EDITORIAL

Bladder cancer markers

The interesting article by Bowles et al from London raises thought provoking questions about our approach to bladder cancer screening and surveillance. The human Telomerase Reverse Transcriptase (hTERT) test, a Telomerase assay for bladder cancer cells in urine, had a 95% sensitivity for bladder cancer in patients with bladder TCC. Specificity was 93%. The assay performed significantly better than urine cytology. Limitations are that the assay was performed on cystoscopy specimens rather than voided urine, the cohort size is relatively small, and the test, which is PCR based, is technically complex compared to cytology and other immunologic-based assays.

This assay joins a number of other urinary assays which have demonstrable superior performance to cytology, including the Immunocyte test, NMP 22, BTA-Stat, Hemastix, and hyaluronic acid (HA)-hyaluronidase (Haase) test. These tests provide an opportunity to reduce the frequency of surveillance cystoscopy and detect bladder cancer early in high risk populations.

These tests are not widely used by Canadian urologists. Compare the enthusiasm for prostate cancer screening with the relative lack of interest in bladder cancer screening. PSA is the best test we have to detect early prostate cancer. However, the bloom is off the PSA rose. We now know that the majority of elevated values are due to BPH rather than cancer, the screening algorithm we use results in the detection of many men with biologically insignificant disease, and a tremendous controversy exists about the optimal treatment of early disease.

With bladder cancer, in contrast, we can identify groups of patients at a very high relative risk for disease (long term smokers and chemical workers); early therapy is clearly lifesaving in men with invasive bladder cancer; the disease is consistently lethal when diagnosed late; in most patients, the treatment is relatively uncontroversial; and in high risk populations, the diagnostic tests have achieved a high degree of accuracy. Nonetheless, there is no outcry over the importance of bladder cancer screening.

We trust our cystoscopes, and the tradition of regular surveillance cystoscopy for patients with bladder cancer is deeply ingrained. However, studies clearly show that the frequency of cystoscopy can be reduced by incorporating bladder tumor marker studies into the follow up algorithm. For the surveillance scenario, a sensitivity of 80%-90%, which currently available markers have achieved, should be sufficient to replace some cystoscopic examinations. For screening those without risk factors, individual markers have not yet reached sufficiently high negative predictive value and specificity to be reliable. For high risk patients, individual markers or a panel of markers may achieve this. Surprisingly, both the AUA and the Canadian Task Force on the Periodic Health Examination take neutral positions on the value of routine urinalysis for microscopic hematuria. The CUA guideline on the investigation of microscopic hematuria does not address the fundamental issue of the value of doing the initial screen. It is time to reconsider these positions.

Laurence H. Klotz
Editor in Chief
Canadian Journal of Urology