

Assessment of quality of life and incontinence in patients of open hemorrhoidectomy



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ABSTRACT

Background: For the most part, symptomatic hemorrhoids are a quality-of-life issue. All patients should initially receive conservative management if this fails to improve symptoms, an office-based or operative procedure may be offered. **Aims and Objectives:** The present study was conducted to assess quality of life using SF-36 health survey and incontinence by Wexner scoring system in patients of open hemorrhoidectomy. **Materials and Methods:** The study was conducted on 50 cases of open hemorrhoidectomy in M.L.B. Medical College, Jhansi, between January 2021 and June 2022. **Results:** Results of health-related quality of life in patients before and after open hemorrhoidectomy are compared out of 8 domains, 5 domains, i.e., physical functioning, role limitation due to physical health, social functioning, pain, and general health have significantly shown that patients after open hemorrhoidectomy are having better quality of life before open hemorrhoidectomy. Out of 8 domains, 3 domains such as emotional well-being, vitality, and role limitation due to emotional problems have shown that there is no significant difference in the quality of life in patients before and after open hemorrhoidectomy. **Conclusion:** Quality of life was improved in patients of hemorrhoids after open hemorrhoidectomy.

Key words: Quality of life; Hemorrhoids; Hemorrhoidectomy

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INTRODUCTION

Hemorrhoids are the downward displacement of cushions of anal submucosal connective tissue containing venules and smooth muscle fibers, causing venule dilatation.¹ They can cause significant symptoms of bleeding, pain, and difficulty with perianal hygiene. Despite medical management, symptomatic hemorrhoids often require surgery. Although hemorrhoidectomy is one of the most common anorectal operations,² it has long been known as a potentially morbid procedure fraught with pain, lengthy recovery, and recurrent disease. Multiple methods, including scissors, electrocautery, and staplers, have been used in attempts to reduce these morbidities.

Surgical excision using the Harmonic Scalpel (Ethicon; EndoSurgery, Inc., Cincinnati, Ohio) is a more recent

technique for use in symptomatic third- and fourth-degree hemorrhoids. It has been advocated in a number of other surgical procedures to decrease bleeding and minimize operating room time.³ This works through the denaturation of proteins by breaking hydrogen bonds, thereby forming a coagulum to seal vessels at lower temperatures and decreasing thermal damage to surrounding tissues.⁴ When used in hemorrhoidal surgery, the resulting mucosal defect created by excising the hemorrhoid is then left open or sutured closed depending on surgeon preference.

The purpose of this study is to assess of quality of life using SF-36 health survey and incontinence by Wexner scoring system in patients of open hemorrhoidectomy.

Aims and objectives

- The present study was conducted to assess the quality of life using SF-36 health survey and incontinence

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by Wexner scoring system in patients of open hemorrhoidectomy.

MATERIALS AND METHODS

Ethical

The ethical committee's approval was duly taken. Data were collected in the department of general surgery from the bedside tickets of the patients after taking a short history and informed consent from the patients.

Source of data

The prospective study was conducted on 50 cases of open hemorrhoidectomy in M.L.B. Medical College, Jhansi, between January 2021 and June 2022.

Inclusion criteria

- Age between 20 and 65 years
- Grade 3 and grade 4 hemorrhoids
- Informed consent was obtained from all the subjects enrolled in the study after explaining to them in detail about the study in their own language.

Exclusion criteria

- Prolapse of single anal cushion
- Anal stenosis
- Patients not giving consent.

SF 36 health survey

The basis of this study is the quality of life analysis of the operated patients, using 36-item short-form questionnaire (SF-36) developed from the RAND corporation medical outcomes study (RAND Health, Santa Monica, CA, USA) which will be translated to Croatian language without changing questions' meaning.

The SF-36 questionnaire is a standardized procedure for the assessment of health-related quality of life which analyzes 8 domains of quality of life:

1. Physical Functioning
2. Role limitations due to physical health
3. Social functioning
4. Bodily pain
5. General mental health
6. Role limitations due to emotional problems
7. Vitality
8. General health perceptions.

