

Ethnic Distribution of Microscopic Colitis

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Background & Aims

Variations in the occurrence of microscopic colitis among different ethnic groups may provide insights into its etiology.

The aim of our study was to utilize a large electronic database of histopathology reports for the analysis of microscopic colitis variation among different ethnic groups within the United States.

Methods

The results of surgical pathology from 1,027,977 unique patients undergoing colonoscopy with biopsies were stored in an electronic database at Miraca Life Sciences, a specialized gastrointestinal laboratory, serving private outpatient endoscopy centers distributed throughout the entire United States.

Over 1,500 individual gastroenterologists contributed to the database between Jan. 2008 and Dec. 2013.

In a case-control study, four ethnic groups (East Asians, Indians, Hispanics, and Jews) were compared with the entirety of all other ethnic groups (comprised mostly of American Caucasians and African Americans), serving as the reference group.

Odds ratios (OR) and their 95% confidence intervals (CI) were adjusted for the varying age and gender distributions of different ethnic groups, using multivariate logistic regression. Mean ages and their standard deviations were compared using t-tests.

Pursuant to 45 CFR 46, section 101b (4) – the Miraca Life Sciences Research Institute IRB determined this study to be "analysis of deidentified existing records only" and, therefore, exempt from the requirement of informed consent.

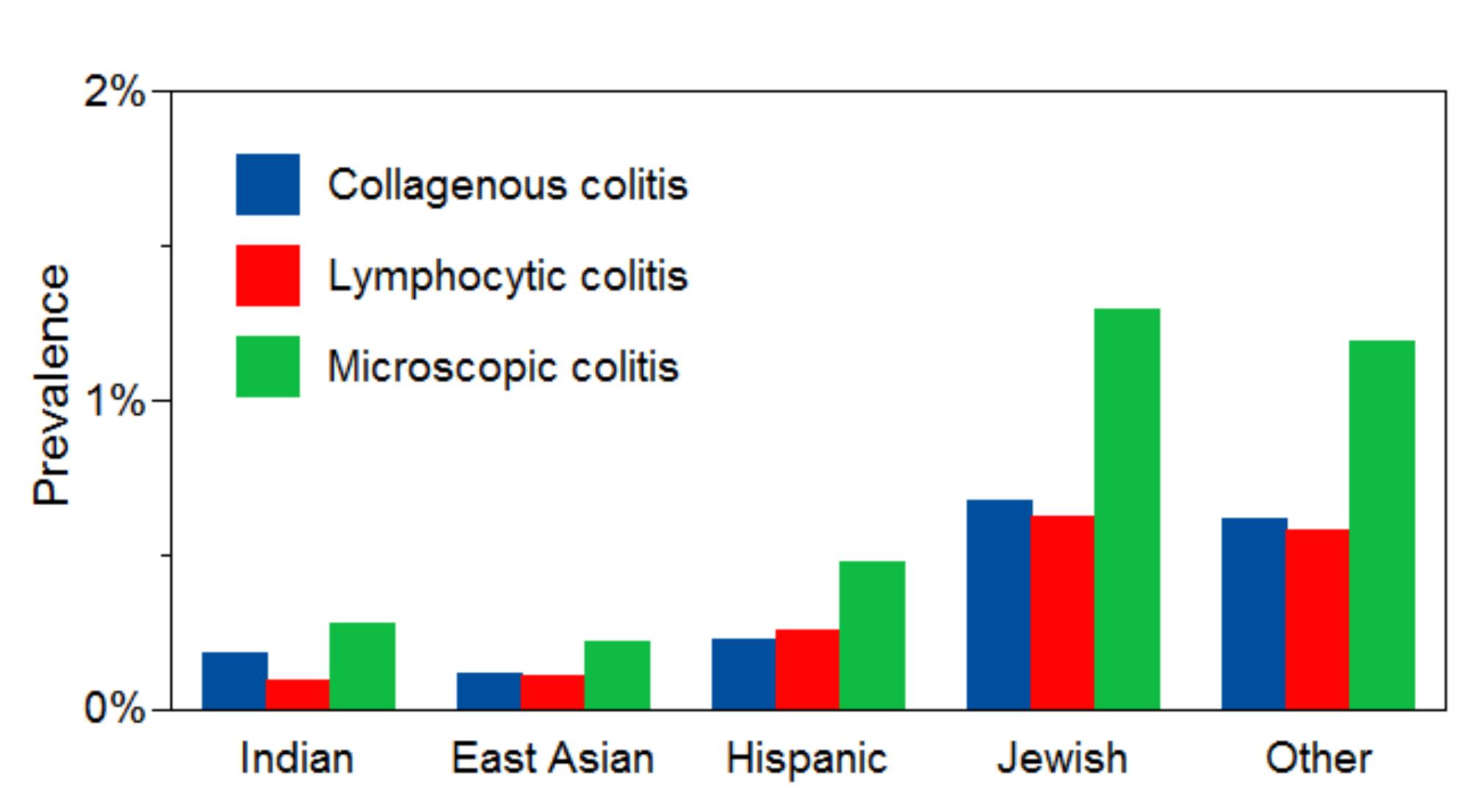


Figure 1 – Distribution of microscopic colitis by type and ethnicity

Ethnicity	Cases (%)	Controls (%)	Total	OR	(95% CI)
Other	10,850 1.20%	860,504 (95%)	907,694	1.00	_
Indian	6 0.28%	1,960 (90%)	2,176	0.32	(0.13 - 0.65)
East Asian	38 0.22%	16,734 (97%)	17,227	0.19	(0.14 - 0.26)
Hispanic	293 0.48%	58,519 (96%)	60,992	0.40	(0.36 - 0.45)
Jewish	519 1.30%	37,384 (94%)	39,982	1.10	(1.01 - 1.21)

Table 1 – Comparison of microscopic colitis prevalence among different ethnic groups

