Hematuria after transrectal prostate biopsy: a warning of future infection?

Alan Quach BS, Colin I. O'Donnell PhD, Mohammed Al-Musawi MD, Simon Kim MD, Tracey MacDermott BA, BS, CRCC, Al Barqawi MD

Abstract

Purpose: To identify the incidence and predictive factors of infectious complications in a prophylactic-controlled cohort of men undergoing transrectal ultrasound-guided prostate needle biopsy (TRUS-Bx) at a single institution.

Materials and Methods: A retrospective review was performed on 539 patients who underwent TRUS-Bx between 2010-2015. All patients received prophylactic Sulfamethoxazole/Trimethoprim and Levofloxacin prior to the biopsy. Charlson Comorbidity Index (CCI) was calculated for each patient. The characteristics of patients with and without infectious complications were compared using Fisher exact tests and student's t-test.

Results: 539 biopsies were performed. Mean age was 64 years, PSA was 17, prostate volume was 41 mL, and CCI score was 3. A total of 7 (1.3%) infectious complications were reported 48-72 hours after biopsy, with 2 (0.4%) developing sepsis. Analysis indicated no significant differences in mean age (p=0.544), PSA (p=0.881), prostate volume (p=0.532), or CCI score (p=0.499) among patients who developed infection. Individual components of the CCI revealed no statistically significant differences. Additional complications following biopsy included: hematuria (8.3%), rectal bleeding (1.3%), urinary urgency (0.9%), and new onset erectile dysfunction (0.6%). Hematuria was associated with the development of infectious complications (OR=8.75, CI 1.895 – 40.400, p=0.0055).

Conclusions: Our cohort of patients undergoing TRUS-Bx had a lower infectious rate compared to that reported by the AUA (1.1% vs 5-7%). Although this study has limited power, CCI was poorly predictive of infectious complications following TRUS-Bx. Persistent hematuria following biopsy was associated with infectious complications. The clinical importance of hematuria following TRUS-Bx, if any, needs to be further clarified.

Keywords: TRUS; Complications; Charlson Comorbidity Index; Risk Factors