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Case Report

Creeping suprapubic catheter site growth-a unique presentation in a case of carcinoma prostate

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ABSTRACT

Postoperative spindle cell nodule (PSCN) is a scarcely studied benign histopathological variant of prostatic growth. This case report demonstrates an extensive growth arising from the suprapubic cystostomy site in the background of carcinoma prostate. An 82-year-old gentleman, diagnosed with primary carcinoma of prostate who underwent channel transurethral resection of prostate (TURP) and subsequent suprapubic catheterisation (SPC) in view of acute retention at a later time period, presented with an exophytic ulcer-proliferative growth along the SPC. The unique presentation as described in our case report, poses a diagnostic conundrum that requires a mention in the literature. Edge wedge biopsy of the lesion revealed it to be a spindle cell neoplasm. The unique case of SPC site involvement by prostatic growth raises questions about the nature of any such growth, with a possibility of it being benign growth and an excellent long-term prognosis for such patients with regard to the PSCN.

Keywords: Prostatic PSCN, Prostate PSCN, Prostate, Spindle, Suprapubic growth

INTRODUCTION

Carcinoma prostate and prostatic hypertrophy patients are frequently subjected to transurethral resection procedures. However, the regrowth tissue may not necessarily be malignant, with one possibility being PSCN. PSCN were first described and recognized by Proppe et al when he published a case series of eight cases, 3 of which were post-TURP of prostate.[1] Following initial surgery, they thought to be leiomyosarcoma with subtle microscopic and clinical differences and hence warranted a separate pathological entity. This benign pathology has rarely been reviewed in literature, and this is 1st reported case of such an extensive PSCN creeping along tract of SPC.

CASE REPORT

An 82-year-old gentleman hailing from Karnataka, India, presented to the emergency department with acute urinary retention and diagnosed with benign prostate enlargement. At the time of initial presentation, rectal examination was suggestive of a benign enlarged gland. Hence, we proceeded to perform TURP to relieve the patient of his lower urinary tract symptoms.

On follow-up, histopathology reported carcinoma of prostate (Gleason score- 5+4=9; grade group-5) (Figure 1). Patients and relatives were explained the condition with possible implications and the need for various imaging studies before settling on future treatment. The patient opted for surgical androgen deprivation in the form of bilateral orchiectomy as he did not wish for any further active intervention.

One year later, he presented with another episode of acute urinary retention, at which time a SPC was placed due to difficult per urethral catheterisation. He underwent cystoscopic evaluation followed by channel TURP.

After clamping SPC and successful TWOC (Trial without catheter), he was discharged with a planned follow-up

after 1 month for SPC removal. However, he was lost to follow-up for 11 months. He had changed SPC twice at a local hospital. On presentation to our outpatient department (Figure 2), we discovered an ulcer-proliferative growth arising along the SPC site, which was non-tender on touch and extremely friable. His PSA at this stage was 0.6 ng/ml.

To define the extent of this lesion, magnetic resonance imaging (MRI) of the pelvis (Figure 3) was performed, which demonstrated a lobulated irregularly shaped T2 hyperintense lesion with possible infiltration to the urinary bladder wall and further along the SPC to reach up to the skin. Inferiorly extending along the prostatic and membranous urethra while posteriorly abutting the anterior rectal wall and the bilateral seminal vesicles. Multiple significantly enlarged pelvic nodes were noted.

At this stage, a firm suspicion of locally advanced carcinoma prostate was held, and a further lesion edge biopsy was performed from the site protruding outside the anterior abdominal skin to confirm our suspicion. To our surprise, repeated biopsies demonstrated that it was a spindle cell neoplasm (Figure 4). On histopathology, spindle cells arranged in intersecting fascicles and bundles were seen. Further evaluation with IHC revealed positivity for vimentin, smooth muscle actin (SMA), and Desmin and negative for pan-cytokeratin, AMACR (excludes prostatic acinar adenocarcinoma), GATA3 (excludes urothelial carcinoma), p40 (excludes squamous cell carcinoma) and ALK (excludes inflammatory myofibroblastic tumor). Correlating the operative history of the patient and the histopathology of the lesion, the diagnosis of PSCN was made.

