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POST OPERATIVE QUALITY OF LIFE AND MORBIDITY IN COMPLICATED COLONIC DIVERTICULITIS

Gastroenterology

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ABSTRACT

Aim: To determine the postoperative morbidity and Quality of life (QOL) among patients who underwent surgery with complicated colonic diverticulitis. **Methodology:** This is an observational single-Institutional study Data collected prospectively from patients who underwent surgical procedures for complicated diverticulitis in our Institution from January 2017 to June 2021 was taken for analysis. Patients who have an associated malignancy and who were lost to follow-up were excluded. Basic information, including BMI, diagnosis, and surgical procedures performed, was recorded. Clavien-Dindo (CD) grading was used as a measure for post-operative morbidity. QOL was assessed with a questionnaires, which were 3 types [Cleveland Global Quality of Life (CGQL), Short Form 36 (SF-36), and Gastrointestinal Quality of Life Index (GIQLI)], taken before the surgery and then after 1 year. **Results:** During the study period, among 372 colonic surgeries, 21 (5.6%) complicated diverticulitis patients were operated upon. After satisfying the exclusion and inclusion criteria, 15 (n) patients were taken for analysis. CD grade proportionally increased with BMI. The CD grade was acceptable, with 10 patients having a grade 1. The mean follow-up time was 32 ± 5 months. There is a statistically significant (p 0.0001) improvement in long-term QOL. The mean QOL scores of CGQL, GIQLI, and SF-36 before surgery were 4.4 ± 1.2, 78.9 ± 10.1, and 52.1 ± 8.2, and after surgery, 7.8 ± 1.2, 123.6 ± 11.8, and 84.3 ± 5.8, respectively. **Conclusion:** Despite the complex clinical course there was no mortality with acceptable morbidity. Surgical intervention achieved satisfactory QOL.

KEYWORDS

Complicated Diverticulitis, Fistula, Quality Of Life

INTRODUCTION :

The manifestations of Acute colonic diverticulitis range from minor, uncomplicated inflammation to complicated forms. Therapeutic decisions are based on presence of complications with radiological and clinical findings in the abdomen.

Most people with diverticulosis are over the age of 40. Only 5% of people under the age of 40 have the condition, compared to 65% of people over the age of 65[1]. Only 10–25% of people with diverticulosis exhibit the symptoms and characteristics of diverticulitis. [7] In their assessment of colonic diverticular disease published in 1975, Painter and Burkitt [8] noted that they were unable to locate any complicated diverticulitis from India. Their personal interactions with significant Indian hospitals led them to the conclusion that the incidence was lower than 0.3%. However, new research suggests that the prevalence is also rising in India. Goenka et al. [9] reported 3.2% as the prevalence rate from Chandigarh, while south Indian researchers Kamalesh et al. observed 9.9% frequency.[10] However, compared to other nations, prevalence rate in India is significantly lower overall.

The rationale of the study is to determine the morbidity among Indian patients who undergo surgical procedures and to compare the quality of life, before and after the surgical intervention.

METHODOLOGY:

This is a record register based observational single Institution study. Data collected prospectively from patients who underwent surgical procedures for complicated diverticulitis in our Institution from January 2017 to June 2021 was taken for analysis. Patients who have an associated malignancy and who were lost to follow-up were excluded. Basic information, including BMI, diagnosis, and surgical procedures performed, was recorded. Clavien-Dindo (CD) grading was used as a measure for post-operative morbidity. Quality of life (QOL) was assessed with three questionnaires. First, the Cleveland Global Quality of Life (CGQL), in which the patients were to score their current quality of life, quality of health, and energy level on a scale of 0 to 10 (worst possible to best possible) [2].Second, the Short Form 36 (SF-36) consists of eight scales, including Physical Functioning, Role-Physical, Bodily Pain, General Health, Vitality, Social Functioning, Role-Emotional, and Mental Health. with an interval-scaled points system-0 to 100 (worst possible to best possible).[3] Lastly, the Gastrointestinal Quality of Life Index (GIQLI) was taken before the surgery and then after 1 year. GIQLI ranges from 0 to 144, with higher scores indicating a better quality of life. It is a 36-item scale divided into five domains: core symptoms (10 items), physical (6 items), psychological (6 items), social (2 items), and disease-specific (8 items). Each item is based on a 0–4 Likert scale, with 0 being the least desirable and 4 being the most desirable option. [4]

Statistical Analysis:

All results were statistical analyzed using SPSS Version 21.0 (IBM software). Data from patient characteristics, operative characteristics, post-operative questionnaire scores were represented in numbers and percentages. Quantitative variables were summarized as mean and standard deviation; and qualitative variables as proportions. Chi-square test were used to analyze categorical variables. Continuous variables were compared using the Student's t-test for data with normal distribution, and Mann–Whitney U test for data that were not.