The answers were categorized in the form of scores in the way recommended by RAND, transforming them into linear analog scale where the score of 100 indicated the optimal health. After that, they were grouped into the domains. The SF-36 questionnaire will be complemented with few questions about the complications or problems specific

to open hemorrhoidectomy such as bodily pain, bleeding, difficulty with perianal hygiene, a lengthy recovery, recurrent disease, and anal stenosis which can be directly connected to open hemorrhoidectomy procedure of the patients. We also asked about the appearance of the recurrence. The questionnaire was sent by mail to the addresses of the patients with the accompanying letter, where we explain the kind of research and ask the patients to focus on the open hemorrhoidectomy procedure or, in other words, to connect the questions to open hemorrhoidectomy procedure.

Wexner scoring system

This scale takes into account the frequency and type of incontinence (flatus, liquid, solid stool, need for pads, and impact of incontinence on lifestyle).

Statistical analysis

The data were summarized as mean values with standard deviations (SD). The statistical analysis was performed using Chi-square test with Yates' correction or Fisher's exact test. The SPSS 20.0 for Windows computer software (SPSS Inc., Chicago, IL) was used for statistical analysis. $P < 0.05$ was considered statistically significant.

RESULTS

The study was conducted on 50 cases of open hemorrhoidectomy in M.L.B. Medical College, Jhansi, between January 2021 and June 2022. In our study, 13 (26%) were in 20–30 years, 7 (14%) in 31–40 years, 9 (18%) in 41–50 years, 0 (18%) in 51–60 years, and 12 (24%) in >60 years [Table 1]. Out of 50 patient 82% are male patient and 18% patient are female [Table 2].

Results of health-related quality of life in patients before and after open hemorrhoidectomy are compared out of 8 domains, 5 domains, i.e., physical functioning, role limitation due to physical health, social functioning, pain,

Table 1: Age (in years) distribution

Age (in years)	No. of patients	Percentage
20–30 years	13	26.00
31–40 years	07	14.00
41–50 years	09	18.00
51–60 years	09	18.00
>60 years	12	24.00
Total	50	100

Table 2: Sex distribution

Sex	No. of patients	Percentage
Male	41	82.00
Female	09	18.00
Total	50	100

and general health have significantly shown that patients after open hemorrhoidectomy are having better quality of life before open hemorrhoidectomy. Out of 8 domains, 3 domains such as emotional well-being, vitality, and role limitation due to emotional problems have shown that there is no significant difference in the quality of life in patients before and after open hemorrhoidectomy.

DISCUSSION

Physical functioning

In our study of 50 patients, mean±SD score of physical functioning before open hemorrhoidectomy is 80.70±24.782 and mean±SD score of physical functioning after open hemorrhoidectomy is 33.5±23.534.

The affecting student t-test for P-value, P=0.0001, which means patients who had open hemorrhoidectomy have significantly benefitting physical activities after open hemorrhoidectomy (Table 3).

Shabahang et al., (2019)⁵ concluded that the mean of physical functioning was 84.5±10.5 and P<0.001, means that there is a statistically significant difference in physical functioning domain.

Garg et al., (2013)⁶ concluded that median score of physical functioning before open hemorrhoidectomy is 57.1 and after open hemorrhoidectomy is 67.8 and P=0.0001, which means that there is statistically significant difference in physical functioning domain.

Khan et al., (2001)⁷ concluded that mean±SD score of physical functioning before open hemorrhoidectomy is 86.00±4.782 and mean±SD score of physical functioning after open hemorrhoidectomy is 71.5±9 and P=0.0001, which means that there is statistically significant difference in physical functioning domain.

Role functioning/physical

50 patients who went open hemorrhoidectomy, the mean±SD score of role functioning/physical

domain questionnaires is 51.00±50.115 and in the same patients before open hemorrhoidectomy, the mean±SD score of role functioning/physical domain is 71.00±45.490. P=0.03 means that patients who had open hemorrhoidectomy have significantly benefitted physical health which had decreased role limitation due to physical health (Table 3).

