in patients with an ostomy in general is relative low, accounting for 64% of patients, and in only 8% were QoL good. A review of 14 studies conducted by Sylvia[12] gave an indication of the impact of ostomy-related problems on the perceived QoL, and all studies demonstrated that living with a colostomy influences the overall QoL negatively, especially for patients with long-term ostomies.

Conclusion

We found that living with a permanent colostomy resulted in significantly impaired quality of life in patients, especially those who underwent the Miles operation for low rectal cancer. We found 3 factors to be significantly associated with QoL. These included marital status, negative thought, and depression. The results of the present study may be helpful when making a decision or providing health counseling to patients prior to the operation for rectal cancer.

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Conflict of Interest

None

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