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Patient undergoing colectomy because of ulcerative colitis had a very high rate of surgical complications in clinical practice conditions

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Introduction

- Ulcerative colitis (UC) is a chronic inflammatory condition causing continuous mucosal inflammation affecting the rectum and a variable extent of the colon in continuity, which is characterized by a relapsing and remitting course
- Symptoms of UC are dependent upon extent and severity of disease, and most commonly include bloody diarrhea, rectal bleeding, and/or rectal urgency. Abdominal pain and systemic symptoms including fever and weight loss are also often reported¹
- The primary goal of treating UC is to reduce the inflammation that triggers symptoms. In many cases colectomy may be required when medical therapy fails²
- Colectomy is a staged-procedure with several surgeries and related inpatient hospitalization, which carries an important economic burden³
- Postcolectomy surgical procedures and complications occur frequently after colectomy⁴

Objective

- This study, part of the COSCOL study, aimed to establish the complications after colectomy for UC

Methods

Study design

- A retrospective audit was undertaken at 35 Spanish tertiary hospitals which reviewed the medical records of UC patients who had undergone total colectomy between January 2000 and November 2005
- The patients included in the study (identified performing a structured search in the diagnosis databases of the centres) fulfilled the following criteria: 1) diagnosis of UC according to clinical criteria, 2) with total colectomy, 3) and with available complete information for the study objectives, 4) patients followed up for a period of at least 24 months after the initial colectomy
- Patients with colectomy due to colorectal cancer were excluded from the study
- Data were recorded for all expected and unexpected surgeries (needed to complete the staged procedure or due to complications)
- Data collected included:
 - Socio-demographic and baseline disease characteristics
 - Type and number of surgeries performed to complete the procedure
 - Type and number of unexpected surgeries
 - Resource use: hospital stays, office visits, drug treatment and laboratory tests

Results

- 209 patients with total colectomy due to UC were included (44.5% women, mean age 41.6 ± 13.2 years at initial colectomy). Mean duration of the disease before surgery was 5.0 ± 6.3 years (Table 1)
- UC was left-sided in 19.6% and extensive in 80.4%
- In 35.4% of patients the initial colectomy was performed as an emergency surgery
- Sixty percent of patients (125) required at least a hospital admission (surgical or medical) due to complications (Figure 1)
- Forty-two percent (89) of the patients required one or more additional surgeries because of complications of the initial procedure
- Total number of additional surgeries was 165 (0.8 ± 1.3 per patient, range 0-8) (Table 2)
- Additional surgeries required 157 hospitalizations in 86 patients (55%) with mean length of surgical stay of 12.2 days (Table 3)

- Complications with surgery were more frequent in patients who finally received a proctocolectomy with ileostomy (1.4 ± 1.7 range 0-8) than in those with proctocolectomy ileal pouch anal anastomosis (IPAA) (0.5 ± 0.9 range 0-5) (Table 2)
- Most frequent complications requiring surgery are shown in figure 2
- Thirty-nine percent of patients (81) presented complications that required medical hospitalization without surgery
- Total number of medical hospitalization was 154 (0.7 ± 1.3 per patient, range 0-6, mean length of stay 8.61 days). (Table 3)
- Globally, 77% of the surgeries and 62% of medical hospitalizations occurred in the first 2 years after initial surgery
- Most frequent complications requiring medical hospitalization are detailed in figure 3

Table 1. Socio-demographic and baseline characteristics. COSCOL Study patients

	Value/N	Percentage
Number of patients	209	100
Females	93	44.5
Age, mean (SEM) (years)	41.6 (13.2)	
Years since diagnosis, mean (SEM)	5 (6.3)	
Smoking habit		
Smoker	18	8.6
Non-smoker	128	61.2
Ex-smoker	61	29.2
Use of immunomodulators	143	68.4
Azathioprine / mercaptopurine / methotrexate only	44	30.8
Cyclosporine only	40	28.0
Both	59	41.2
Extension		
Left-sided	41	19.6
Extensive	168	80.4
Proctitis	0	0
Reason for colectomy		
Treatment failure	131	62.7
Severe complications	61	29.2
Other	17	8.1
Colectomy performed as an emergency procedure	74	35.4

