

Efficacy of prophylactic administration of prulifloxacin vs. cefixime in patients undergoing ultrasound guided prostate biopsy: A prospective randomized study

Eur Urol Suppl 2019; 18(1);e118

Samarinas M. ¹, Skriapas K. ¹, Karatzas A. ², Gravas S. ², Tzortzis V. ²

¹General Hospital of Larissa, Dept. of Urology, Larissa, Greece, ²University Hospital of Larissa, Dept. of Urology, Larissa, Greece

Introduction & Objectives: Although ultrasound guided prostate biopsy is a well tolerated procedure, one of the most serious complications is bacterial sepsis due to urinary tract infection (UTI). The aim of our study is to investigate the safety and efficacy of cefixime versus prulifloxacin in order to prevent UTIs after the procedure.

Materials & Methods: In this prospective randomized trial, patients have been allocated into two groups using a research randomizer (www.randomizer.org). Furthermore, the power of the study has been calculated up to 94% (DSS Research: Statistical Power Calculator). All biopsies were performed as outpatient procedures with the use of transrectal ultrasound. Eligible for the study were men with a high PSA value or/and a positive DRE. Exclusion criteria were allergy to cefixime or fluoroquinolones, low GFR and known drug-resistance in these antibiotics. Patients were divided into 2 groups. In the first (A) group, patients received a three days' scheme of cefixime 400mg p.o/ day, while in second (B) group patients received a same duration scheme of prulifloxacin 600mg p.o/ day. Treatment was starting a day before the procedure and patients were followed-up about symptoms for seven days after biopsy. Study has been accepted from the Ethical Committee of University Hospital of Larisa, while it has also been submitted in the Australian and New Zealand Clinical Trial Registry (Trial Id: ACTRN12616001344482).

Results: A total of 120 consecutive patients were prospectively divided into 2 groups each of 60 patients from 51-87 years of age (mean= 68.6) and a PSA value of 5.08-100ng/ml (mean= 13,86). In total, 16 (13.3%) men had already been subjected to another biopsy in the past while 18 patients (15%) had already received prulifloxacin and 8 (6.67%) cefixime, at least once in the last three months. During follow-up period, hospital admission due to septicemia was required in 2 of 60 (1.2%) and 1 of 60 (0.6%) patients from group 2 and 1 respectively. The bacteria detected in these urine cultures were resistant to prulifloxacin and cefixime while additionally, a history of taking the above antibiotics was noticed. Among the remaining 117 patients (97.5%), nobody appeared with an UTI after the biopsy.

Conclusions: Our findings suggest that prophylactic cefixime and prulifloxacin are effective in preventing acute bacterial sepsis after TRUS-guided prostate biopsy. Of note, the medical history of previous antibiotic therapies should be taken into account, in order to avoid possible complications.