
Correlation between prolonged use of aspirin and prognostic risk in prostate cancer.

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Abstract

Aims and background. In recent years the role of inflammation in cancer etiology has gained attention and several studies have suggested that acetylsalicylic acid and other nonsteroidal anti-inflammatory drugs may have chemopreventive activity and reduce the risk of prostate cancer. We investigated whether there is a correlation between prolonged use of aspirin and prognostic risk in prostate cancer. Methods and study design. From January 2002 to December 2007 we performed 385 radical prostatectomies for localized prostate cancer. Patients were divided into 2 groups: group A (GA) comprised 174 patients who took aspirin 100 mg once daily for 2 years or more; group B (GB) consisted of 211 patients who did not take NSAIDs, or only occasionally. To evaluate the correlation between aspirin use and prognostic risk in prostate cancer we examined the following factors: biochemical recurrence, percentage of positive surgical margins, pathological stage, pathological Gleason score, percentage of positive lymph nodes, and preoperative PSA level. Results. There was no statistical difference in preoperative PSA levels (6.5 and 6.9 ng/mL; P = 0.045) between the 2 groups. The incidence of positive surgical margins was 18.9% in GA and 28.9% in GB (P <0.002). The percentage of positive lymph nodes in patients with positive surgical margins in GB (47.5%) was statistically higher than that in GA (27.2%). With an average follow-up period of 4.6 years, 22.7% of patients in GA and 32.7% in GB developed biochemical recurrence. In the stratified analysis we observed significant differences in the association between prediagnostic aspirin use and prognostic risk for patients with Gleason score 7 and T2 stage of disease. The daily use of aspirin was significantly associated with a lower risk of disease progression, with a hazard ratio of 0.92 (95% CI 0.85-0.99). Conclusions. These results provide further evidence that aspirin may have chemopreventive activity against prostate cancer and highlight the need for additional research. Additional studies with more detailed exposure measurement are warranted to evaluate questions about dose, the best age to begin treatment, and the duration of therapy.

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