

Background

- The use of cannabis for symptom control in patients with inflammatory bowel disease (IBD) is common.
- Cannabis contains over 500 substances, several of which have exhibited anti-inflammatory properties in murine models.
- However, human clinical studies show conflicting data regarding its effects on IBD activity.

Objective

- The aim of this study was to examine and compare the clinical outcomes of cannabis users vs. cannabis non-users in admitted patients with IBD using a national database.

Methods

- Retrospective, observational study using the National Inpatient Sample (NIS) 2018.
- All patients with principal ICD10CM codes for IBD were included.
- The cohort was stratified into ulcerative colitis (UC) and Crohn's disease (CD).
- Primary outcome was determining occurrence and odds of admission for IBD in patients with cannabis consumption compared to patients with no cannabis consumption.
- Secondary outcomes included inpatient morbidity, mortality, colectomy odds, hospital length of stay (LOS), and total hospital costs and charges.
- Multivariate regression analyses were used to adjust for confounding variables.

Results

- A total of 99,530 patient admissions for IBD were included in the study (39% UC), of who 3,095 (3.11%) had associated use of cannabis.
- Mean age was 36 years and 35% were female. A greater proportion of African Americans were noted to be cannabis users compared to non-cannabis users (26.44% vs 13.30%, respectively).
- Cannabis-users with CD were noted to have higher odds of admission (aOR:1.17, p< 0.01), while cannabis users with UC had lower odds of admission for IBD (aOR:0.80, p< 0.01) compared to non-cannabis users.
- Cannabis users with CD displayed lower odds of acute kidney injury (AKI) and multiorgan failure compared to non-cannabis users.
- Overall, cannabis users had decreased associated hospitalization costs and charges compared to non-cannabis users (Table 1).

Conclusions

- Cannabis users with UC displayed lower odds of admission compared to non-cannabis users.
- Although cannabis users with CD had higher odds of admission for IBD, these patients demonstrated lower odds of AKI and multiorgan failure.
- This may potentially suggest a lower degree of disease activity compared to non-cannabis users.
- This was also potentially reflected in the overall lesser hospitalization costs and charges.
- Future studies are needed to better assess inpatient outcomes of cannabis users with IBD, particularly focusing on disease activity.

Table 1

	Adjusted Odds Ratio	95% Confidence Interval	p-value
IBD Admission			
Crohn's Disease	1.03	0.97-1.14	0.48
Ulcerative Colitis	1.17	1.05-1.30	<0.01
Mortality			
Crohn's Disease	0.80	0.68-0.94	<0.01
Ulcerative Colitis	n/a	n/a	n/a
Shock			
Crohn's Disease	0.97	0.35-2.70	0.95
Ulcerative Colitis	0.77	0.18-3.33	0.73
AKI			
Crohn's Disease	1.30	0.31-5.49	0.72
Ulcerative Colitis	0.81	0.56-1.18	0.28
SIRS			
Crohn's Disease	0.52	0.31-0.87	0.01
Ulcerative Colitis	1.52	0.88-2.61	0.13
Multiorgan Failure			
Crohn's Disease	1.34	0.77-2.32	0.30
Ulcerative Colitis	1.45	0.72-2.95	0.29
Colectomy			
Crohn's Disease	1.32	0.53-3.26	0.55
Ulcerative Colitis	0.76	0.53-1.11	0.16
	0.48	0.29-0.82	<0.01
	1.42	0.83-2.45	0.20
	0.67	0.45-1.00	0.06
	0.75	0.46-1.23	0.27
	0.56	0.27-1.17	0.13
	No Cannabis Use	Cannabis Use	p-value
Mean Costs (USD\$)	\$12,152	\$11,033	<0.01
Crohn's Disease	\$11,723	\$11,052	<0.01
Ulcerative Colitis	\$12,817	\$10,984	0.01
Mean Charges (USD\$)	\$49,610	\$46,105	<0.01
Crohn's Disease	\$47,612	\$46,549	0.10
Ulcerative Colitis	\$52,710	\$44,953	<0.01
Mean LOS (days)	5.04	4.94	0.35
Crohn's Disease	4.89	4.87	0.55
Ulcerative Colitis	5.26	5.12	0.68

Table 1 – Adjusted Odds Ratios and Means for Cannabis Users with IBD Compared to Patients with Non-cannabis Users with IBD.