Intravenous Cefuroxime: Does It Improve the Efficacy of Ciprofloxacin in the Prevention of Infectious Complications Following Transrectal Prostate Biopsy? A Prospective Comparative Study

Introduction and Objective: To compare the frequency of infection following transrectal ultrasound guided biopsy of the prostate (TRUSBP) using ciprofloxacin prophylaxis with and without adding cefuroxime.
Materials and Methods: Between June 2008 and October 2009, a total of 205 consecutive patients were subjected to TRUSBP with the use of oral 500mg ciprofloxacin twice per day, 2 days before and 3 days after the biopsy and defined as group A. Starting from November 2009 and onwards, 250 consecutive patients were subjected to TRUSBP using the same previous protocol of antibiotic prophylaxis with the addition of intravenous (IV) 1.5g cefuroxime given 30 minutes before the procedure and defined as group B. The incidence of post-TRUSBP sepsis together with the results of urine and blood cultures and antibiotic sensitivity were compared between the two groups.
Results: Post-TURSBP fever was recorded in 18 out of 205 patients of group A (8.8%) and in 9 out of 250 patients of group B (3.6%), a difference of significant value (p=0.018). Urine culture was positive in 14 and 5 of patients of group A and B, respectively, with extended spectrum beta lactamase producing (ESBL) Escherichia coli (E. Coli) as the most common organism. Blood culture was positive in 7 and 3 patients of group A and B, respectively, with ESBL E. Coli as the most common organism. All patients who experienced post-TRUSBP sepsis were successfully treated.
Conclusions: Adding a single IV injection of 1.5g cefuroxime to oral ciprofloxacin significantly reduces the frequency of post-TRUSBP infectious complications.