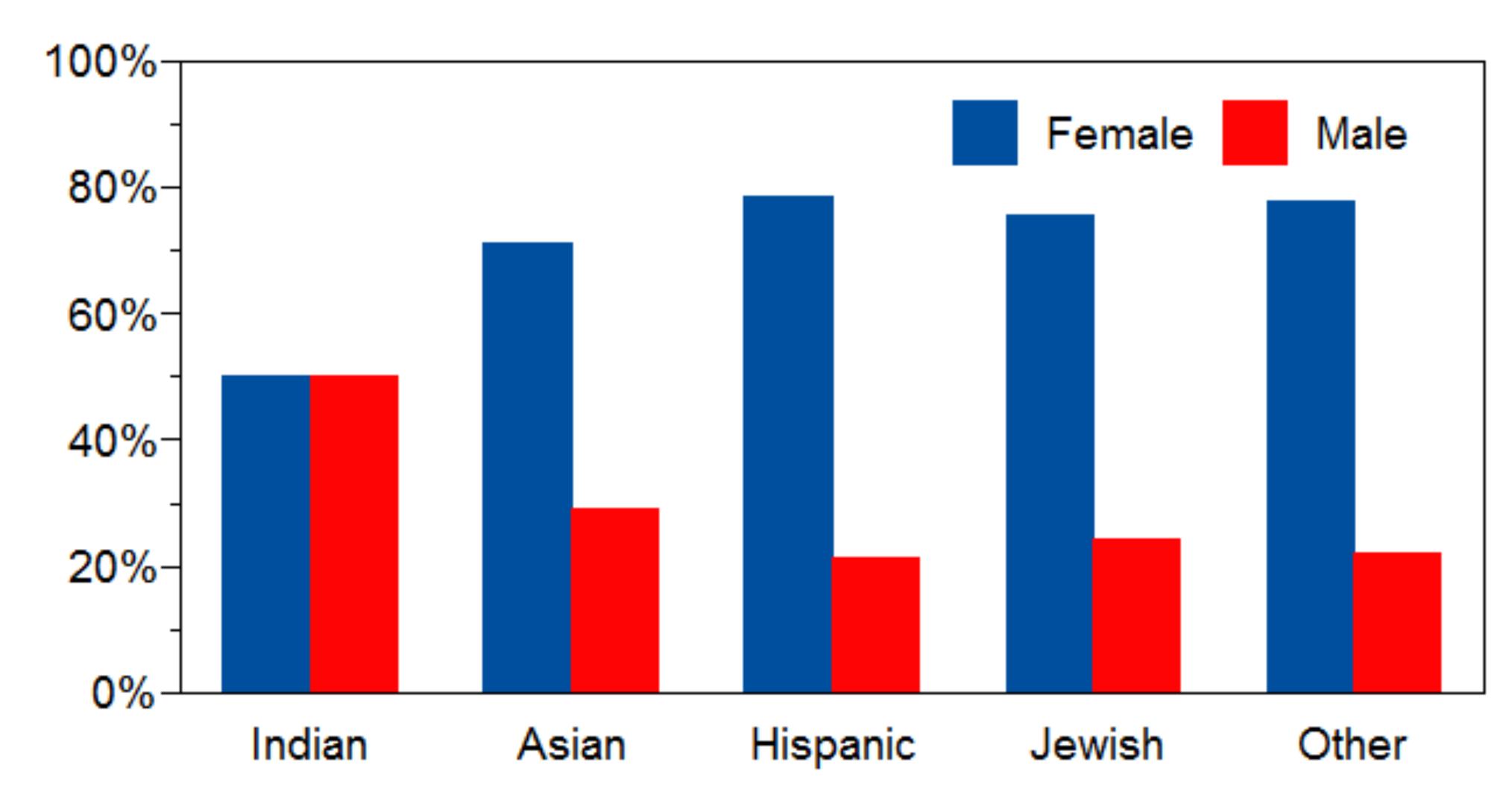


Figure 2 – Distribution of microscopic colitis by sex and ethnicity

Ethnicity	Female	Male	Total	OR	(95% CI)
Other	8,456 (78%)	2,389 (22%)	10,850	1.00	-
Indian	3 (50%)	3 (50%)	6	0.29	(0.05 - 1.57)
Asian	27 (71%)	11 (29%)	38	0.70	(0.35 - 1.47)
Hispanic	230 (78%)	63 (22%)	293	0.96	(0.73 - 1.28)
Jewish	392 (76%)	127 (24%)	519	0.89	(0.73 - 1.10)

