Surgery for Benign Colorectal Disease Improves Patient-reported Quality of Life

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Introduction

- Patient-reported outcomes (PRO) on health status and quality of life (QOL) can be used to assess surgical intervention, yet there is limited data on PRO for patients with benign colorectal disease

Purpose

- To assess if PRO on health status improved after elective major abdominal surgery for benign colorectal disease

Methods

- Patients with Crohn’s disease, Ulcerative colitis or diverticular disease undergoing elective major abdominal surgery were surveyed on PRO from 2012 to 2016
- Procedures included small or large bowel resection, or pelvic pouch procedure
- Health status PRO were collected after placement on the surgical wait list and 6 months post-operatively
 - EQ-5D index and visual analog scale (VAS)
 - PEG pain scale and PHQ-9 depression scoring tool

Results

- 57 patients completed both pre- and post-operative surveys
- 93% of patients had no other comorbidities (Charleston comorbidity index = 0)

Patient Demographics

Characteristic	Percent (N)	Characteristic	Percent (N)
Diagnosis		Procedure	
Crohn’s	28.1% (16)	Small bowel resection	10.5% (6)
UC	19.3% (11)	Segmental colectomy	22.8% (13)
Diverticulitis	52.6% (30)	Anterior resection	47.4% (27)
Approach		Proctocolectomy/APR	10.5% (6)
MIS	61.4% (35)	Pelvic Pouch	10.5% (6)
Open	38.6% (22)		

Results

Health Status PRO for benign disease

Survey Instrument	Pre-operative score (mean ± standard deviation)	Post-operative score (mean ± standard deviation)	p-value
EQ-5D (/1.0)	0.78 ± 0.19	0.85 ± 0.17	0.004
VAS (/100)	66.9 ± 19.7	76.2 ± 18.0	0.001
PEG (/10)	2.9 ± 3.1	2.0 ± 2.4	0.020
PHQ-9 (/27)	5.3 ± 5.4	3.7 ± 4.4	0.016

Survey Instrument	Pre-operative score	Post-operative score	p-value
EQ-5D (/1.0)			
Diverticulitis	0.79 ± 0.17	0.88 ± 0.16	0.01
Crohn’s	0.69 ± 0.23	0.81 ± 0.21	0.05
UC	0.89 ± 0.10	0.85 ± 0.10	0.71
VAS (/100)			
Diverticulitis	67.7 ± 14.9	78.7 ± 15.6	0.005
Crohn’s	56.3 ± 23.3	68.3 ± 22.9	0.05
UC	80.4 ± 16.6	81.3 ± 13.7	0.88
PEG (/10)			
Diverticulitis	2.7 ± 2.7	1.6 ± 2.1	0.05
Crohn’s	4.3 ± 3.6	2.8 ± 3.2	0.04
UC	1.2 ± 2.4	1.8 ± 1.3	0.59
PHQ-9 (/27)			
Diverticulitis	3.8 ± 3.9	2.8 ± 3.2	0.19
Crohn’s	9.3 ± 7.2	6.7 ± 6.4	0.05
UC	3.4 ± 2.7	2.7 ± 1.6	0.49

Conclusion

- Surgical intervention for benign colorectal disease improves patient-reported health status and QOL
- Improvements in PRO for Crohn’s disease and diverticulitis may be due to pre-operative symptom burden, and these patients may benefit from pain and depression optimization before surgery
- Surgery for ulcerative colitis may not result in significant improvements in patient-reported health status as measured by the EQ-5D, PEG and PHQ-9 tools
- Patients with benign colorectal disease can be counselled their health status will likely remain stable or significantly improve following elective abdominal surgery
- Further study is needed to determine which perioperative factors other than disease process influence patients’ QOL and health status