

Outpatient transperineal prostate biopsy under local anaesthesia is safe, well tolerated and feasible.

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Introduction

Transperineal biopsy (TPB) of the prostate has been increasingly utilised as it has reduced infection risks. Traditionally, it is performed under general anaesthesia, therefore it carries anaesthetic risks. Recently, new studies have performed TPB under local anaesthesia with success [1]. In the present study, we explored our experience of performing TPB under local anaesthesia in an Australian cohort.

Aims

The primary endpoint was complication rates, pain scores and tolerability as rated by the patient. Secondary endpoints included detection of clinically significant prostate cancer (csPCa), lower urinary tract symptoms and erectile dysfunction.

Methodology

In this prospective study based at a metropolitan outpatient clinic, patients were provided with TPB under local anaesthesia. Consecutive patients with suspicion of prostate cancer were selected for this study. All had a pre-biopsy multi-parametric MRI and were offered a biopsy if a suspicious lesion was seen. Pain was assessed using a 10 point visual analogue scale (VAS). Lower urinary tract symptoms were assessed using the International Prostate Symptom Score (IPSS). Erectile function was assessed using the erectile function subset of the international Index of Erectile Function (IIEF). Data was collected at baseline, and days 7 and 30 post-biopsy via telephone interview.

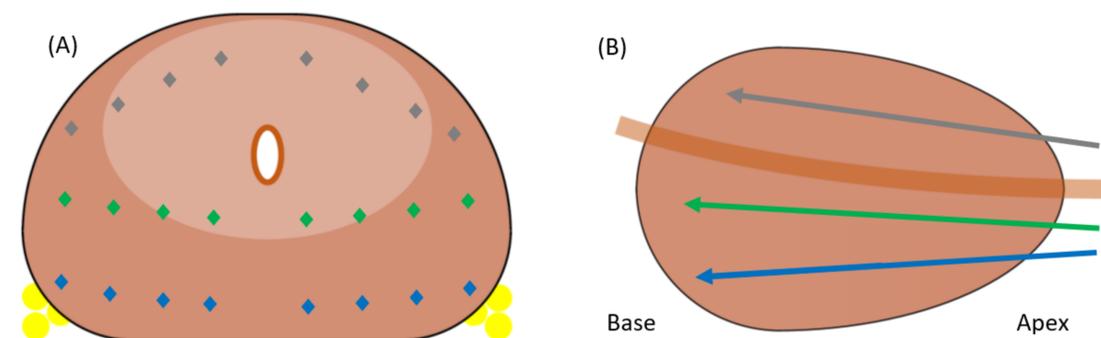
[1] Szabo, R J. "Free-Hand" Transperineal Prostate Biopsy Under Local Anesthesia: Review of the Literature. *J Endourol.* 2021 Apr;35(4):525-543. doi: 10.1089/end.2020.1093. Epub 2021 Feb 17.

Results

A total of 48 patients were enrolled in this study between June 2020 and March 2021. Median age was 65.5 years and median PSA was 6.95 ng/mL. Clinically significant prostate cancer was detected in 56% of patients. During the procedure, pain scores were rated the highest during infiltration of local anaesthetic agent with a median score of 5. By the conclusion of the procedure, median pain score was 1. Vast majority of patients (85.4%) would opt for a repeat TPB under local anaesthesia should the need for prostate biopsy arise again. Two of our patients experienced infectious complications, and one experienced urinary retention.

At post-biopsy follow up, median IPSS score at baseline was 6 versus 7 at day seven post-biopsy ($p=0.012$). Erectile function score did not significantly differ between baseline and day 30 post-biopsy (median score 2.5 vs 10.5 respectively, $p=0.094$).

Figure 1: diagrammatic representation of the Ginsburg template utilised for systematic biopsies shown in (A) axial view and (B) sagittal view. Arrows represent the path the biopsy needle takes.



Conclusions

Our data is in line with currently available data and confirms that TPB under local anaesthesia can be achieved in a safe and tolerable manner. We add to the current evidence with follow up data including an assessment of functional outcomes.