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An unusual presentation of prostate cancer posing a diagnostic dilemma: A case report

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ABSTRACT

Sarcomatoid carcinomas are a rare type of prostate cancer and are associated with a poor prognosis. We present the case of an 80-year-old gentleman who presented with rectal bleeding and his CT scan revealed an incidental pelvic cystic mass. He initially underwent attempted ultrasound-guided drainage and transurethral resection for this. Definitive management was a radical surgery. Histological findings confirmed that the morphological features favoured a sarcomatoid prostate cancer rather than a primary sarcoma, as was thought. Unusual presentations of pathologies may be encountered during our practice and present a challenge. A methodological approach is required to ensure positive outcomes.

Introduction

Sarcomatoid carcinomas are an exceedingly rare and aggressive type of prostate cancer.[1] The histogenesis of these tumours is not known[2] and these tumours can arise in the absence of an elevated prostate-specific antigen, therefore making it more difficult to detect their disease progression.[3] Due to the rarity of this tumour, there is no standardised method to treat it, and patients who present with advanced disease are often presented with non-curative treatment options due to the disease progression and their overall physiological reserve.[1,2,4]

Case presentation

An 80-year-old gentleman with a background of hypertension, generalised anxiety disorder and two transurethral resections of the prostate in the past was referred to our care for the management of a large pelvic cystic mass. The patient had presented with rectal bleeding and on CT scanning he was incidentally found to have a 16cm cystic pelvic mass which extended to the umbilicus (Fig. 1 and Fig. 2). Following this, he underwent a bladder biopsy, this revealed spindle cells and fibrous process with no glandular or tubular structures. Ultrasound-guided drainage of the cystic mass was attempted, but was unsuccessful. This led to us determining that the mass was of prostatic origin and a transurethral r resection of the mass was attempted, however this was not possible due to stenosis of the urethra at the bulbar-membranous region.

His case was discussed at a multidisciplinary team meeting (MDTM) and the consensus was for the patient to undergo a radical cystoprostatectomy with ileal conduit formation. As such, the patient then underwent work up for surgery.

At surgery, through a midline incision extended above the umbilicus, a massive cystic pelvic tumour arising from the prostate and/or seminal vesicles and adherent to the rectum, was found. Complete excision of the mass with the involved part of the rectum was done. With assistance from our Colorectal colleagues, completion anterior resection was done with end colostomy in the left iliac fossa. The rest of the urological part of the operation proceeded as standard with level 2 bilateral pelvic lymphadenectomy to the common iliac bifurcation and ileal conduit diversion with Bricker uretero-ileal anastomoses. A urostomy stoma was formed on the pre-marked site on the right side.

The patient had a protracted post-operative recovery. There was significant intra-operative blood loss requiring 10 units of blood transfusion and thus he was kept in ITU for immediate post-operative care. Other post-operative issues included intraabdominal sepsis, poor intake, increased state of confusion and electrolyte disturbances. He improved with antibiotic therapy, nutritional support and general nursing care and eventually was discharged to the community on the February 23, 2018 as a step down prior to going to his own home. He was continually reviewed by the urology team, general surgeons, tissue viability nurses, physiotherapists and dieticians.

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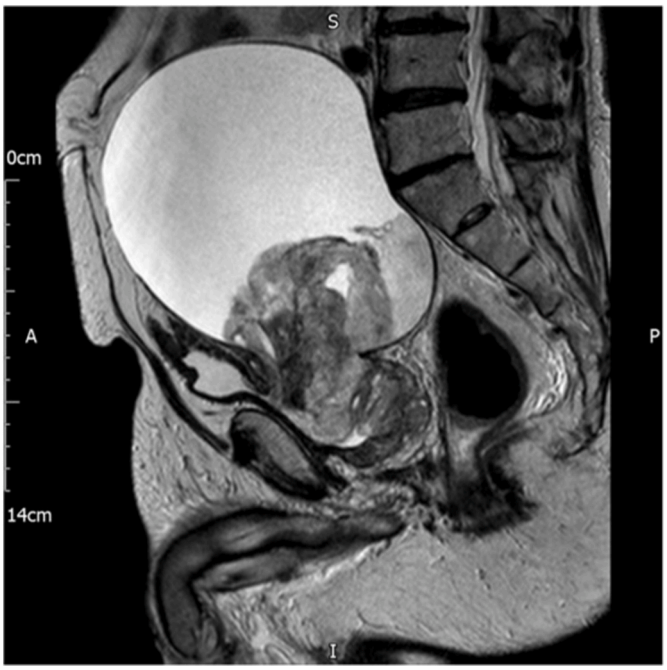

Fig. 1. Lateral view of pre-operative CT showing the pelvic mass.