Table 3. Hospitalizations related to UC complications

	Surgical hospitalizations			Medical Hospitalizations		
	Frequency	Mean±SD	Stay (days) Mean±SD	Frequency	Mean±SD	Stay (days) Mean±SD
Proctocolectomy with ileal pouch anal anastomosis (IPAA)	57	0.5 ± 0.9	9.3 ± 21.5	92	0.8 ± 1.3	9.7 ± 22.2
Proctocolectomy with ileostomy	87	1.4 ± 1.7	19.4 ± 27.4	41	0.6 ± 1.3	5.3 ± 11.1
Proctocolectomy with IPAA and ileostomy	9	1.3 ± 1.1	33.9 ± 37.9	9	1.3 ± 1.6	32.3 ± 58.2
Colectomy with ileorectal anastomosis	0	0	0	3	0.3 ± 0.6	3.7 ± 9.8
Colectomy with ileostomy and rectal remnant	4	0.3 ± 0.6	2.4 ± 5.5	9	0.6 ± 0.9	6.7 ± 9.4
Total	157	0.8 ± 1.2	12.3 ± 23.9	154	0.7 ± 1.3	8.6 ± 20.9

Figure 2. Origin of UC complications requiring surgery

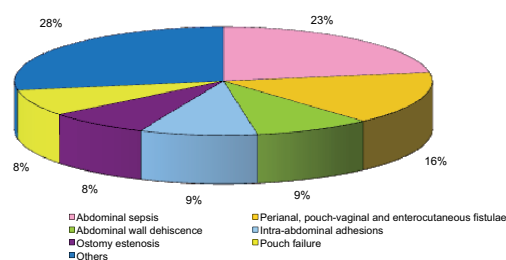


Figure 3. Origin of UC complications requiring medical hospitalizations

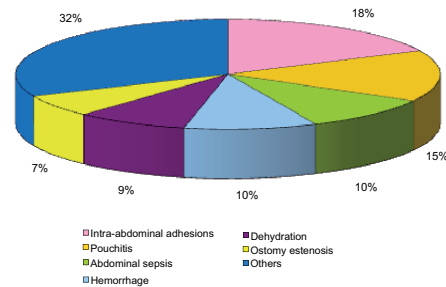


Figure 1. Flow of patients

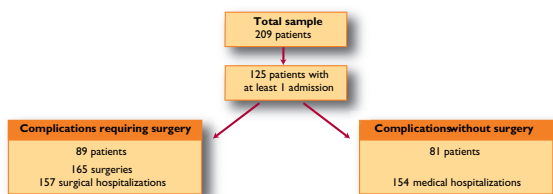


Table 2. UC complications requiring surgery

UC COMPLICATIONS REQUIRING SURGERY	Patients	Number of surgeries due to complications	Percentage	Surgeries per average patient (Mean±SD)
Proctocolectomy with ileal pouch anal anastomosis (IPAA)	113	62	37.6	0.5 ± 0.9
Proctocolectomy with ileostomy	64	90	54.5	1.5 ± 1.7
Proctocolectomy with IPAA and ileostomy	7	9	5.5	1.3 ± 1.1
Colectomy with ileorectal anastomosis	11	0	0.0	0
Colectomy with ileostomy and rectal remnant	14	4	2.4	0.3 ± 0.6
Total	209	165	100.0	0.8 ± 1.3

Conclusions

- In clinical practice more than 40% of patients required additional surgery because of complications of the initial colectomy. Surgeries were more common in patients who ended in a proctocolectomy with ileostomy
- Thirty-nine percent of patients required hospitalization due to medical complications
- Mean hospital stay per patient was 12.2 days for surgical complications and 8.6 days due to medical complications

References

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