Shabahang et al., (2019)⁵ concluded that the mean of role limitations due to physical health was 56.9±9.4 and P<0.001, means that there is statistically significant difference in role limitations due to physical health domain.

Khan et al., (2001)⁷ concluded that mean±SD score of role limitations due to physical health before open hemorrhoidectomy is 76.00±9 and mean±SD score of physical functioning after open hemorrhoidectomy is 59±14 and P=0.0001, which means that there is statistically significant difference in physical functioning domain.

Bodily pain

50 patients who went open hemorrhoidectomy, the mean±SD score of bodily pain domain questionnaires is 52.30±19.312 and in same patients before open hemorrhoidectomy, the mean±SD score of bodily pain domain is 76.85±18.825. P=0.001 means that patients who had open hemorrhoidectomy have significantly benefitted physical health which had decreased bodily pain (Table 3).

Shabahang et al., (2019)⁵ concluded that the mean of role limitations due to bodily pain was 31.6±10.03 and P<0.001, means that there is statistically significant difference in bodily pain domain.

Khan et al., (2001)⁷ concluded that mean±SD score of role limitations due to physical health before open hemorrhoidectomy is 59±5 and mean±SD score of physical functioning after open hemorrhoidectomy is 59±5 and P>0.05, which means that there is no statistically significant difference in bodily pain domain.

Table 3: Quality of life

Domains of QOL n=8	Question	Mean±SD		P-value
		Before	After	
1. Physical functioning	3, 4, 5, 6, 7, 8, 9, 10, 11, 12	80.70±24.782	33.50±23.534	0.0001
2. Role physical	13, 14, 15, 16	71.00±45.490	51.00±50.115	0.03
3. Bodily pain	17, 18, 19	57.33±49.625	58.00±49.521	0.94
4. Vitality	23, 27, 29, 31	55.80±32.304	52.70±21.980	0.57
5. General health	24, 25, 26, 28, 30	62.56±31.861	64.40±23.742	0.74
6. Social functioning	20, 32	92.00±15.843	78.00±27.358	0.002
7. Mental health	21, 22	76.85±18.825	52.30±19.312	0.001
8. Role emotion	1, 33, 34, 35, 36	77.90±20.756	62.30±19.946	0.0002

Vitality

The mean±SD score for vitality in the group of patients before open hemorrhoidectomy is 55.80±32.304 and in group after open hemorrhoidectomy is 52.7±21.98. The P=0.57 means that there is no significant difference in vitality in group of patients before and after hemorrhoidectomy (Table 3).

Khan et al., (2001)⁷ concluded that mean±SD score of vitality before open hemorrhoidectomy is 59±5 and mean±SD score of physical functioning after open hemorrhoidectomy is 62±4 and P>0.05, which means that there is no statistically significant difference in vitality domain.

General health

The mean±SD score for general health in the group of patients before open hemorrhoidectomy is 77.96±20.755 and in group of patients after open hemorrhoidectomy is 62.36±14.946 (Table 3).

The P=0.0002 means that there is significant benefitting general health in patients after open hemorrhoidectomy than patients before open hemorrhoidectomy.

Shabahang et al., (2019)⁵ concluded that the mean of general health was 56.7±3.1 and P<0.001, means that there is statistically significant difference in general health domain.

Social functioning

The mean±SD score for social functioning in the group of patients after open hemorrhoidectomy is 78.00±27.358 and in group of patients before open hemorrhoidectomy is 92.00±15.843.

The P=0.002 means that there is significant difference between the groups of patients after open hemorrhoidectomy than group of patients before open hemorrhoidectomy in having better social well-being (Table 3).

Khan et al., (2001)⁷ concluded that mean±SD score of social functioning before open hemorrhoidectomy is 80±6 and mean±SD score of social functioning after open hemorrhoidectomy is 73±6 and P<0.05, which means that there is statistically significant difference in social functioning domain.

Garg et al., (2013)⁶ concluded that median score of social functioning before open hemorrhoidectomy is 75.0 and after open hemorrhoidectomy is 75.0 and P=0.15, which means that there is no statistically significant difference in social functioning domain.