RESULTS:

During the study period, among 372 colon surgeries, 21 (5.6%) were planned for complicated diverticulitis. After satisfying the exclusion and inclusion criteria, 15 (n) patients (males:8, females:6) were taken for analysis.

Table 1: Morbidity (CD grade)

CD grade	Non-obese	Obese	Total (n=15)
0	1	1	2
1	3	5	8
2	2	2	4
3	0	1	1

Colo-vesical fistula was the commonest indication for the surgery, present in 12 out of 15 patients (80%). Anterior Resection was the most common surgery performed. The mean age of presentation was 64.8 years. The median BMI was 27.1. CD grade proportionally increased with BMI. The CD grade was acceptable, with 10 patients having a grade 1. The mean follow-up time was 32 ± 5 months.

The mean QOL scores of CGQL, GIQLI, and SF-36 before surgery were 4.4 ± 1.2, 78.9 ± 10.1, and 52.1 ± 8.2, and after surgery, 7.8 ± 1.2, 123.6 ± 11.8, and 84.3 ± 5.8, respectively. There is a statistically significant ($p<0.0001$) improvement in long-term QOL.

Table 2: Mean QOL score before and after surgery

Questionnaire	Pre	Post	Total Score
CGQL	4.4	7.8	10
SF36	52.1	84.3	100
GIQLI	78.9	123.6	144

Table 3: Paired Samples Correlations

N=15	Correlation	P value
CGQL (pre) & CGQL (post)	0.555	0.032
Sf36 (pre) & SF36 (post)	0.912	0.001
GIQLI (pre) & GIQLI (post)	0.856	0.001

DISCUSSION:

All three questionnaires showed significant improvement in QOL following surgical intervention. There was marked improvement in QOL with surgical intervention in Colonic Diverticulitis with low Postoperative Morbidity.

Our study results are similar to the previous study by Martina et al., which showed improved QOL with the same questionnaires among Hinchey's type II diverticulitis and above. [1]

Obese patients (BMI >25) tend to have higher post-operative morbidity, which was graded with the Clavien-Dindo grading system.

CONCLUSION:

Despite the complex clinical course there was no mortality with acceptable morbidity. Surgical intervention achieved satisfactory QOL.

REFERENCES:

1. Martina Brandlhuber & Christian Genzinger & Bernhard Brandlhuber & Wieland H. Sommer & Mario H. Müller et al. Long-term quality of life after conservative treatment versus surgery for different stages of acute sigmoid diverticulitis. International Journal of Colorectal Disease, https://doi.org/10.1007/s00384-018-2969-y
2. Eypasch E, Wood-Dauphinee S, Williams JI, Ure BM, Schmulling C, Neugebauer E, et al. The Gastrointestinal Quality of Life Index: a clinical index for measuring patient status in gastroenterologic surgery. Chirug 1993;64: 264e74.
3. Kiran RP, Delaney CP, Senagore AJ, O'Brien-Ermlich B,Mascha E, Thornton J, Fazio VW(2003) Prospective assessment of Cleveland Global Quality of Life CGQL as a novel marker of quality of life and disease activity in Crohn's disease. Am J Gastroenterol 98(8): 1783–1789. https://doi.org/10.1111/j.1572-0241.2003.07592.x
4. McHorney CA, Ware JE, Lu JFR, Sherbourne CD. The MOS 36-Item Short-Form Health Survey (SF-36®): III. tests of data quality, scaling assumptions and reliability across diverse patient groups. *Med Care*1994; 32(4):40-66.
5. Ware JE, Snow KK, Kosinski M, Gandek B. *SF-36® Health Survey Manual and Interpretation Guide*. Boston, MA: New England Medical Center, The Health Institute, 1993.
6. Ware JE, Sherbourne CD. The MOS 36-Item Short-Form Health Survey (SF-36®): I. conceptual framework and item selection. Med Care 1992; 30(6):473-83.
7. Diverticular disease of colon: Changing trends Ajithakumari K., Philip Umman, Roshan Varkey, Deepak Johnson, Geetha Gopal, Abraham John. International Journal of Case Reports and Images, Vol. 7 No. 12, December 2016. ISSN – [0976-3198]. doi:10.5348/ijcri-201618-CS-10079.
8. Painter NS, Burkitt DP. Diverticular disease of the colon: A deficiency disease of Western civilization. Br Med J 1971 May 22;2(5759):450–4.
9. Goenka MK, Nagi B, Kochhar R, Bhasin DK, Singh A, Mehta SK. Colonic diverticulosis in India: The changing scene. Indian J Gastroenterol 1994 Jul;13(3):86–8.
10. Kamalesh NP, Prakash K, Pramil K, Zacharias P, Ramesh GN, Philip M. Prevalence and patterns of diverticulosis in patients undergoing colonoscopy in a southern Indian hospital. Indian J Gastroenterol 2012 Dec;31(6):337–9.