

Introduction

- Isolated recurrent metastatic prostatic carcinoma in the urethra is a rare entity.
- Metastatic sites of recurrence more commonly present in the bone, distant lymph nodes, liver and thorax.¹

Case Report

- A 77-year old male presented to the Singapore General Hospital with a 2-day history of gross hematuria with passage of blood clots per urethra in acute urinary retention.

Significant past medical history:

- Robotic assisted laparoscopic radical prostatectomy (RARP) 13 years ago, for pT2N0M0 Gleason 3+4 (Grade group 2) prostatic adenocarcinoma with clear surgical margins.
- Salvage radiotherapy 3 years later for biochemical recurrence of PSA rise up to 0.06 with PSA response back to nadir. (Fig. A)

Investigations:

- Flexible cystoscopy : 3cm pedunculated lobulated fleshy lesion in the mid segment of the penile urethra. Radiation cystitis changes were noted in the bladder. (Fig. B)
- Magnetic resonance imaging (MRI) : T2-weighted hyperintense lobulated enhancing 4.1 x 1.7 x 1.7 cm lesion in the midsegment of the penile urethra extending into the corpus spongiosum, not involving the corpus cavernosa. No recurrence noted at the prostatectomy surgical bed with no enlarged lymph nodes. (Fig. C)

References

- ¹ Gandaglia, G., et al., Distribution of metastatic sites in patients with prostate cancer: A population-based analysis. *The Prostate*, 2014. 74(2): p. 210-216.

Surgical Intervention

- He underwent excision of the urethral lesion with primary repair of the urethra, with clear surgical margins.
- Operative Procedure:** Through the perineal approach, the penile urethra is isolated from the cavernosum and incised ventrally over the fleshy lesion. (Fig. D) The lesion was excised in entirety with a resultant 2cm x 8mm defect in the dorsal penile urethra. (Fig. E) The defect in the dorsal and ventral aspect of the urethra was closed primarily with vicryl 4/0 over an indwelling catheter.
- The patient recovered well with complications. Post operative Urethrogram revealed no leakage (Fig. F) and PSA returned back to nadir <0.03.
- Final histology revealed Gleason 4+5 (Grade group 5) prostatic adenocarcinoma.

Discussion

- There have been less than 15 reported cases of isolated recurrent prostatic urethra metastasis.

Literature review revealed that:

- Occurs in intermediate and high-risk patients
- Long latent periods, from 2-13 years after primary radical treatment.
- Mainstay treatment modalities include androgen deprivation therapy (ADT) and radical resection
- Prognosis was good, more than 6 months disease free post-treatment

Conclusion

- As it is uncommon, it is important to remember that such atypical recurrence of isolated prostatic adenocarcinoma can present unconventionally after many years and attention should be taken to ensure continued surveillance of these patients.