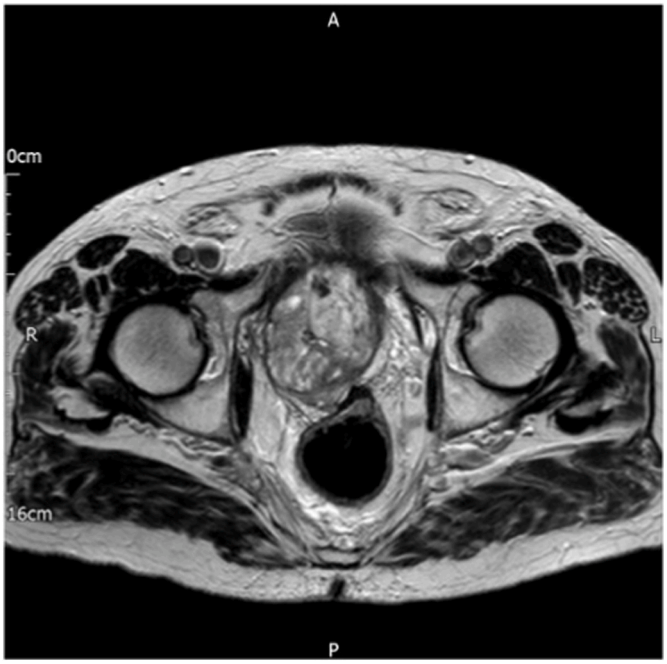

Fig. 2. Axial view showing the relation of the mass to the rectum and other pelvic structures.

Histopathological examination revealed evidence of a sarcomatoid carcinoma (Fig. 3). This diagnosis is often a diagnosis of exclusion, as it was in this case, and was arrived at due to positive immunohistochemistry stains for prostate such as PSA and AMACR. Differential diagnoses included other prostatic malignancies such as adenocarcinoma, and more common pelvic sarcomas, such as fibrosarcoma which arises from the areolar tissue of the retroperitoneal space.

Discussion

In the realm of urological surgery prostatic adenocarcinoma is the most common type of prostate cancer.[4] Contrasting to this sarcomatoid carcinoma, a malignant tumour with a biphasic pattern, is rare and accounts for less than 1% of all prostate neoplasms.[1,2] This malignancy is aggressive and has a tendency to invade local structures and metastasise early on.[3,4] Due to this nature, the majority of cases of patients with sarcomatoid carcinoma in the past demonstrate a poor prognosis,[1,3] with a 20% estimated risk of mortality within one year of diagnosis.[2]

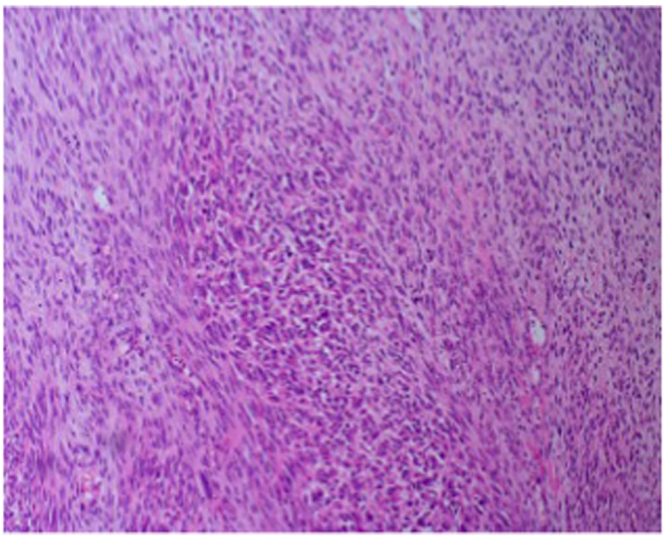

Fig. 3. Histological appearance of tumour showing spindle cells and frequent as well as varying mitotic figures.

Histologically, sarcomatoid carcinoma has a biphasic growth pattern with two components: a malignant epithelial (carcinomatous) and a malignant mesenchymal (sarcomatous) component.[1–3] It has been reported that the deletion of a prostate-specific erythroblast transformation-specific (ETS)-related gene occurs in both the sarcomatoid component and the adjacent adenocarcinoma, confirming that these tumours are derived from prostate epithelium.[5] The exact aetiology of this carcinoma is not known.[4] Clinically, patients with sarcomatoid carcinoma often present with the following: urinary filling and voiding symptoms, haematuria, perineal pain, symptoms due to effects on neighboring structures and also constitutional symptoms.[2] Digital rectal examination tends to reveal a nodular, hard or large prostate.[2] Serum PSA is often normal. This makes it challenging to monitor this prostate malignancy.[1–4]

This carcinoma is commonly diagnosed by a transrectal needle biopsy, organised due to clinical presentation or examination findings. Due to the invasive nature of the carcinoma patients are usually diagnosed with late stage disease.[2] In the case of our patient the tumour was first noted on CT scanning due to the patient presenting with PR bleeding, and the diagnosis was ultimately confirmed following surgery.

For the treatment of sarcomatoid carcinoma there are no standardised methods.[2] Tumours which are deemed operable i.e. localised carcinomas, have a number of definitive surgical options available including: radical retropubic, and suprapubic, prostatectomy, and radical cystoprostatectomy.[2,4]

Advanced disease can reportedly be treated with hormonal therapy or chemoradiotherpay, however this often confers a poor prognosis.[1,3,4] With advanced disease conferring a poorer prognosis, this highlights the necessity for early diagnosis and subsequent management.[1] The case we are presenting is rare in the fact that although the patient had advanced disease due to invasion of neighboring structures, he was treated with curative surgery with a good outcome.

Conclusion

Through our case we demonstrate that patients may present with

unusual presentations of pathologies. However, in using a methodical approach, on a case by case basis, can ensure a good outcome. We have also demonstrated that surgery can be used in the treatment of advanced disease with a good prognosis for the patient.

Consent

Patient consent was obtained for writing this case.

Declaration of competing interest

The Authors have no conflicts of interest.

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