

UNDERUTILIZATION OF ASPIRIN IN PATIENTS WITH ADVANCED COLORECTAL POLYPS

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**UNDERUTILIZATION OF ASPIRIN IN PATIENTS WITH ADVANCED  
COLORECTAL POLYPS**

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## ABSTRACT

**Background:** Colorectal cancer is the third most common cause of cancer deaths in the United States and advanced colorectal polyps are a major risk factor. Although there are no large-scale individual trials designed a priori to test the hypothesis, in meta-analyses of trials in primary prevention of cardiovascular disease aspirin reduces risk of colorectal cancer. The United States Preventive Services Task Force utilized a micro-simulation model including baseline risk factors and concluded that aspirin reduces risk of colorectal cancer by 40%. Their guidelines suggest that, without a specific contraindication, clinicians should routinely prescribe aspirin to patients with advanced colorectal polyps.

**Methods:** Written informed consent was obtained and brief telephone interviews conducted by trained interviewers for 84 men and women with biopsy proven advanced colorectal polyps from 55 clinical practices.

**Results:** Of the 84, 39(46.4%) were men. The mean age was 66 with a range from 41 to 91 years. Among the 84, 36 (42.9%) reported taking aspirin.

**Conclusions:** These data suggest underutilization of aspirin by patients with advanced colorectal polyps. These data pose major challenges requiring multifactorial approaches by clinicians and their patients which include therapeutic lifestyle changes and adjunctive drug therapies as well as screening. Lifestyle changes include avoidance and treatment of overweight and obesity as well as regular physical activity and adjunctive drug therapies include aspirin. These multifactorial approaches will be necessary to achieve the most good for the most patients concerning prevention as well as early diagnosis and treatment of colorectal cancer in patients with advanced colorectal polyps.

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Colorectal cancer is the third most common cause of cancer deaths in the United States and advanced colorectal polyps are a major risk factor. (1) Although there are no large-scale individual trials designed a priori to test the hypothesis, in meta-analyses of trials in primary prevention of cardiovascular disease aspirin reduces risk of colorectal cancer.(2 Hennekens and Bjorkman) The United States Preventive Services Task Force utilized a micro-simulation model including baseline risk factors and concluded that aspirin reduces risk of colorectal cancer by 40%. Their guidelines suggest that, without a specific contraindication, clinicians should routinely prescribe aspirin to patients with advanced colorectal polyps. (3)

The protocol was approved by the Institutional Review Board of Florida Atlantic University (IRB Net ID 734261-1). During the period between July 1, 2013 and June 30, 2017, there were 249 consecutive patients aged 40 to 91 years who had colonoscopies that led to a diagnosis of biopsy proven advanced colorectal polyps. After obtaining informed consent, we were able to secure complete interview data from a case series of 84 willing and eligible patients (33.7%). The self-reports by patients about their use of aspirin was obtained from brief telephone interviews that consisted of eleven questions from semi-structured questionnaires. The interviews were conducted by one of two female medical assistants certified by American Medical Technologies. Further details about the subjects and methods have been published elsewhere (4)

For each variable, the data were coded and frequencies of the self reports were calculated. Of the 84 patients, 39(46.4%) were men, 45 were women, and their mean age was 66 with a

range from 41 to 91 years. Among the 84 patients with biopsy proven advanced colorectal polyps, 36 (42.9%) reported taking aspirin.

These data suggest underutilization of aspirin by patients with advanced colorectal polyps. Several limitations to this study merit consideration. First is the low response rate which may, at least in theory, have led to a biased result (5-6). Although we cannot accurately estimate either the magnitude or direction of any bias, we believe that the respondents in this case series are more likely to represent a more knowledgeable subgroup than the general US population. Specifically, this study population is homogeneous with regard to having health insurance as well as residing in four relatively affluent counties in South Florida (Broward, Dade, Martin, and Palm Beach). In addition, health care literacy tends to correlate with socioeconomic status. (7) We believe that such socioeconomic factors are unlikely to affect the validity but may influence the generalizability of the findings as the lack of reliability of self reports is likely to be even greater among the uninsured and less affluent. As a consequence, these results are likely to underestimate the utilization of aspirin among patients with a biopsy proven diagnosis of colorectal polyps in the general population in the United States.

Despite these and other potential limitations, we believe the most plausible interpretation of the data to be that there is underutilization of aspirin in patients with biopsy proven advanced colorectal polyps, a major risk factor for colorectal cancer. These data pose major challenges requiring multifactorial approaches by clinicians and their patients which include therapeutic lifestyle changes and adjunctive drug therapies as well as screening. Lifestyle changes include avoidance and treatment of overweight and obesity as well as regular physical activity and adjunctive drug therapies include aspirin. These multifactorial approaches will be necessary to achieve the most good for the most patients concerning prevention as well as early diagnosis and treatment of colorectal cancer in patients with advanced colorectal polyps.

These multifactorial approaches should achieve the most good for the most patients concerning prevention as well as screening and early diagnosis and treatment of colorectal cancer.

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### Clinical Significance

- There is underutilization of aspirin by patients with advanced colorectal polyps.
- These data pose major challenges to clinicians and their patients
- There is a need for multifactorial approaches by clinicians and their patients
- These include therapeutic lifestyle changes and adjunctive drug therapies including aspirin