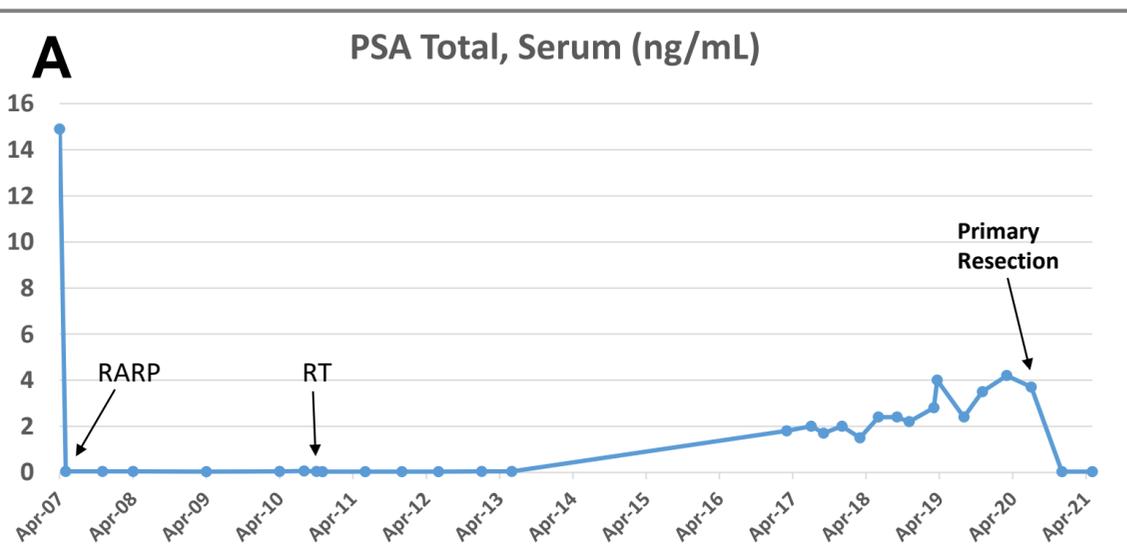


Fig. A: PSA trend from post RARP to time of excision with urethroplasty and response

Fig. F: Post-operative normal retrograde urethrogram

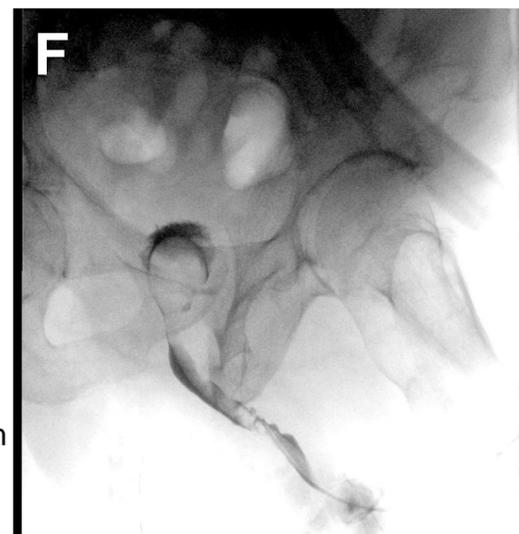


Fig. B: Flexible Cystoscopy demonstrating lobulated fleshy lesion at mid penile urethra



Fig. C: MRI of urethra showing T2-weighted hyperintense lesion arising from left of urethra

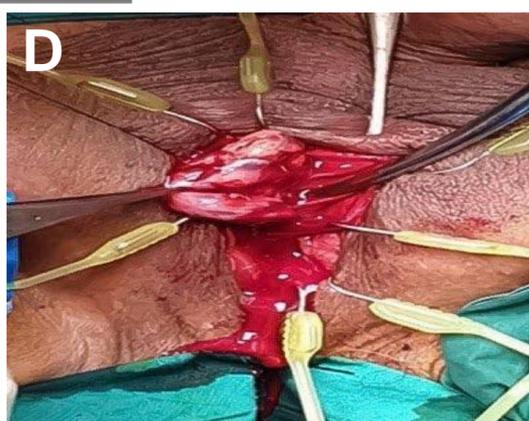


Fig. D: Intraoperative photo showing ventral incision to expose lobulated lesion arising from dorsal urethra

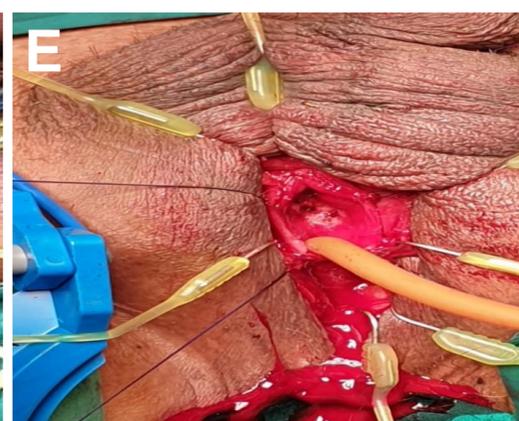


Fig. E: Intraoperative photo showing 20 x 8 mm defect in dorsal urethra after excision of lesion in entirety