

[Turk J Urol](#). 2013 Mar;39(1):6-11. doi: 10.5152/tud.2013.002.

Complications of transrectal ultrasound-guided 12-core prostate biopsy: a single center experience with 2049 patients.

[Efesoy O¹](#), [Bozlu M²](#), [Çayan S²](#), [Akbaş E²](#).

Author information

Abstract

OBJECTIVE:

Currently, transrectal ultrasound-guided (TRUS) systematic prostate biopsy is the standard procedure in the diagnosis of prostate cancer. Although TRUS-guided prostate biopsy is a safe method, it is an invasive procedure that is not free from complications. In this prospective study we evaluated the complications of a TRUS-guided 12-core prostate biopsy.

MATERIAL AND METHODS:

The study included 2049 patients undergoing transrectal ultrasound-guided 12-core prostate biopsy used in the diagnosis of prostate cancer. The indications for the prostate biopsy were abnormal digital rectal examination findings and/or an elevated serum total prostate specific antigen (PSA) level (greater than 4 ng/mL). The participants received prophylactic oral ciprofloxacin (500 mg) the night before and the morning of the biopsy, followed by 500 mg orally twice daily for 2 days. To prevent development of voiding disorders, the patients also received oral alpha blockers for 30 days starting the day before the procedure. A Fleet enema was self-administered the night before the procedure for rectal cleansing. The complications were assessed both 10 days and 1 month after the biopsy.

RESULTS:

The mean age, serum total PSA level and prostate volume of the patients were 65.4±9.6 years, 18.6±22.4 ng/mL and 51.3±22.4 cc, respectively. From these 2042 biopsies, 596 cases (29.1%) were histopathologically diagnosed as prostate adenocarcinoma. Minor complications, such as hematuria (66.3%), hematospermia (38.8%), rectal bleeding (28.4%), mild to moderate degrees of vasovagal episodes (7.7%), and genitourinary tract infection (6.1%) were noted frequently. Major complications were rare and included urosepsis (0.5%), rectal bleeding requiring intervention (0.3%), acute urinary retention (0.3%), hematuria necessitating transfusion (0.05%), Fournier's gangrene (0.05%), and myocardial infarction (0.05%).

CONCLUSION:

TRUS-guided prostate biopsy is safe for diagnosing prostate cancer with few major but frequent minor complications. However, patients should be informed and followed-up after biopsy regarding possible complications.

KEYWORDS:

Biopsy; complications; prostate; transrectal ultrasound