A RARE CASE OF SARCOMA PROSTATE

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Abstract:
Leiomyosarcoma of the prostate is a rare entity. It is the most common prostate sarcoma in the elderly. The malignant mesenchymal lesions of the prostate has been classified into sarcomas of specialised prostatic stroma (stromal proliferations of uncertain malignant potential and prostatic stromal sarcoma) and other sarcomas equivalent to their soft tissue counterparts. The latter group accounts for only 0.1-0.2 of all primary prostatic tumours. We report a patient who presented to us with obstructive symptoms.

Keyword: Prostate, Leiomyosarcoma

Introduction:
Leiomyosarcoma of the prostate is an extremely rare entity. Sarcomas account for about 1% of all malignant tumours and less than 5% arise from genitourinary tract\(^1\). Leiomyosarcoma of the prostate is a rare neoplasm that usually pursues an aggressive clinical course. It is the most common primary sarcoma of the prostate in adults and comprises 38% to 52% of primary prostatic sarcomas\(^2\). We report a gentleman presenting with obstructive symptoms diagnosed to have Leiomyosarcoma of the prostate.

Case History: A 35 year old male patient presented with acute urinary retention catheterised 6 weeks back. He had an h/o straining to void of 6 months duration. His vitals were normal. There was no history of hypertension or diabetes. He underwent transurethral resection surgery in a local hospital with histological diagnosis of inflammatory lesion and was referred to our department in Madras Medical College, Chennai with persistent symptoms.

On examination, palpation revealed a globular non-tender mass palpable in the suprapubic region measuring 10 x 8 cms, firm to hard in consistency, irregular surface, all borders well made out except lower border with restricted mobility. Digital rectal examination revealed a large firm to hard mass in the region of prostate, projecting and occupying the whole lumen of rectum, upper extent could not be made out, prostate could not
be felt separately not warm, not tender. Rectal mucosa free. Upper border of prostate could not be reached. Ultrasonography showed the presence of a retrovesical mass displacing the bladder anteriorly, measuring 14.5 x 10 x 12.3 cms with anechoic central area, irregular wall thickening and internal debris (Fig 1). An impression of prostatic neoplasm was made. Serum prostate specific antigen (PSA) was 0.6 ng/ml (normal = 0-4 ng/ml). Subsequently a CECT of the pelvis was performed (Fig 2) which showed gross prostatomegaly with central necrotic breakdown, preserved prostatic fat plane and mass effect on adjacent soft tissue indenting the urinary bladder. Since there was a doubt in the involvement of other pelvic viscera, an MRI pelvis was ordered (Fig 3) which showed large lobulated heterogenous solid mass lesion containing tumour vascularity with central hemorrhage and necrosis measuring 14.7 x 10.6 x 12.9 cms occupying the pelvis with epicentre from prostate involving seminal vesicles and displacing the bladder anteriorly. Fat planes with rectum and recto sigmoid junction effaced indicating involvement. Aspiration cytology revealed a hemorrhagic aspirate. So a transurethral biopsy was planned which showed features suggestive of high grade sarcoma. In view of this diagnosis, metastatic workup was made and was normal. So the plan was to do a pelvexenteration since there was rectal involvement and patient underwent pelvexentereation(Fig 4 & 5). Post operative period was uneventful. HPE turned out to be Leiomyosarcoma (Vimentin negative, Cytokeratin negative, SMA positive)(Fig 6). Patient was referred to radiation oncology and is on regular follow up.

Discussion:
Sarcomas of prostate are rare tumours and can be classified as rhabdomyosarcomas, leiomyosarcomas, fibrosarco-mas, angiosarcomas, and others counterparts. Microscopically the histomorphology is similar to soft tissue and uterine leiomyosarcoma and immunohistochemical positivity for SMA clinches the diagnosis. Sarcomatoid carcinoma comes as a differential diagnosis of this entity. Cytokeratin immunostaining is of value to demonstrate an epithelial component; however, it should be kept in mind that co-expression of intermediate filaments may be found in high grade sarcomas. The reported 5-year survival of prostatic leiomyosarcoma has been 50-60%. Surgery, chemotherapy and radiotherapy have been used in the treatment, but there are no standard recommendations (3). For operable tumours, the primary treatment is surgery followed by either chemotherapy or radiotherapy or both (4). Various chemotherapy regimens have been used in this disease, but most receive anthracycline (doxorubicin) based combinations with alkylating agents (cyclophosphamide, ifosfamide, or dacarbazine) and/or vinca alkaloids (vinblastine or vincristine). The clinical outcome with prostate leiomyosarcoma is poor. When compared to other urologic leiomyosarcomas, prostate leiomyosarcomas are associated with significantly worse survival than renal and bladder leiomyosarcomas (5). Early diagnosis and complete surgical resection offer patient the best possible chance of survival. Our case depicts the classic histomorphology and immunohistochemical profile of prostatic leiomyosarcoma. Conclusion: Leiomyosarcoma of the prostate is a rare
neoplasm that usually presents with metastatic disease and typically follows an aggressive course. A multidisciplinary approach that includes urology, radiation oncology, and medical oncology consultations should be employed for appropriate management of this devastating malignancy. Complete surgical resection increases the survival rates.

References:


