INCIDENTAL DYSPLASIA IN PATIENTS UNDERGOING PROCTOCOLECTOMY AND ILEAL POUCH-ANAL ANASTOMOSIS FOR MEDICALLY REFRACTORY ULCERATIVE COLITIS

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BACKGROUND

- Elevated risk of dysplasia and colorectal cancer in patients with ulcerative colitis is a well-established concern[1]
- Detecting dysplasia during colonoscopy presents a substantial challenge
- Some studies show that as many as 56 random biopsies may be required for a 95% sensitivity to detect dysplasia[2]

AIMS

- To assess the incidence of dysplasia and carcinoma in patients with medically refractory Ulcerative Colitis (UC) undergoing proctocolectomy and Ileal pouch-anal anastomosis (IPAA) which was not previously detected during endoscopy

METHODS

- Single center retrospective study (December 2016 to August 2023)
- Included patients with a diagnosis of ulcerative colitis who underwent a proctocolectomy and IPAA for non dysplasia related indications
- Patient demographics, operative details and pathology reports including the most recent colonoscopy prior to surgery were reviewed

RESULTS

- 226 patients underwent IPAA surgery for UC: 35 patients with dysplasia or colorectal cancer were excluded
- 191 patients were included in our review (Table 1 and 2)

Table 1. Patient with medically refractory UC undergoing proctocolectomy and IPAA without an endoscopic diagnosis of dysplasia or carcinoma, N=191

Demographics	N (%)
Age at initial surgical intervention, median years [IQR]	32 [24-46]
Sex	
Male	115 (60.2)
Female	76 (39.7)
Race & ethnicity	
Caucasian	155 (81.1)
Black	8 (4.1)
Hispanic	15 (7.8)
Asian	8 (4.1)
Not specified	5 (2.6)
Smoking Status	
Never Smoker	152 (79.5)
Former Smoker	32 (16.7)
Current Smoker	7 (3.6)
BMI, Median [IQR]	23.5 [21.2-26.7]
Clinical	
Indication For colectomy	
Refractory to medical management	127 (66.5)
Acute Flare of ulcerative colitis	63 (32.9)
With toxic megacolon	5 (2.6)
With large bowel perforation	8 (4.1)
With bowel obstruction	2 (1.0)
Iatrogenic perforation during colonoscopy	1 (0.5)
Stages for IPAA	
Three-Stage	189 (98.9)
Two-Stage	2 (1.04)
Duration of time with UC diagnosis, Median years [IQR]	4[1-10]
Time from most recent colonoscopy, median days [IQR]	81.5 [10-252]
Dysplasia	
Dysplasia identified at time of surgery	
Yes	**12 (6.28)**
No	179 (93.7)
Type of Dysplasia	N=12
Low grade dysplasia	10 (16.7)
High grade dysplasia	2
Adenocarcinoma	1[a]

IQR=Interquartile Range
[a]One patient had adenocarcinoma and low grade dysplasia

Table 2. Univariate analysis among baseline patient characteristics and presence of dysplasia, N=191

	Dysplasia		
	No	Yes	p-value*
Variables	N (%)	N (%)	
	179 (93.7)	12 (6.28)	
Age at Surgery, Median (IQR)	32 [24-45]	38.5 [28-57]	0.20
Sex			0.63
Male	107 (59.7)	8 (66.6)	
Female	72 (40.2)	4 (33.4)	
BMI (kg/m2), Median (IQR)	23.4 [21.1-26.7]	24.8 [23.3-26.6]	0.15
Smoking Status			
Never	141 (78.7)	11 (91.6)	0.28
Former or current	38 (21.2)	1 (8.3)	
ASA score			0.38
Ⅰ	6 (3.3)	0 (0)	
Ⅱ	134 (74.8)	11 (91.6)	
Ⅲ	39 (21.7)	1 (8.3)	
Time since diagnosis of ulcerative colitis, median [IQR]	4 [1-10]	9 [3.5-16]	**0.03**
Time since most recent colonoscopy, days [IQR]	96[16-270]	125 [32.5-275.5]	0.54

CONCLUSIONS

- Incidence of previously undetected dysplasia identified at the time of proctocolectomy in patients with ulcerative colitis is 6.28% (n=12)
- In our review, current colonoscopy practices identified most cases of dysplasia and carcinoma
- Longer duration of disease may be a predictor of undetected dysplasia
- Clinicians and patients need to be aware of the dysplasia/carcinoma burden that remains undetected by colonoscopy

1. Kim, E.R. and D.K. Chang, *Colorectal cancer in inflammatory bowel disease: the risk, pathogenesis, prevention and diagnosis.* World J Gastroenterol, 2014. **20**(29): p. 9872-81..
2. Rubin, C.E., et al., DNA aneuploidy in colonic biopsies predicts future development of dysplasia in ulcerative colitis. Gastroenterology, 1992. 103(5): p. 1611-20.