



Pelvic Mass

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Case Report

A 58 years old male with medical history of mucoepidermoid carcinoma of the parotid gland and Hodgkin's lymphoma consulted for lower urinary tract symptoms. The patient presented an acute urinary retention leading to urological consultation. Digital rectal examination revealed the presence of an area of increased hardness on the left side of the prostate. Transrectal ultra-sound defined the presence of a definite hypoechoic nodule on the left side of the prostate, 38 mm × 36 mm × 31 mm, along an area of heterogeneous echotexture. No apparent invasion of seminal vesicles. PSA levels of 1.6 ng/mL. The multiparametric Magnetic Resonance Imaging (MRI) of the pelvis is shown in Figure 1.

Discussion

Sarcoma of the prostate

Difficulty of diagnosis and treatment of this disease is related to the fact that these malignant tumors don't produce PSA and no other biochemical parameter exists indicative of them. This entity definitely presents a significant therapeutic challenge. The multiparametric MRI of the prostate shown above depicts successively axial and sagittal T2-weighted images of a well defined lesion arising from the left peripheral zone of the prostate. The lesion is predominantly of homogeneous low T2 signal intensity with an isosignal region standing more medially (Figure 1). It shows extraprostatic extension to the left levator ani muscle. Contrast-enhanced MR imaging showed an avid and early enhancement of the whole tumor (Figure 2).

Imaging appearances of prostate sarcomas vary from a case to another. Specific radiological features are not a reliable predictor of the histologic subtype of prostate sarcomas but they can help differentiate prostate sarcoma from adenocarcinoma [1]. A common question is whether a surgical biopsy should be assessed or not. In this case, Transrectal Ultrasound-Guided (TRUS) prostatic biopsies were performed. Based on the literature, the standard approach to diagnosis consists of multiple core needle biopsies, following proper imaging assessment [2]. The histological examination reveals a low grade stromal sarcoma of the specialized of the Prostatic Stroma (LG-PS). The pathological diagnosis and grade of the tumor was evaluated according to the classification of the National Cancer Institute and French Federation of Cancer Centers Sarcoma Group. Soft tissue sarcomas are ubiquitous in their site of origin, and are often treated with multimodality treatment. A multidisciplinary approach is therefore mandatory in all cases (involving pathologists, radiologists,

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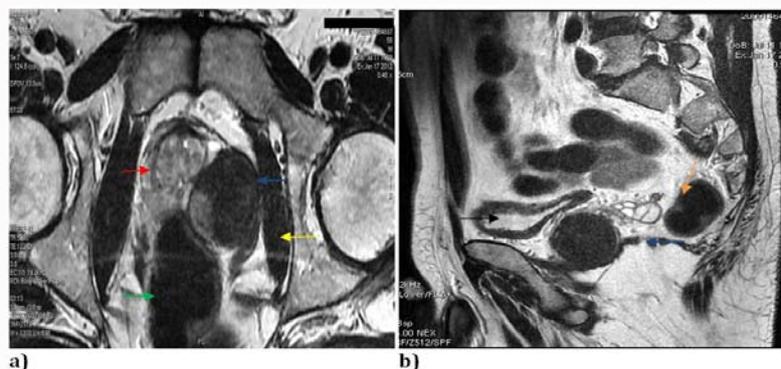


Figure 1: a) axial T2-weighted and b) sagittal T2-weighted MRI images showing a pelvic mass located to the left side of the prostate. It appears as a heterogeneously signal hypo intense mass with a pseudocapsule on T2-weighted imaging (blue arrow). Red arrow indicates the prostate; yellow arrow, levator ani muscle; green arrow: rectum; orange arrow, the seminal vesicles; black arrow, the bladder.

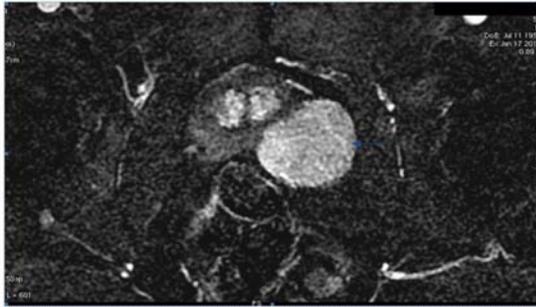


Figure 2: Axial T1-weighted fat-suppressed post contrast MR image demonstrates avid and early enhancement of the tumor (blue arrow).

surgeons, radiation therapists, medical oncologists) [2]. The patient underwent an uneventful Robot-Assisted Radical Prostatectomy (RARP) with deliberate sacrifice of the left neurovascular bundle. The goal of resection was a complete macroscopic removal. Neither chemotherapy nor radiation therapy were administered prior to or subsequent to the surgery according to the decision of the Multidisciplinary Consultation Setting. Pathological analysis of the specimen revealed a prostatic stromal sarcoma with negative surgical margin. Although, leiomyosarcoma is the most common histological subtype of prostate sarcoma seen in adults, stromal sarcomas are locally aggressive and require careful care [3]. The outcomes of previous studies are challenging to interpret due to the heterogeneity of treatment modalities [4,5]. However, a complete radical surgical excision (radical prostatectomy or cystoprostatectomy) with negative margin (R0) remains the preferred treatment that is most likely to result in long-term survival for patients with clinically localized disease [6]. The role of MRI is crucial for defining the resectability of the tumour in order to predict the feasibility of a wide excision with a rim of normal tissue around [2]. Repeat PET/CT scans have shown the disease to be in complete remission within a 57 months follow-up of our patient. To the best of our knowledge, this is the third case in the literature of sarcoma prostate treated with RARP

and the first to have such a long follow up [7]. Prostatic stromal sarcoma is known as an aggressive disease with usually a poor prognosis [8]. Despite the challenges that were experienced due to the tumor location and adhesions, the « en bloc » resection of the tumor with negative margins and favorable results observed in our case demonstrate that robotic extirpation is a feasible and effective option for clinically localized disease. Management of such pathology should be carried out in reference centers within reference networks sharing multidisciplinary expertise (e.g. NetSarc in France).

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