

Variation in Colectomy Rates in Ulcerative Colitis

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Background

Data regarding inter-regional colectomy rates in patients with ulcerative colitis (UC) remains largely unknown. Herein, we sought to systematically review the global variation in the rates of colectomy in patients with UC.

Aim of Study

The primary aim of the study is to determine the global variation in the rates of colectomy in patients with UC.

Methods

A comprehensive search analysis was performed using the electronic databases MEDLINE/PubMed, EMBASE, and Cochrane through May 2020 to identify all full-text, randomized controlled trials (RCTs) and cohort studies pertaining to colectomy rates in adult patients with UC. We followed PRISMA and AMSTAR 2 guidance for conducting our systematic review. Outcomes included continent-based demographic data and variation in colectomy rates. All articles were screened for bias using the Newcastle-Ottawa Scale. To identify the region-specific proportion of patients undergoing colectomy, data were plotted and median overall proportions were generated.

- Disclosure: none
- Conflict of interest: none
- Acknowledgement: Healthcare Cost and Utilization Project (HCUP) sponsored by the Agency for Healthcare Research and Quality in Rockville, MD for database.

Results

Region	N studies	N sample size (median, range)	Proportion males (median, range)	N colectomy (median, range)	Proportion colectomy (median, range)
North America	20	429 (26-443, 043)	51% (39%-66%)	176 (9-19, 208)	31% (4%-58%)
Europe	41	474 (30-76, 129)	53% (0%-88%)	37 (10-9118)	14% (2%-71%)
Asia	10	175.5 (62-1013)	54% (49%-59%)	20 (3-61)	8% (16%-47%)
Oceania	3	71 (15-225)	61% (55%-67%)	22 (9-86)	38% (31%-60%)
Africa	2	125 (115-135)	45% (44%-47%)	12 (4-20)	10% (3%-17%)
South America	1	267	33%	9	3%

Table 1. Continent-based Ulcerative Colitis (UC) colectomy rates.

Our literature search identified 1249 articles, of which 77 studies met inclusion criteria and were eligible for review. The median overall proportion of patients with UC whom underwent a colectomy in studies was 17% (range: 1.6%-71%). Median age at UC diagnosis was scarcely reported and could not be adequately assessed. While the median proportion of patients with UC whom underwent colectomy was 38%, 31%, and 14% in Oceania, North America, and Europe respectively; Africa, Asia, and South America saw median colectomy rates as low as 10%, 8%, and 3%, respectively (**Table 1**).

Conclusion

- ❖ **Considerable inter-regional differences were observed regarding colectomy rates in patients with UC.**
- ❖ **As such, the development of homogenous evidence-based guidelines accounting for the geographic differences in managing patients with UC is needed.**
- ❖ **Additionally, as a paucity of data on colectomy exists outside the North American and European continents, future studies - particularly in less studied locales - are warranted.**