High Diagnostic Yield of Colonoscopy in Symptomatic Adults Aged Under Fifty Years: Missed Opportunities for Early Detection of Colorectal Cancer in Southeast Asia

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Abstract

Aim: Despite the global rise in young-onset colorectal cancer (CRC), data on the diagnostic yield of colonoscopy in symptomatic adults aged <50 years remain scarce. This study evaluates colonoscopic findings and identifies predictors of clinically significant pathology in this cohort. Method: This retrospective study included symptomatic adults aged 18-49 years who underwent colonoscopy between January 2017 and June 2023 at a Malaysian tertiary referral center. Clinical, endoscopic, histopathological, and complication data were analyzed. Univariate analysis identified predictors of clinically significant pathology, defined as CRC, adenomas (including advanced adenomas), histologically confirmed inflammatory bowel disease (IBD), or diverticulosis, whereas hyperplastic polyps, hemorrhoids, and non-specific colitis were considered non-significant. Results: Among the 397 patients included (mean age 37±8 years; 51% women), the most common indications were altered bowel habits (n=178), abdominal pain (n=126), and rectal bleeding (n=149). Clinically significant pathology was identified in 15.9% of patients, comprising CRC (3.3%), adenomas (5.8%), IBD (2.8%), and diverticulosis (4.0%). Hyperplastic polyps (8.8%) were excluded from clinically significant pathology and reported separately. Rectal bleeding odds ratio (OR) 2.29, 95% confidence interval (CI) 1.22-4.30; p=0.009, weight loss (OR 4.87, 95% CI 1.4915.87; p=0.009), and altered bowel habits (OR 1.95, 95% CI 1.07-3.56; p=0.03) were independent predictors. No major procedural complications were observed. The adenoma detection rate was 5.8%, and the colonoscopy completion rate was 81.4%, with incomplete procedures mainly due to looping, obstructing lesions, or poor bowel preparation. Conclusion: A substantial proportion of symptomatic adults aged <50 years demonstrate clinically significant pathology. These findings support prioritized, symptom-based referral for early colonoscopy rather than universal screening in this age group but require validation in prospective multicenter studies.

Author keywords

Colonoscopy; colorectal neoplasms; young colorectal cancer

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