

The Prostate Problem You Can't Put Your Finger on the Normal Way: A Case of Perineal Prostate Cancer Post Transperineal Prostate Biopsy

Kevin Yinkit Zhuo,^{✉1,2} James Kovacic,^{1,2} Amanda Chung,^{1,2,3} Thomas Eade,^{3,4} Venu Chalasani,^{1,2,3}

¹Department of Urology, Royal North Shore Hospital, Sydney, Australia ²North Shore Urology Research Group, Sydney, Australia ³University of Sydney, Sydney, Australia

⁴Radiation Oncology Department, Northern Sydney Cancer Centre, Royal North Shore Hospital, Sydney, Australia

Transperineal biopsy needle-tract tumour seeding is a rare complication, with sparse published literature[1]. We describe the management of metastatic prostate cancer secondary to transperineal biopsy needle-tract seeding.

An 80-year-old male presented with an otherwise asymptomatic, hard perineal mass that had progressively enlarged over a few months. The patient's urological history included prostate adenocarcinoma of the right prostatic-apex, prostatic urethra, and lymph nodes (ISUP-Grade 4 [4 + 4 = 8], PIRADs-5, PSA-level 2.7µg/L), diagnosed via transperineal biopsy and TURP 3 years prior. His prostate cancer was definitively managed with TURP, ADT, and radiotherapy with a post-treatment PSA-level of 0.05µg/L.

On pelvic examination, a perineal 2cm fixed lump was palpable. Pelvic-MRI demonstrated a 20mm irregular mass in the perineal fat immediately below the penile base (**Figure 1A**). Repeat PSA-level was 6.0µg/L. Subsequent PSMA PET-scan revealed a PSMA-avid lesion in the perineal midline, consistent with prostatic neoplasm metastasis without other metastatic disease (**Figure 1B**). Cystoscopy showed no obvious urinary-tract cancer recurrence.

The patient's case was discussed in a multi-disciplinary team meeting and excision was recommended. The patient then underwent a wide-local excision, requiring partial resection of bulbar-spongiosum (**Figure 1C**). Histopathology revealed a complete excision of his prostate adenocarcinoma metastasis, with post-excision PSA-levels of 0.12µg/L. No adjuvant therapies were given.

Needle-tract seeding following transperineal prostate biopsy is rare and should not preclude patients from undergoing biopsies. This case highlights the need for patient follow-up after cancer treatment and exemplifies the practicality of PSMA PET-scans if there is evidence of rising PSA-levels after definitive prostate cancer treatment.

Acknowledgements

Competing interests: Dr Amanda Chung: Proctor for Medtronic and Boston Scientific. The other authors have no competing interests.

Reference

1. Volanis D, Neal DE, Warren AY, Gnanapragasam VJ. Incidence of needle-tract seeding following prostate biopsy for suspected cancer: a review of the literature. *BJU Int.* 2015 May;115(5):698-704.

Key Words

Prostatic neoplasm, needle biopsy, neoplasm metastasis, prostate-specific antigen, early detection of cancer

Competing Interests

See Acknowledgements.
Patient Consent: Obtained.

Article Information

Received on October 28, 2022
Accepted on November 6, 2022

Soc Int Urol J. 2023;4(3):232–233

DOI: 10.48083/ZHVJ6978

FIGURE 1A.

Pelvic-MRI. Mass in perineal fat abutting fascia around inferior corpora spongiosus.

FIGURE 1B.

PSMAPET (ongoing resolving right prostatic posterolateral peripheral zone and equivocal left pre-sacral node uptake. New PSMA-avid lesion in the perineal midline (SUV-max 21.7)

FIGURE 1C.

Intraoperative image demonstrating perineal metastatic lesion abutting bulbospongiosus. The urethra, however, was clear of disease.

