

BLADDER CANCER

Aspirin reduces bladder cancer recurrence

Investigators of a small case–control study report that cardioprotective aspirin reduces the recurrence rate of bladder cancer in patients treated with intravesical bacillus Calmette–Guérin (BCG). Preclinical studies show that NSAIDs are effective in bladder cancer prevention; however, epidemiological studies have conflicting results as to their benefits in patients with this disease.

The researchers retrospectively reviewed data from a series of patients treated with intravesical BCG therapy for carcinoma *in situ* and/or high-grade papillary bladder cancer, and compared the recurrence rates and progression-free survival of 20 patients taking aspirin (81 mg or 325 mg per day) with 23 not taking aspirin. These patients are at a high risk of tumor recurrence and progression, and are, therefore, good candidates for assessing the effects of chemopreventive agents. In this study, patients defined as taking cardioprotective aspirin took it for at least 50% of the time period from bladder cancer diagnosis to tumor recurrence, or final follow-up.

The 5-year recurrence-free survival rate in patients taking aspirin was significantly higher than in patients not taking aspirin (64% versus 27%, respectively). This remained significant after controlling for other factors. Progression-free survival rates were not significantly different between the two groups, although mean time to progression was longer in patients taking aspirin. Most of the patients had a history of smoking, but the only significant variable between the characteristics of the two groups was that patients taking aspirin were older (mean age 72 years, compared to 63 years for the group not taking aspirin).

The role of aspirin in treating bladder cancer is of particular interest because both bladder cancer and coronary artery disease are associated with smoking, and it is common for patients with bladder cancer to take cardioprotective aspirin. This study adds to other evidence indicating that NSAIDs might have a chemopreventive role in patients with bladder cancer. “While toxicities of these agents remain a concern, the frequent use of cardioprotective aspirin in patients



with bladder cancer, a smoking-related illness, affords the opportunity to examine whether aspirin affects tumor recurrence in a prospective fashion,” says Jason Gee, corresponding author. “We are now proceeding to evaluate the influence of aspirin and other nonsteroidal agents prospectively in bladder cancer patients in a larger, multicenter study”.

Alexandra M. Hay

Original article Gee, J. R. *et al.* Reduced bladder cancer recurrence rate with cardioprotective aspirin after intravesical bacille Calmette–Guérin. *BJU Int.* **103**, 736–739 (2009).