Aspirin Use and Survival After Diagnosis of Colorectal Cancer

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Background: Aspirin reduces risk of colorectal neoplasia in randomized trials and epidemiological studies and inhibits tumor growth and metastases in animal models. However, the influence of aspirin on survival after diagnosis of colorectal cancer is unknown. Methods: Among 1288 participants diagnosed with Stage I, II, or III colorectal cancer enrolled in two colorectal cancer trials (Controlled Oncologic Hazards Avoidance Program, respectively compare the city of aspirin use before and after colorectal diagnosis on mortality. Results: Compared to non-users, participants who regularly used aspirin after colorectal cancer diagnosis experienced a multivariate hazard ratio (HR) for colorectal cancer-specific mortality of 0.72 (95% CI, 0.54-0.97) and overall mortality of 0.82 (95% CI, 0.67-1.00). Among 719 participants who did not use aspirin before diagnosis of colorectal cancer, aspirin use initiated after diagnosis was associated with a multivariate HR for colorectal cancer-specific mortality of 0.35 (95% CI, 0.14-0.89). Among 459 participants with colorectal cancers that were accessible for immunohistochemical analyses, the effect of aspirin use was significantly accentuated (HR Cox-2 expression Fhetergogeneity=0.04). Regular aspirin use after diagnosis was associated with a lower risk of colorectal-cancer-specific mortality among those whose primary tumors overexpressed Cox-2 (multivariate HR 0.39, 95% CI, 0.26-0.76) whereas aspirin use had no influence on those whose primary tumor with normal expression (multivariate HR Cox-2 1.25, 95% CI, 0.37-4.22). Conclusions: Regular aspirin use after the diagnosis of colorectal cancer may reduce the risk of colorectal cancer-specific mortality, especially among individuals with tumors that overexpress Cox-2.

First Randomised Trial On the Risk of Colorectal Cancer After Flexible Sigmoidoscopy Screening

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Background: Despite the lack of evidence from randomised trials, many countries recommend endoscopic screening for colorectal cancer (CRC) for the general population. This is the first report from a randomised trial on the risk of CRC after flexible sigmoidoscopy (FS) screening. Methods: 55,736 individuals, aged 55-64 years, living in the city of Oslo or Telemark county, Norway, were randomised from the population registry to once-only FS screening with or without a single round of faecal occult blood testing (n=13,823), or no screening (n=98,960 patients). The planned trial outcome measures were cumulative CRC incidence and mortality. We here present cumulative CRC incidence after 7 years and mortality hazard ratios (HR) after 6 years of follow-up. Results: In the intention-to-screen analyses (67% attendance rate), there was no difference in the 7-year cumulative CRC incidence between the screening and control groups (1.34% vs 1.31% cases per 100,000 person-years). There was a trend towards reduced CRC mortality (HR=0.73, 95% CI 0.74-1.13, p=0.16). Screening attenders had a significantly reduced CRC mortality (HR=0.41, 95% CI 0.21-0.82, p=0.01) compared to controls. For rectosigmoidal CRC, the risk of dying from CRC was reduced by 95% (HR=0.01-0.04, 95% CI 0.01-0.06, p=0.01). CRC screening occurred during treatment of CRC in 2.5% of screened individuals, compared to 0.8% of individuals in the control group. Conclusions: In an intention-to-treat analysis, a CRC incidence reducing effect of FS screening could not be demonstrated. However, a trend towards reduced CRC mortality in the screening group was seen. Individuals actually screened had significantly lower risk of dying from CRC compared to controls, indicating an effect of flexible sigmoidoscopy screening in those attending.

Colorectal Cancer Despite Colonoscopy: Critical Is the Endoscopist, Not the Withdrawal Time

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Background: The rate of detection of advanced adenomas or colorectal cancer (CRC) during colonoscopy (C) has a high correlation with endoscopist and the time taken to withdraw the endoscope. Aim: To investigate the impact of endoscopist and the withdrawal time on the development of C not prevented by C. (C/CD24: specify) in patients undergoing screening, or surveillance C at Mayo Clinic Rochester (MCR). Methods: A large dataset was created containing (1) patients who had undergone C at MCR between 1992 and 2002 (138,318 Cs in 98,980 patients), and (2) patients who had a tissue specimen diagnosis of CC between 1992 and 2004 (N=10,136). Withdrawal time was not recorded until 2002; therefore the average withdrawal time for each endoscopist was based on data from 2002 to 2006 and reflected Cs with indication as screening. A C/CD24: defined as a C that was diagnosed 90 days to 3 years of preceding C (Group A). We elected to also study the protective effect of C against C by extending the post-C observation period to 5 years and defined another set of C/CD24: cases that were diagnosed 3 to 5 years of preceding C (Group B). Results: A total of 10,136 patients with either primary or metastatic colon cancer were identified between 1992 and 2004 at MCR. Of these, 2692 patients had undergone a total of 2692 colonoscopies at MCR. From this cohort, we identified 187 Cs in 145 patients as Group A and 124 Cs in 104 patients as Group B who developed C/CD24: There were subsets in which the CC was truly or possibly missed: no lesion was seen or treated in the colonic segment during the preceding C. 120 Cs in 100 patients for Group A (truly missed) and 60 Cs in 55 patients for Group B (possibly missed). Among the 44 excluded intervals of at least 10 Cs in CC patients and for whom we were able to compute an average withdrawal time, the truly missed CC rate (truly missed CC per total CC cases) per endoscopist varied from 0% to 7.9% for Group A and from 0% to 7.7% for Group B. Among the endoscopists who missed at least one CC, 8-fold variation we, gave a variable observed for the true miss lesion cohort. Moreover, a Pearson linear correlation for average withdrawal time versus truly missed cancer rate revealed R = 0.03 (with 0.32 and 0.27 as lower and upper bounds at a 95% confidence interval). Conclusion: The endoscopist, not the withdrawal time, is of critical importance given the 8-fold variation of true miss CC rate for the same endoscopist over intervals of 90 days to 3 years. The absence of correlation between truly missed CC rate and average withdrawal time of each endoscopist suggests that some endoscopists can better detect lesions than others irrespective of the withdrawal time.