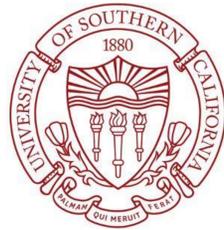


Endoscopic Mucosal Resection for Colorectal Dysplasia in Inflammatory Bowel Disease

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Background

- IBD is associated with an increased risk of colorectal cancer due to underlying chronic inflammation.
- Frequent surveillance colonoscopy is essential for early identification and removal of dysplastic lesions in this group.
- Many dysplastic lesions require advanced endoscopic resection due to size, morphology, or indistinct margins.
- The effectiveness of EMR is well documented in the general population, but it continues to be challenging in patients with IBD.
- We aim to characterize outcomes of EMR for IBD-associated lesions compared to controls.

Methods

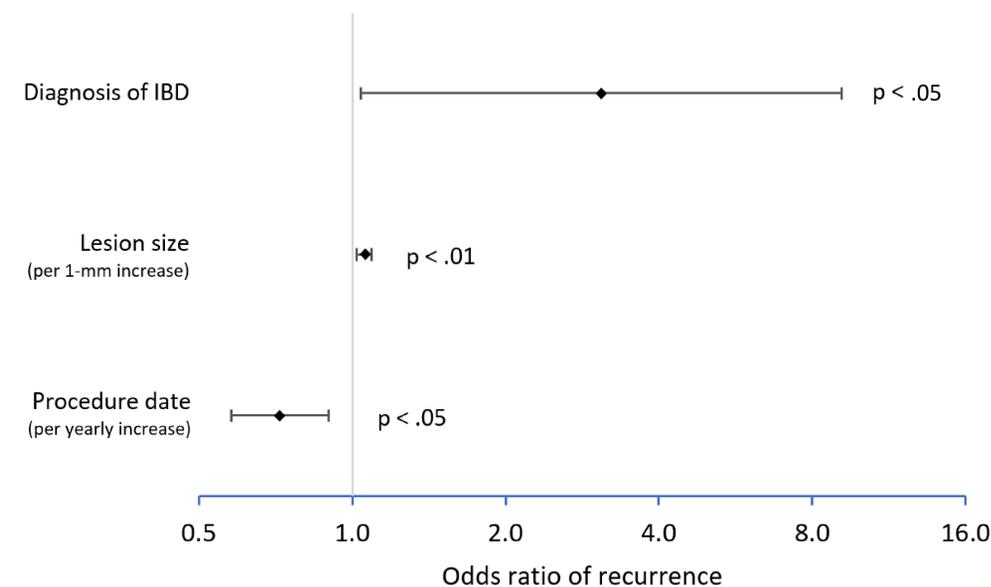
- Retrospective data was collected from 2016 to 2021.
- CPT code 45390 was used to identify colonoscopies with EMR. ICD-10 codes K50-52 were used to identify patients with IBD.
- Adenomatous and dysplastic lesions of all sizes that were removed with EMR and underwent endoscopic surveillance were included.
- Data was recorded and stored in a REDCap database and analyzed using a mixed effects model for logistic regression with SAS Statistical Software.

Conclusion

- **Recurrence of dysplastic lesions after EMR is more common in patients with IBD compared to controls.**
- **Most IBD-associated lesions are resected piecemeal.**
- **Mucosa and submucosal fibrosis in IBD may drive these observations.**
- **Future studies should assess the types of lifting solutions used and modifications to advanced resection techniques.**
- EMR in patients with IBD should be performed in expert centers with close endoscopic surveillance.

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Figure 1. Mixed effects logistic regression model estimating odds of recurrence after EMR of adenomatous and dysplastic colorectal lesions. Diagnosis of IBD, lesion size, year of procedure, and degree of dysplasia were incorporated in the model. OR = 3.08 with a diagnosis of IBD (95% CI 1.04-9.13, p=.04). OR = 1.06 with each millimeter increase in lesion diameter (95% CI 1.02-1.09, p=.001). OR = 0.72 with each year from the study start date that elapsed prior to EMR (95% CI 0.58-0.90, P=.004).



Results

- 23 lesions in 14 patients with IBD and 187 lesions in 141 patients without IBD were included. The groups were demographically similar (Table 1).
- Piecemeal resection was more common in the IBD group (91.3% vs. 42.1%, P<.001). Surgical resection was required for 2 IBD-associated lesions and 7 controls (8.7% vs. 3.9%, P=.27).
- Recurrence was detected and confirmed by histology in 7 IBD-associated lesions and 39 controls. In a mixed effects logistic regression model (Figure 1), **IBD and lesion size were independently associated with recurrence** (OR=3.08, 95% CI 1.04-9.13, P=.04; OR=1.06 per mm increase, 95% CI 1.02-1.09, P=.001).
- In this model, 38.4% of IBD-associated lesions (95% CI 18.6-58.1) compared to 19.1% of controls (95% CI 13.8-24.5) recurred after EMR.

Table 1. Characteristics of adenomatous and dysplastic colorectal lesions resected with EMR in patients with IBD compared to controls.

	Total n = 210	Control n = 187	IBD n = 23	P-value
Lesion size (mm): mean (SD)	21.7 (12.2)	21.5 (12.4)	22.9 (11.3)	.617
Degree of dysplasia: n (%)				.811
adenoma/LGD	191 (91.0)	170 (90.9)	21 (91.3)	
HGD	14 (6.7)	12 (6.4)	2 (8.7)	
invasive carcinoma	5 (2.4)	5 (2.7)	0 (0.0)	
Location: n (%)				.365
ascending colon	69 (35.8)	61 (35.3)	8 (40.0)	
transverse colon	44 (22.8)	40 (23.1)	4 (20.0)	
cecum	29 (15.0)	28 (16.2)	1 (5.0)	
sigmoid colon	19 (9.8)	18 (10.4)	1 (5.0)	
descending colon	14 (7.3)	12 (6.9)	2 (10.0)	
rectum	11 (5.7)	9 (5.2)	2 (10.0)	
ileocecal valve	7 (3.6)	5 (2.9)	2 (10.0)	
Procedure time (min): mean (SD)	74.1 (29.9)	73.3 (30.4)	80.6 (25.5)	.270
En-bloc vs piecemeal resection: n (%)				<.001
en-bloc	108 (52.4)	106 (57.9)	2 (8.7)	
piecemeal	98 (47.6)	77 (42.1)	21 (91.3)	
Complications: n (%)	11 (5.2)	9 (4.8)	2 (8.7)	.344