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Perspective

Urine Culture Prior to Transrectal Prostate Biopsy for Follow the Proper Routine of Clinical Value

Priya Sharma*

Department of Internal Medicine, University of California, Los Angeles, United states

*Corresponding Author's E-mail: PriyaSharma43@gmail.com

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Abstract

Following a transrectal prostate biopsy, there could be serious infectious consequences. In order to facilitate targeted antibiotic prophylaxis and lessen postbiopsy infections, regular cultures performed before all prostate biopsies were implemented in sweden. To find out if a clinical practice that includes a urine culture before a prostate biopsy and specific preventive antibiotic medication lowers postbiopsy infections. Participants, setting, and design Region kronoberg started a site-specific antimicrobial stewardship programme with a urine culture before a prostate biopsy in 2015. To evaluate this routine, we designed a population based register study including all men who had an outpatient prostate biopsy in and a control period including all men who had a biopsy in, when a urinary culture was obtained only on clinical suspicion. Outcome measurements and statistical infectious complications within were the main result, and changing the antibiotic preventive regimen was the secondary result. The prescription of antibiotics for urinary tract infections, hospital admission for urinary tract infections, or sepsis following a biopsy were all considered infectious complications. Results and constraints prostate biopsy operations, which were preceded by a urine culture, were performed during the urine culture phase. A urine culture was performed before to 2818 procedures during the control period.

Keywords: Antibiotic resistance, Biopsy, Infection, Prostate, Urine culture

INTRODUCTION

Inpatient treatment for infections and infectious complications were also marginally more frequent during the urine culture period compared to the control period. Men with asymptomatic bacteriuria were detected by the routine. The rate of infectious complications (6.3%) was comparable to that in the control period despite focused antibiotic therapy. Over a million Prostate Biopsies (PBs) are conducted in Europe each year.

Yearly following a transrectal PB, infectious complications are becoming a bigger issue. Despite using preventative antibiotics, studies have found that between 0.7% and 7% of individuals still develop a fever postbiopsy infection. In rare instances, the infection may result in fatal sepsis to death. The ideal course of antibiotics for prevention is unknown. Prior to a few years ago, one dose of an oral.

DESCRIPTION

It was advised to utilise fluoroquinolones despite advice to stay away from broad spectrum and prefer narrow spectrum medications because of FQ resistance that is growing, recent recognition of potentially harmful side effects, and widespread broad spectrum misuse guidelines from the European association of urology, and antibiotics rather since a urine culture and preprocedural, targeted antibiotics are advised before many urological procedures because asymptomatic bacteriuria is a risk factor for infection problems following invasive procedures in the urinary tract. In

order to enable targeted antibiotic prophylaxis and decrease postbiopsy infections, region Kronoberg, Sweden, implemented a site specific antimicrobial stewardship programme in 2015 that includes a regular culture prior to all PBs in the county.

The worth of such a programme is unknown, though. Asymptomatic bacteriuria is a risk factor for a postbiopsy infection, according to a Swedish study, although two earlier small studies, one from France and one from the USA, did not corroborate this. We created a large, population based study to assess the clinical value of a standard prebiopsy urine test due to these inconsistent results. The goal of this study was to enable targeted antimicrobial prophylaxis to reduce both ineffective use of FQ and infectious consequences in Region Kronoberg, Sweden, using culture and targeted antimicrobial prophylaxis to reduce postbiopsy infections. A prebiopsy urine culture was only necessary prior to 2015 when there was a clinical suspicion of bacteriuria. Prior to and following the implementation of the new procedure, the recommended prebiopsy antibiotic prophylaxis was one oral dosage of 750 mg ciprofloxacin or, in the case of FQ allergy patients, one dose of mg sulfamethoxazole/trimethoprim. Patients who had a positive urine culture had their biopsies rescheduled and, if possible, got a course of antibiotic treatment using a non-FQ antibiotic, guided by the resistance pattern of the culture. The growth of mixed bacterial urine cultures and all positive urine cultures were evaluated separately by the doctor of urology. A fresh urine culture was taken after the antibiotic treatment. Before performing a biopsy, it was customary to get a negative urine culture. At the time of a PB, the previously mentioned standard prebiopsy prophylaxis was also administered. Ten to fourteen systematic cores were typically taken during the entire study period after periprostatic injection of a local anaesthetic. All men in region Kronoberg who underwent an outpatient transrectal PB at one of the three urology clinics in the county (Vaxjo regional hospital, Ljungby hospital, or Gransbygdskliniken) between January 1, 2010, and December 31, 2019, were included in the current study. Between January 1, 2015, and December 31, 2019, urine cultures were routinely taken during the urine culture period of the study before prebiopsy urine culture was routinely started, that is, before PB and a control period after that. Each outpatient visit and inpatient episode's diagnosis and intervention codes are included in the electronic medical records in region Kronoberg. Both hospital departments and every primary care clinic in the area are covered by the EMRs. Patients who had an outpatient visit that was registered and had the intervention code were included in the trial.

CONCLUSION

The majority of patients chosen for inpatient PB procedures have severe comorbidities, therefore they typically receive antibiotic treatment rather than prophylaxis. For this reason, inpatient PB procedures were avoided. Patients who had urine drawn through a catheter, urostomy, or nephropyelostomy were also not included since they frequently have germs that are resistant to treatment and should be given a pre-PB urine sample.