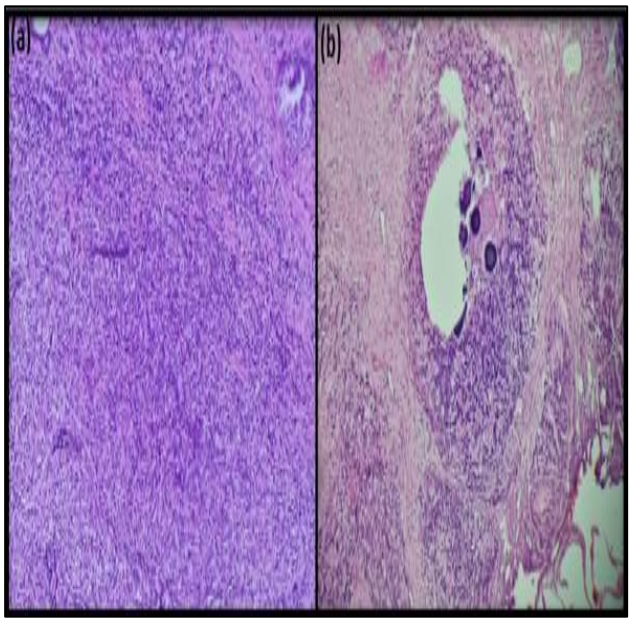

Figure 1 (a and b): TURP chips with a poorly differentiated carcinoma in sheets, poorly formed glands and fused glands. Foci of cribriform sheets of tumor cells with necrosis and dystrophic calcification.

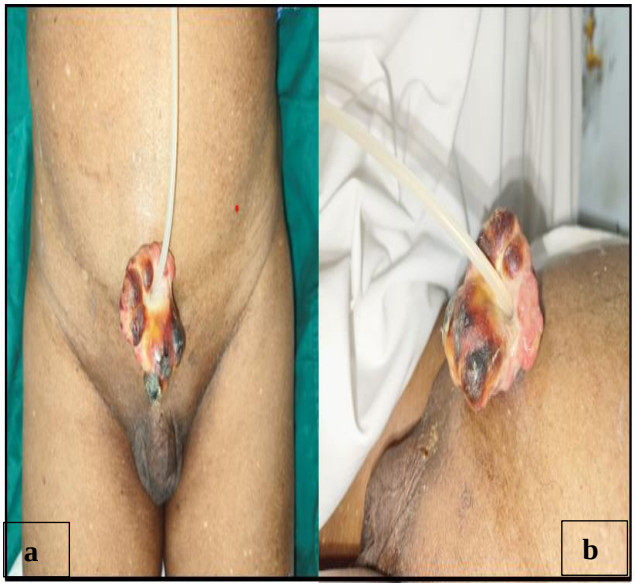

Figure 2 (a and b): Showing an ulcero-proliferative lesion arising from the SPC site.

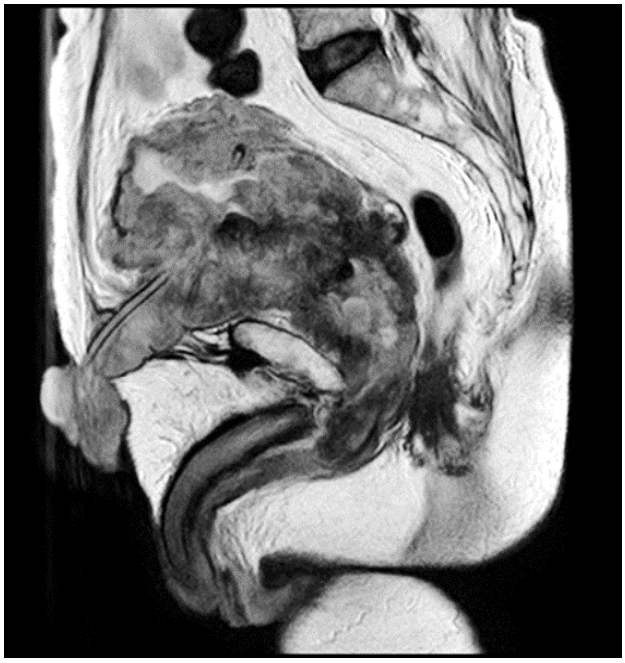

Figure 3: MRI pelvis T2 weighted image (sagittal section) showing lesion extending from the prostate along the anterior abdominal wall and through the SPC site.