Mental health/emotional wellbeing

The mean±SD score for mental health in the group of patients after open hemorrhoidectomy is 64.4±23.742 and in group of patients before open hemorrhoidectomy is 62.56±31.861. The P=0.74 means that there is no significant difference in emotional well-being between the patients before and after open hemorrhoidectomy (Table 3).

Khan et al., (2001)⁷ concluded that mean±SD score of mental health/emotional well-being before open hemorrhoidectomy is 80±4 and mean±SD score of emotional well-being after open hemorrhoidectomy is 80±3 and P>0.05, which means that there is no statistically significant difference in mental health/emotional well-being domain.

Role limitation due to emotional problem

The mean±SD score for role limitation due to emotional problem in the group of patients before open hemorrhoidectomy is 57.33±49.625 and in the group after open hemorrhoidectomy is 58.00±49.521. The P=0.94 means that there is no significant difference in role limitation due to emotional problem in patients before and after open hemorrhoidectomy (Table 3).

Khan et al., (2001)⁷ concluded that mean±SD score of role limitation due to emotional problem before open hemorrhoidectomy is 100±0 and mean±SD score of social functioning after open hemorrhoidectomy is 76±11 and P<0.05, which means that there is statistically significant difference in role limitation due to emotional problem domain.

Quality of life assessment

Results of health-related quality of life in patients before and after open hemorrhoidectomy are compared out of 8 domains, 5 domains, i.e., physical functioning, role limitation due to physical health, social functioning, pain, and general health have significantly shown that patients after open hemorrhoidectomy are having better quality of life before open hemorrhoidectomy (Table 3).

Table 4: Comparison between Khan et al., (2001) 7 and in our study

Domain	Khan et al., (2001) ⁷ (P-value)	Our study (P-value)
1. Physical functioning	<0.05	0.0001
2. Role physical	<0.05	0.03
3. Bodily pain	>0.05	0.001
4. Vitality	>0.05	0.57
5. General health	>0.05	0.0002
6. Social functioning	<0.05	0.002
7. Mental health	>0.05	0.74
8. Role emotion	<0.05	0.94

Out of 8 domains, 3 domains such as emotional well-being, vitality, and role limitation due to emotional problem have shown that there is no significant difference in the quality of life in patients before and after open hemorrhoidectomy.

Khan *et al.*, (2001)⁷ study, SF-36 scores, out of 8 domains, 4 domains such as physical functioning, role functioning physical, social functioning, and role functioning emotional have significantly shown patients that after open hemorrhoidectomy is having better quality of life than before open hemorrhoidectomy (Table 4).

Incontinence

In our study, out of 50 patients, no patients gave history of incontinence to flatus before operation. This is due to hypertonia of internal sphincter. No incontinence to liquids, solids, need to wear pad, impact of incontinence on lifestyle. 4 weeks after open hemorrhoidectomy, only 1 (2%) patient gave history of incontinence to flatus only. Patient complaining of incontinence is female.

Limitations of the study

This was a single-centered study.

CONCLUSION

- In our study, a comparison between quality of life after open hemorrhoidectomy and before open hemorrhoidectomy using SF-36 questionnaire, we concluded that quality of life of patients after open hemorrhoidectomy is significantly better in 5 domains (physical functioning, role limitation due to physical health, social functioning, bodily pain, and general health) out of 8 domains in SF-36 questionnaire than quality of life before open hemorrhoidectomy and quality of life of patients after open hemorrhoidectomy is not significant in 3 domains (role emotional, vitality, and mental health) out of 8 domains in SF-36 questionnaire than quality of life before open hemorrhoidectomy.

- There was no significant difference in continence in patient before and after hemorrhoidectomy and 4 weeks after open hemorrhoidectomy.

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SP, NKB, ASY, SP, AG, SG- Concept and design of the study, prepared first draft of manuscript; interpreted the results; reviewed the literature and manuscript preparation; concept, coordination, preparation of manuscript and revision of the manuscript.

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