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Abstract

Comparison Between TRUS and Finger Guided Prostate Biopsy: A 5-Year Audit at Chris Hani Baragwanath Academic Hospital.

Background: Although trans-rectal ultrasound guided prostate biopsy is the gold standard diagnostic tool for prostate cancer, finger-guided prostate biopsy is still used in low- and middle-income settings. This study was conducted to determine if finger-guided prostate biopsy is still an appropriate diagnostic technique for suspected prostate cancer.

Methods: An audit of records of patients who underwent a prostate biopsy was conducted. Data collected included demographic information, findings on digital rectal examination, level of prostate specific antigen, type of biopsy and histology results. Data were summarised using the mean with standard deviation for continuous variables or percentages for categorical data. Pearson's Chi square test, Fisher's exact test or Student's t-test was used to compare findings where it was appropriate. A p-value below 0.05 was considered significant. The data were analysed statistically using Stata software version 15.

Results: A total of 3115 records were found of which 62% (1933/3115) were of patients who had trans-rectal ultrasound guided prostate biopsy. Sixty-seven percent of patients in the finger-guided biopsy group had a normal digital rectal examination compared with 58% in the trans-rectal ultrasound group. The mean prostate specific antigen level was 15 (8-56) ng/ml for the finger-guided group and 19 (9-84) ng/ml for the transrectal ultrasound group, respectively. Prostate cancer was confirmed in 53% in the finger-biopsy guided group compared to 62% following trans-rectal ultrasound guided biopsy. Repeat biopsy showed prostate cancer in 39% of the finger-guided biopsy and 42% in the transrectal ultrasound-guided biopsy group.

Conclusion: Both transrectal ultrasound- and finger-guided prostate biopsy had higher cancer yield above 50%. Transrectal ultrasound-guided biopsy had superior cancer pick-up rate

overall. Finger-guided biopsy led to marginal increase in cancer diagnosis in patients with normal prostate on DRE but level of PSA equal or greater than 10ng/ml. And, in patients with palpable nodule, the two techniques had comparable outcomes. Therefore, finger-guided biopsy remains appropriate for use in low- and middle-income settings where patients present at an advanced stage of prostate cancer.

Key words: Biopsy, Finger-guided, Prostate, TRUS-guided.