At this stage, the patient was counselled about the condition and explained regarding the excellent prognosis of the local growth with surgical extirpation, which the patient promptly refused, and thus remains on regular SPC change at his local hospital.

The patient's due consent was taken at this stage for possible reproduction of this case as a public, academic text, and written assurance of maintaining anonymity was given to this patient.

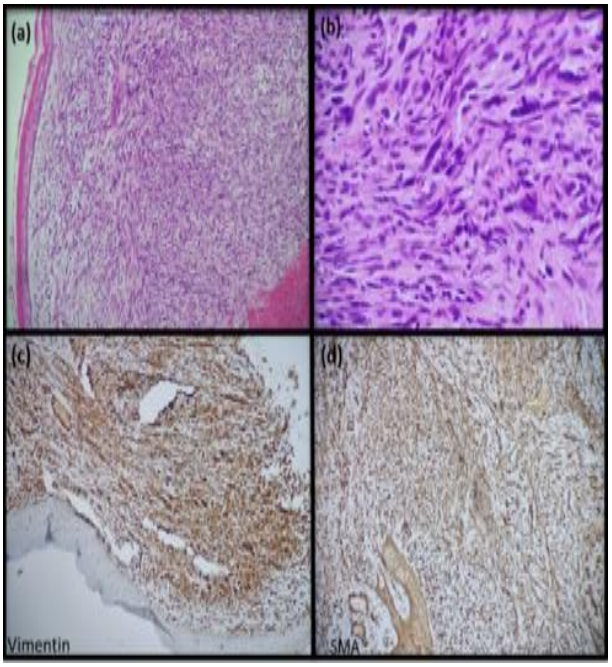

Figure 4 (a-d): Biopsy with surface lining by keratinized stratified squamous epithelium, overlying a lesion with spindle cells arranged in fascicles and bundles. Tumor cells show mild to moderate anisonucleosis with interspersed inflammatory cells composed of lymphocytes, plasma cells and mast cells, IHC Staining. The spindle cells were positive for vimentin, SMA.

DISCUSSION

A review of the scarce literature on this topic did not reveal a similar growth pattern of spindle cell nodules from the Suprapubic site as is seen in our case. Primary squamous cell carcinoma has been reported arising from the suprapubic cystostomy site, and this poses a diagnostic conundrum when a biopsy is not available to support the clinical diagnosis. However, the growth of spindle cell nodule in background of prostatic carcinoma with repeated channel TURP has been documented in the past.[2,3]

As per Manini et al PSCN is sub-classified under the broad group of pseudosarcomatous myofibroblastic proliferation along with another similar entity known as inflammatory myofibroblastic tumour (IMT).[4] The known difference between PSCN and IMT or pseudosarcomatous fibro-myxoid tumours (PSFT) exists in the history of repeated instrumentation as is seen in the case of the former.[5]

Similar findings of PSCN are also seen in patients who underwent TURBT, where multiple spindle cells are found deep in bladder walls at the site of resection, lodged in the smooth muscle layer, without any significant atypia.[6]

There are numerous cases of primary spindle cell lesions discussed in literature confused with this pathological variant like STUMP (Stromal tumors of uncertain malignant potential), sarcomas (Stromal or leiomyosarcoma), Solitary fibrous tumor and GIST (Gastrointestinal stromal tumor). Definitive diagnosis is based on histopathology, immunohistochemistry and radio-imaging.[7] Based on IHC typing, the lesional cells of PSCN stain positive for CD 68, Vimentin, SMA, Desmin, p53 and EMA (Epithelial membrane antigen). MSA (muscle-specific actin) and SMA negativity in sarcomatous carcinoma differentiate PSCN from the former.[8]

PSCN are benign lesions with limited potential for regrowth. The prognosis of patients undergoing surgical management for PSCN and PSFT of prostate is excellent with higher chances of recurrence in patients being treated with transurethral resection.[9,10] In our case, due to the patient's unwillingness, a surgical extirpative procedure was not taken up, and supportive treatment was provided. However, literature suggests excellent outcomes in cases where surgical removal of the lesion can be performed with periodic follow-up.

CONCLUSION

Prostatic growths may have a spectrum of varied presentations, including such a rare, unusual scenario of a proliferative mass creeping along the SPC in a patient with prostatic carcinoma and history of channel TURP. However, any confusion may be tackled effectively with a careful histopathological assessment, which will thus provide the patient with a favourable future outcome.

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