Background

Microscopic colitis (MC) is a condition that includes a spectrum of histological abnormalities of the colonic mucosa, ranging from an increase in the number of intraepithelial lymphocytes (IELs) (‘lymphocytic colitis’, or LC) to a diffuse lymphoplasmocytic infiltrate of the lamina propria, prominent intraepithelial lymphocytosis, and the formation of a thick subepithelial collagen band (‘collagenous colitis,’ or CC).

Previous studies have suggested that patients with CC or LC may harbor fewer colon polyps than controls without MC. Such studies, however, were potentially affected by a strong selection bias: while cases generally included patients who presented with diarrhea, controls included patients who were undergoing screening colonoscopy for the prevention of colorectal carcinoma. Since this latter group was more likely to have a greater prevalence of polyps, results may have been affected.

Aims

The objective of this study was to test the hypothesis that patients with MC have a smaller prevalence of colorectal polyps than patients without either LC or CC.

To minimize selection bias, we focused this study on a large cohort of patients who underwent colonoscopy for the workup of diarrhea.

Methods

We used the Miraca Life Sciences database to extract histopathologic, demographic, and clinical information from all adult patients who had a colonoscopy for the investigation of diarrhea with colonic biopsies from 1/2008 to 12/2012.

Patients who had a screening colonoscopy, a history or a diagnosis of inflammatory bowel disease, or lower gastrointestinal surgery were excluded.

Only the first chronological colonoscopy was included for patients who had multiple procedures.

Results

Cases were 9,521 patients with MC (median age 67, range 18-98; 77.9% female): 4,183 with CC; 4,784 with LC; and 606 with a mixed form.

Controls were 104,439 patients with diarrhea and no MC (median age 57 years, range 18-100; 69% female).

Hyperplastic polyps were found in 13.1% of controls and 6.7% of patients with MC (OR 0.48 95%CI 0.44-0.52; p<.0001), with no significant difference between CC and LC. In contrast, adenomas were detected in 19.9% of controls, 12.3% of patients with LC (OR 0.57 95%CI 0.52-0.62; p<.0001), and 6.8% of patients with CC (OR 0.30 95%CI 0.26-0.33; p<.0001). The results are depicted in Figure 2.

Study Highlights

• Amongst patients with diarrhea, those with MC have a significantly lower prevalence of polyps than those without.

• The infiltrates found in microscopic colitis consist of increased CD4+ cells in the lamina propria and ab-T cell receptor(+ CD8+) IELs.

• Studies have shown there is an increased ratio of Foxp3/CD8+ cells in MC and to a greater degree in CC.

• Thus, regulatory T cells are highly represented, suggesting that immunomodulation may exert an inhibitory effect on epithelial proliferation.

References

