Prevalence of Colorectal Adenomas in Young Hispanic population

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Background

Colorectal cancer (CRC) is the second most common cancer in men and women in Puerto Rico. According to the Central Cancer Registry of Puerto Rico, colorectal cancer was the leading cause of death from cancer in Puerto Rican men and women between 2006 and 2010. CRC screening efforts are directed toward removal of adenomas and detection of early-stage CRC. The most common precancerous colon polyp is the adenoma, which is believed to be the precursor for about 80% of CRC.

Objective

The aim of this study is to estimate the prevalence of colorectal adenomas in Hispanic young adults in Puerto Rico and establish statistical association between age, gender and location of colorectal adenomas.

Methods

This population-based retrospective cross-sectional study reviewed the reports of colonoscopies for persons from 21 to 49 years of age performed during 2012 to 2019 in three academic settings. Variables examined included age, gender, presence, and location of adenomas. Descriptive statistics compared categorical variables as bivariate schema using Chi-square. The protocol was approved by the MSC IRB.

Inclusion Criteria

Patients with average risk for CRC with indications for colonoscopy other than those in exclusion criteria

Patients between 21 and 49 years old

Exclusion Criteria

History of inflammatory bowel disease, hereditary CRC syndromes, adenomatous polyposis (FAP, MUTYH-associated polyposis (MAP), Lynch Syndrome, personal or family history of sporadic CRC's or adenomatous polyps, abdominal radiation and cystic fibrosis.

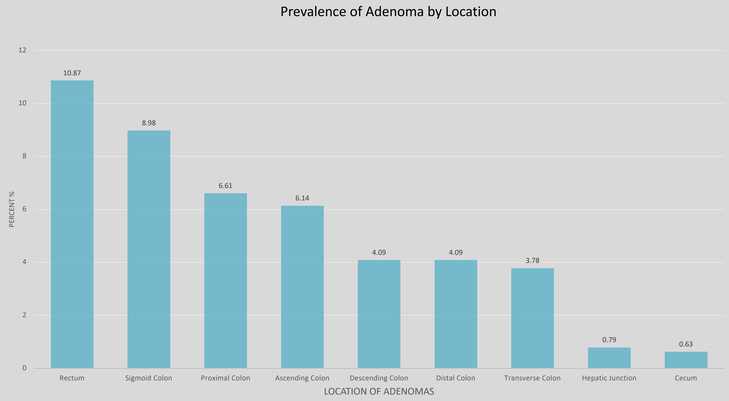
Results

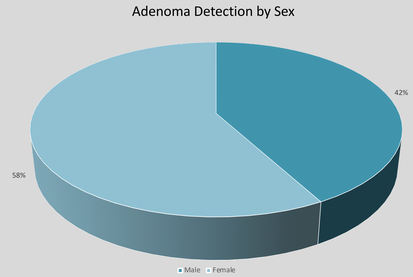
A total of 635 colonoscopies were included. Subjects had a mean age of 38 years old of which 42.05% were female and 57.95% were males. Overall adenoma prevalence was 33.395%. The adenoma prevalence was higher among males (17.32% vs 16.06%). Adenoma prevalence increased with advancing age from 0.79% among 21-26 years to 17.95% among ages 45-49 years. Location of adenoma was highest in the rectum (10.87%) and sigmoid colon (8.98%) and lowest in the cecum (0.63%).

Age at Colonoscopy Stratified

Variable	21 - 26	27 - 32	33 - 38	39 – 44	45 - 49	Total
Adenoma_Detection						
No	45 (7.09%)	45 (7.09%)	69 (10.87%)	109 (17.17%)	155 (24.41%)	423 (66.61%)
Yes	5 (0.79%)	6 (0.94%)	37 (5.83%)	50 (7.87%)	114 (17.95%)	212 (33.39%)
Total	50 (7.87%)	51 (8.03%)	106 (16.69%)	159 (25.04%)	269 (42.36%)	635 (100.00%)

Note. Due to rounding error, percentages may not sum to 100%.
Prevalence of Adenoma 21- 26: 0.79%, Prevalence of Adenoma 27 -32: 0.94%, Prevalence of Adenoma 33 - 38: 5.83%, Prevalence of Adenoma 39 - 44: 7.87%, Prevalence of Adenoma 45 - 49: 17.95%





Conclusion

Our study demonstrates a progressive increase in prevalence of adenomas in Hispanic population after 32 years of age that reaches nearly 1 in 5 at ages 45 to 49. Adenoma prevalence increases among increasing age. Males have a higher prevalence when compared to females. Distal adenomas are far more frequent. Effectiveness of screening colonoscopies has markedly reduced the prevalence of CRC in patients above 50 years. However, some studies have shown an increase in prevalence of CRC among Hispanics below the age of 50. Our findings corroborate the presence of colorectal neoplasia below age 50 and support earlier screening colonoscopies in Hispanics.

Acknowledgements

Thank you very much to my mentors in the Gastroenterology Division, specially to Dra. Esther Torres and to the University of Puerto Rico for all their support in pursuing my passion for this field and research.

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Disclosures: The authors have no disclosures in relation to this study.