Table 2 – Comparison of gender distributions among different ethnic groups

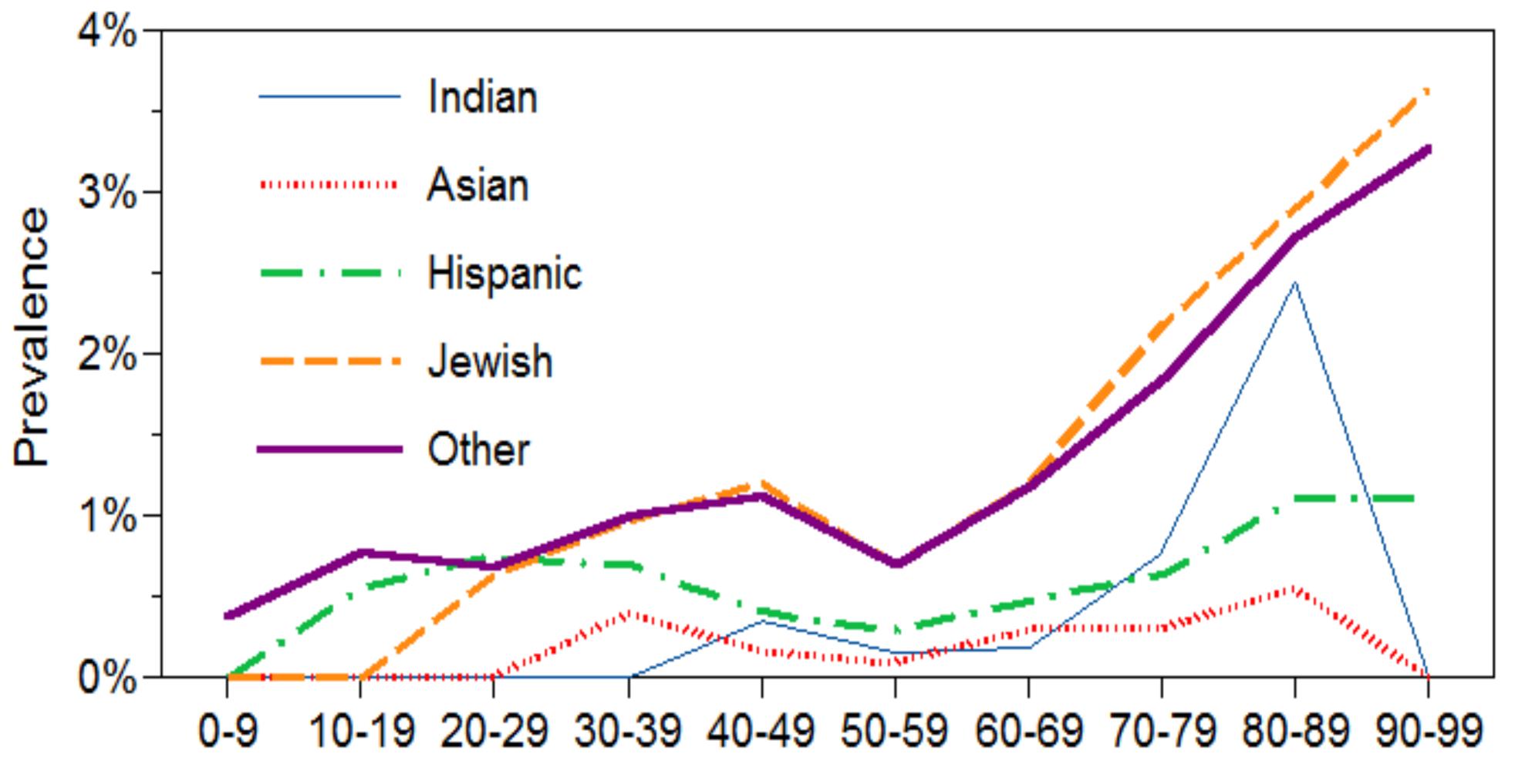


Figure 3 – Prevalence of microscopic colitis by age and ethnicity

Ethnicity	Mean age	SD	N	t-value	p-value
Other	64.2	13.8	10,850	reference	
Indian	66.2	14.2	6	0.3482	0.7277
East Asian	64.6	14.1	38	0.1975	0.8435
Hispanic	59.4	16.2	293	5.0057	0.0000
Jewish	65.6	13.4	519	2.4297	0.0151

Table 3 – Comparison of age distributions among different ethnic groups

Study Highlights

- Microscopic colitis was significantly less common among patients of Indian, East Asian and Hispanic ethnicity and significantly more common among Jewish patients.
- In all ethnic groups alike, microscopic colitis was more common in women than women. (The seeming difference in Indian patients is due to their small sample size.)
- Hispanic patients with microscopic colitis were on the average younger than the reference group, while Jewish patients were slightly older. In all ethnic groups, the prevalence of microscopic colitis showed an age-dependent rise.

Conclusion

In a large population of US patients, microscopic colitis showed striking variations with respect to its occurrence among different ethnic groups. These variations could point at differences in the exposure to environmental risk factors.