



## Surgery

## A RARE CASE OF RHABDOMYOSARCOMA OF PROSTATE IN YOUNG ADULT

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**ABSTRACT** Rhabdomyosarcoma is a soft tissue malignant neoplasm. Bimodal peak – between the ages of 2 and 5 years and again from 15 to 19 years. Pathologically classified into three types : embryonal , alveolar , pleomorphic. RMS of the prostate occurs predominantly in male children and infants and is a highly malignant tumour. It is rapid growth tumour with local invasion leads to symptoms of bladder obstruction. Bladder outlet obstruction in a young male is an unusual symptom. A high index of suspicion alone will help in detecting RMS of the prostate before it is too late.

**KEYWORDS :** Rhabdomyosarcoma, Prostate, Hematuria, Bladder outlet obstruction

**INTRODUCTION:**

- Rhabdomyosarcoma is a soft tissue malignant neoplasm.
- Incidence is 4.3 cases/million children, approximately 350 new cases diagnosed annually
- Bimodal peak – between the ages of 2 and 5 years and again from 15 to 19 years
- Pathologically classified into three types : embryonal , alveolar , pleomorphic.
- Embryonal is most common. Two subtypes of embryonal, botryoid and spindle cell. Better prognosis.
- M/c site in children are head and neck(35%), genito-urinary tract (25), and extremities (20).
- Less common sites are trunk, GI tract, intrathoracic and perineal region, bladder, prostate, vagina, liver.
- Present as asymptomatic, most symptoms are related to compressive effects and can result in pain.
- Prostate or bladder tumours, commonly located at the base and trigone, result in hematuria and urinary obstruction.

**CASE REPORT:**

An 18 yrs old male came to opd with c/o Obstructive LUTS symptoms since 1 month with lower abdomen pain and urinary retention since 1 day. On examination- bladder was palpable with lower abdomen tenderness. External genitals were normal. On PR examination- grade 3 prostatomegaly with hard, irregular mass felt. Routine investigation- Hb, cbc, RFT , Bsl-random, urine routine/micro, sr. PSA are within normal limits. X-ray KUB showing ill defined soft tissue shadow inferior to pubic symphysis? Mass lesion. On USG finding, 35mm × 35mm size hyperechoic lesion in prostate. Lesion ? Bladder mass? Prostate mass. Distended bladder with Rt Hydronephrosis. Catherization done with 16F foley's catheter.

He came after 7 days with c/o hematuria. CECT of abdomen and pelvis showing large mass lesion at the base of bladder measuring size 6.2×6.0×5.7cm, prostate is not visualized separate from the lesion, neoplastic etiology. Enlarged pelvic and b/l iliac region lymphnodes. Cystoscopy finding was large prostate median lobe with normal lateral lobes. TRUS biopsy done. HPE report was BPH with severe acute on chronic prostatitis with HG-PIN, showing Few areas of malignancy CFT given after 21 days but recatheterization done same day due to not able to pass urine. Repeat 10 core TRUS biopsy from Rt and Lt lateral prostate lobe done for IHC study. On IHC, the tissue specimen was positive for vimentin/myogenin/myoD1 with rare cell immunoreactivity for desmin and negative for pancytokeratin, CD45, suggestive of Embryonal rhabdomyosarcoma. Microscopic showing malignant small round cell tumour. Advised him to do CECT Chest and start chemotherapy. Unfortunately patient did not come for follow up. I called him after 7 days but he died at home.

**DISCUSSION:**

RMS of the prostate occurs predominantly in male children and infants and is a highly malignant tumour. Very few cases have been reported in patients above 18 years[1,2]. It mostly presents with obstructive symptoms. It is rapid growth tumour with local invasion leads to symptoms of bladder obstruction. The lungs, liver and skeleton are the main sites for metastasis. CT is helpful in characterising the primary tumour and spread to regional lymph nodes [3]. Prostatic acid phosphates and PSA levels are usually normal. The diagnosis is made on transrectal needle biopsy or transurethral resection or biopsy specimens [2]. IHC shows positivity for desmin and skeletal muscle marker, which include MyoD1, myogenin, sarcomeric actin, myoglobin and cytoplasmic straining with WT1 [3]. Bladder preservation is the major goal for young patients with tumour arising in the bladder or prostate. Patients treated with XRT following initial chemotherapy to relieve symptoms. For patients with residual tumour following chemotherapy and XRT, appropriate surgical management may include partial cystectomy and prostatectomy [4,5].

**CONCLUSIONS:**

Bladder outlet obstruction in a young male is an unusual symptom. A high index of suspicion alone will help in detecting RMS of the prostate before it is too late.

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