



A Rare Case of Recurrent Leiomyosarcoma of Prostate: A Case Report

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Abstract

Introduction or Background:

Among prostate carcinomas, adenocarcinoma is the most common histology accounting for 90% of prostate cancers. Prostate leiomyosarcoma is an extremely rare and highly aggressive neoplasm that accounts for less than 0.1% of primary prostate malignancies.

Case Presentation:

We present a patient with primary leiomyosarcoma of the prostate who underwent radical prostatectomy and then presented with local recurrence. Patient received radical radiation and on follow up developed distant metastasis and underwent palliative treatment and died of respiratory failure due to lung metastasis.

Discussion and Conclusion:

Leiomyosarcoma accounts for less than 0.1% of primary prostate malignancies. The clinical outcome of patients is poor. Median survival is estimated to be 17 months.

Keywords: *Leiomyosarcoma, radical prostatectomy, recurrence, median survival, metastasis.*

Introduction

Adenocarcinoma, arising from peripheral acinar glands, is the most common tumour in the prostate.(1) Prostate leiomyosarcoma is an extremely rare and highly aggressive neoplasm that accounts for less than 0.1% of primary prostate malignancies.(2) These tumours tend to invade lymphatics and blood vessels, causing widespread regional lymphatic and distant metastases. Individuals most commonly present with signs and symptoms of urinary obstruction.(3) Additional associated symptoms include perineal pain, haematuria, burning on ejaculation, constipation and weight loss. We present a patient with primary leiomyosarcoma of the prostate who underwent radical prostatectomy and then presented with local recurrence.

Case Presentation

A 55-year-old male, a known hypertensive on oral medications, presented with complaints of difficulty in urination and pain during micturition for 3 years for which he was evaluated in an outside hospital and underwent TURP on 5/11/18. Biopsy was suggestive of leiomyosarcoma and he was referred to a higher center where he underwent radical prostatectomy on 5/01/19. Serum PSA was 1.6 ng/ml. Post op HPE showed high grade leiomyosarcoma pT1N0M0. He was planned for observation as there were no indications for adjuvant treatment. He presented to JIPMER hospital with recurrence of symptoms after 3-4 months of treatment. PET CT was done on 9/8/19 which was suggestive of local recurrence (Fig.1). On Examination, Per abdomen: Laparoscopic port site scars seen, normal movements with respiration, no organomegaly. DRE: Anal tone normal, rectal mucosa smooth, hardness along anterior rectal wall felt. Outside Biopsy slide review: 3/07/19 showed leiomyosarcoma of prostate. PETCT: 09/08/19: Metabolically active recurrence in prostatic bed, 3.8x3.7x3.1cm enhancing soft tissue density inferior to bladder; SUV max-5. 57. He received radical radiotherapy 66 Gray in 33 fractions in two phases, Phase 1 50 Gray in 25 fractions and Phase 2, 16 Gray in 8 fractions. Radiation was planned using Volumetric Modulated Arc Therapy (Fig.2). During radiation, patient developed grade 1 constipation and grade 1 dermatitis in the fourth week and was managed conservatively. He was planned for regular follow up and PETCT was done 3 months post radiation which showed asymptomatic bilateral lung metastasis (Fig.3), but no disease at local site (Fig.4). He was started on palliative chemotherapy and received two cycles of injection paclitaxel and carboplatin. The patient expired in June 2020 due to type 1 respiratory failure due to pulmonary metastasis. The Time from diagnosis to death was 18 months.

