

# POSTCOLECTOMY BURDEN IN ULCERATIVE COLITIS PATIENTS UNDERGOING COLECTOMY

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## BACKGROUND:

- Ulcerative colitis (UC) is a chronic inflammatory condition causing continuous mucosal inflammation of the colon without granulomas on biopsy, affecting the rectum and a variable extent of the colon in continuity, which is characterised by a relapsing and remitting course<sup>1</sup>.
- UC primarily presents in late adolescence and early adulthood, although the diagnosis may be made at any age.
- Symptoms of ulcerative colitis are dependent upon extent and severity of disease, and most commonly include bloody diarrhoea, rectal bleeding, and/or rectal urgency. Nocturnal defaecation is also often reported.
- The primary goal of treating ulcerative colitis is to reduce the inflammation that triggers symptoms. In many cases, medication can control symptoms, but surgery may be required when medical therapy fails or if signs of colon cancer develop.

## OBJECTIVE:

- This study, part of the COSCOL study, aimed to establish the types of colectomies and the number of stages for UC performed in this population in Spain with a high previous use of immunomodulators.

## SUBJECTS & METHODS:

- A retrospective audit was undertaken at 35 Spanish centres which reviewed the medical records of UC patients who had undergone total colectomy between 2000 and 2005.
- Patients were followed up for a period of at least 24 months after the initial colectomy and data were recorded for all expected and unexpected surgeries needed to complete the staged procedure.
- The patients included in the study fulfilled the following criteria: 1) diagnosis of UC according to clinical criteria, 2) with total colectomy, 3) and with available complete information for the objectives of the study.
- Patients with colectomy due to colorectal cancer were excluded from the study.
- 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:

- Two hundred and nine 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 was 5.0 ± 6.3 years.
- UC was left-sided in 19.6% and extensive in 80.4%.
- Early surgery, defined as colectomy performed within the first two years of disease, was recorded in 77 patients (36.8%).
- One hundred and forty-three patients (68.4%) received immunomodulators (30.8% azathioprine and/or mercaptopurine and/or methotrexate only, 28% cyclosporine only, and 41.2% were receiving both).
- In 46.9% of patients the initial colectomy was performed as an emergency surgery.
- Socio-demographic and baseline disease characteristics for all patients are shown in table 1.

**Table 1. Socio-demographic and baseline disease characteristics**

Characteristic	N (%)
Number of patients	209 (100)
Females	93 (44.5)
Age, mean (SEM) (years)	41.6 (13.2)
Smoking habit:	
Smoker	18 (8.6)
Non-smoker	128 (61.2)
Ex-smoker	61 (29.2)
Years since UC diagnosis, mean (SEM) (years)	5 (6.3)
Extension	
Left-sided	41 (19.6)
Extensive	168 (80.4)
Proctitis	0
Use of immunomodulators	143 (68.4%)
Azathioprine / mercaptopurine / methotrexate only	44 (30.8)
Cyclosporine only	40 (28)
Both	59 (41.2)
Reason for colectomy	
Treatment failure	131 (62.7)
Severe complications	61 (29.2)
Other	17 (8.1)
Colectomy performed as an emergency procedure	98 (46.9)

- Proctocolectomy with ileal pouch anal anastomosis (IPAA) was the most frequent surgery performed (54% of cases), followed by proctocolectomy with ileostomy (31%).
- Other surgeries were less frequent, colectomy with ileostomy and rectal remnant was performed in 7% of the patients, colectomy with ileorectal anastomosis was performed in 5% of the patients and proctocolectomy with IPAA and ileostomy in 3%.
- Most procedures were performed in 1 or 2 stages (75% of patients), but in other 4 or 5 surgeries were needed (3%)
- Table 2 shows the types of colectomy performed and the number of stages needed to complete the procedure.

**Table 2. Type of colectomy and number of stages performed**

Type of colectomy			Number of surgeries needed to complete	
Type	#	%	# of surgeries	# of patients
Proctocolectomy with ileal pouch anal anastomosis (IPAA)	113	54%	1	3
			2	66
			3	43
			4	1
Proctocolectomy with ileostomy	64	31%	1	28
			2	25
			3	6
			4	3
Proctocolectomy with IPAA and ileostomy	7	3%	5	2
			1	3
			2	1
Colectomy with ileorectal anastomosis	11	5%	3	2
			4	1
Colectomy with ileostomy and rectal remnant	14	7%	1	6
			2	5
TOTAL	209	100%	1	13
			2	1
				209

- Planned surgery failed in 29 patients (13.9%).
- Table 3 shows failed planned colectomies and the final colectomy performed.
- In the failed surgery population, 21 unexpected surgeries were performed in 20 patients (13 pouch resections, 4 re-ileostomies, 3 proctectomies with ileostomy, 2 isolated proctectomies, 1 proctectomy with IPAA and 1 rectal stump closure with ileostomy).

**Table 3. Failure rate in planned colectomy and type of final colectomy performed**

Type of planned colectomy (#)	% failure	Final colectomy performed (#)		
Proctocolectomy with ileal pouch anal anastomosis (IPAA)	132	15%	IPAA (no failure)	112
			Proctocolectomy with ileostomy	13
			Proctocolectomy with IPAA and ileostomy	7
Proctocolectomy with ileostomy	48	4%	Proctocolectomy with ileostomy (no failure)	46
			Colectomy with ileostomy and rectal remnant	2
Colectomy with ileorectal anastomosis	18	39%	Colectomy with ileorectal anastomosis (no failure)	11
			Proctocolectomy with ileostomy	5
			Proctocolectomy with IPAA	1
			Colectomy with ileostomy and rectal remnant	1
Colectomy with ileostomy and rectal remnant	11	0%	Colectomy with ileostomy and rectal remnant (no failure)	11

## CONCLUSIONS:

- Although restorative proctocolectomy with IPAA has become the gold standard surgery for UC, it was only performed in 54% patients.
- Colectomy due to UC places a high burden on the patient: in 75% of patients at least two operations are required to complete it, and in 25% at least three.
- As many as 41% of patients carry a permanent ileostomy.
- As many as 14% of all planned colectomies fail.
- Only 15% of proctocolectomies with IPAA need in-pouch resection or a permanent diversion (pouch failure).
- Planned surgery involving ileorectal anastomosis, considered an inappropriate type of surgery for UC, failed in nearly 40% of patients.

## REFERENCES:

- Silverberg MS, Satsangi J, Ahmad T, et al. Toward an integrated clinical, molecular and serological classification of inflammatory bowel disease: report of a working party of the 2005 Montreal World Congress of Gastroenterology. *Can J Gastroenterol* 2005;19(Suppl A):5-36.