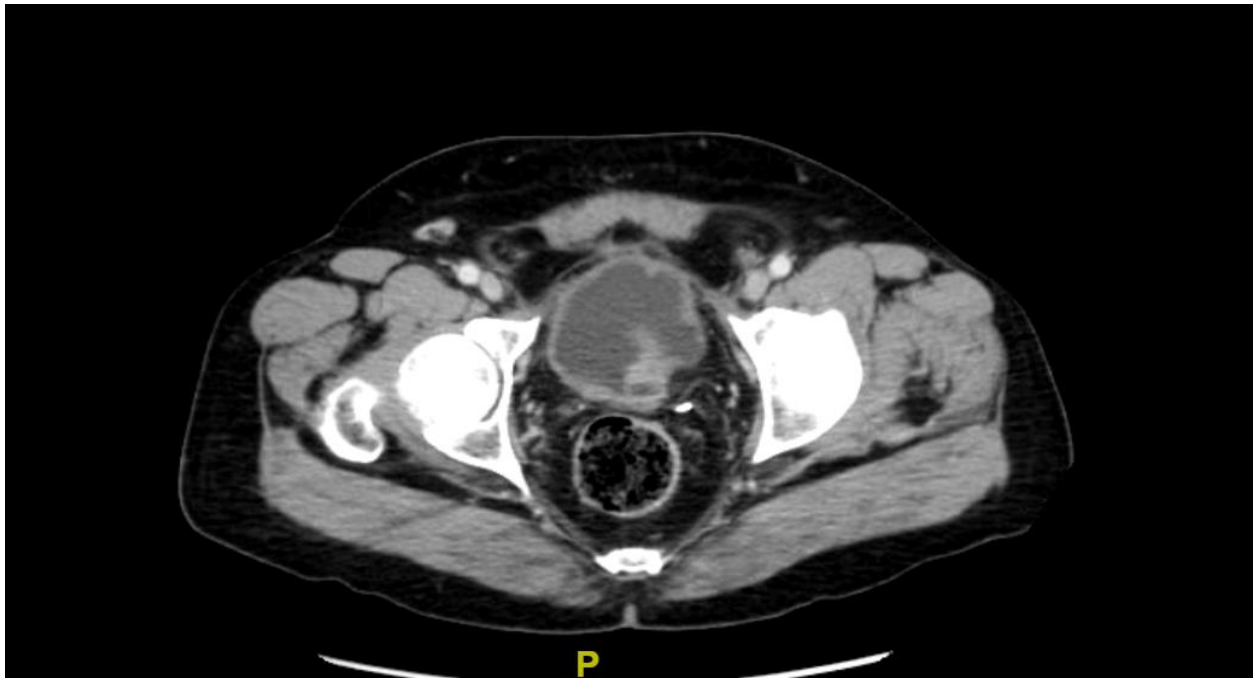


Figure 1. PETCT pre-RT

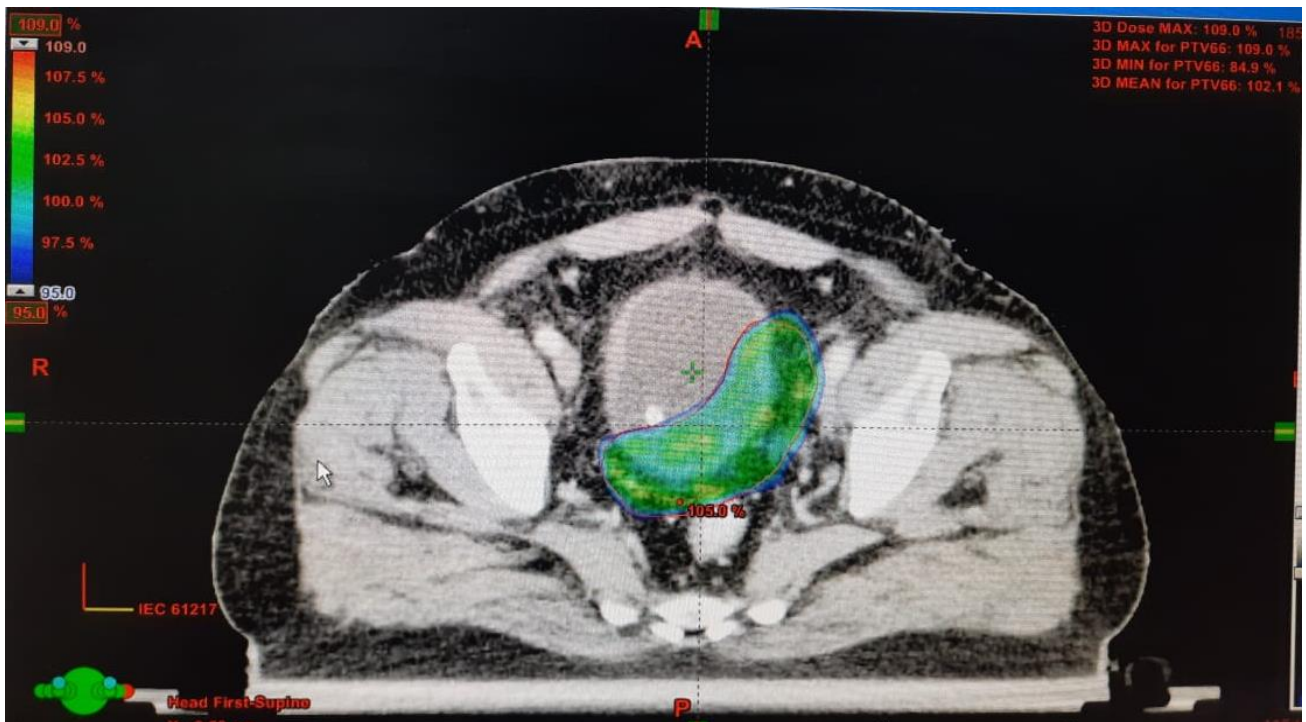


Figure 2. RT plan

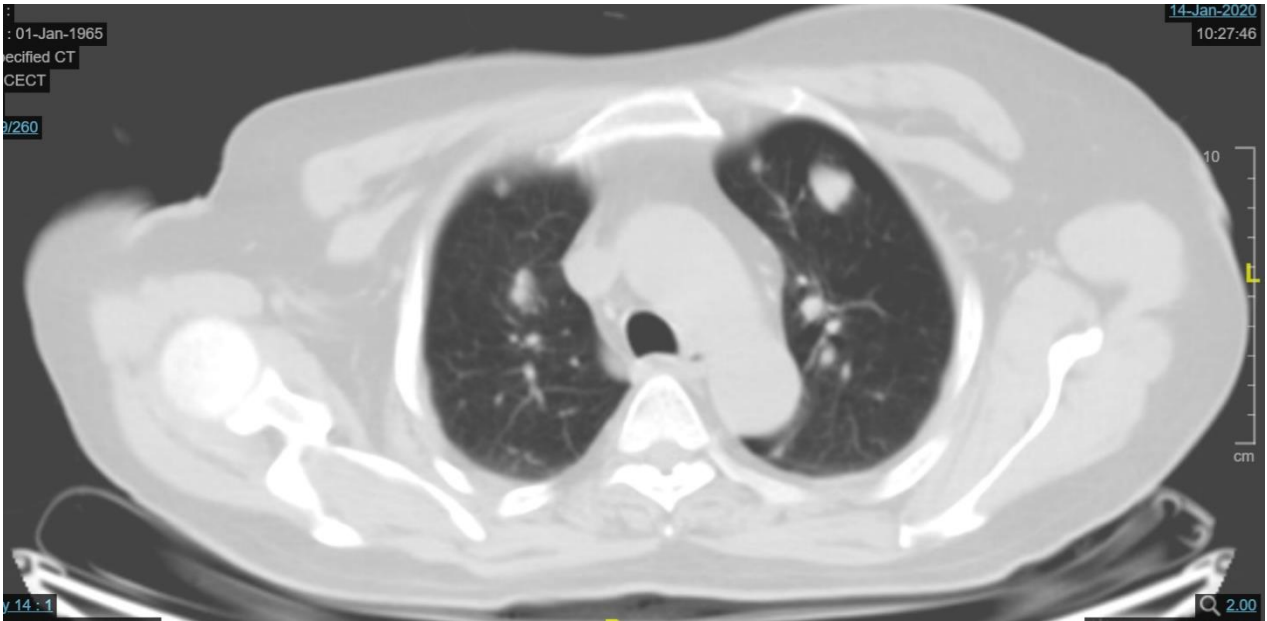


Figure 3. post treatment CT showing lung metastasis



Figure 4. Post RT PETCT showing no local residual

Discussion and Conclusion

Leiomyosarcoma accounts for less than 0.1% of primary prostate malignancies.(2)

Leiomyosarcoma most commonly presents with signs and symptoms of urinary obstruction (frequency, urgency, and nocturia).(2) Multimodality treatment combinations include surgery, pre- or postoperative radiation therapy, and neoadjuvant or adjuvant chemotherapy.(2–6) The clinical outcome of patients is poor. Median survival is estimated to be 17 months.(3) Our patient presented with a rare histology of carcinoma of prostate, underwent surgery and he presented with local recurrence. Recurrence was treated with radiotherapy but due to the aggressive nature of the disease he soon developed lung metastasis.

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