

Single Cutaneous Metastasis from Mucinous Adenocarcinoma of Prostate with Bladder Invasion: An Unusual Localization

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DOI: [10.36347/sjmcr.2022.v10i03.026](https://doi.org/10.36347/sjmcr.2022.v10i03.026)

| Received: 13.02.2022 | Accepted: 18.03.2022 | Published: 30.03.2022

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Abstract

Case Report

Mucinous adenocarcinoma of the prostate is an extremely rare histological variant of prostate cancer. The malignancy potential, tumor grading, clinical course and prognosis of affected patients remain controversial. There are no data on the evolution of metastatic mucinous adenocarcinoma of the prostate. Our case describes the rapid and unfortunate evolution of a prostatic mucinous adenocarcinoma invading bladder with skin metastasis in a 47-year-old patient, who was hospitalized because of intermittent gross hematuria accompanied by bulky and dark red clots for more than two months. The diagnosis was confirmed after a prostatic Magnetic resonance imaging (MRI) and a transurethral resection of the prostate and bladder with anatomopathological study and immunohistochemical complement. The evolution was marked initially by the appearance cutaneous metastasis during his hospitalization and hepatic and splenic metastases 3 months after his initial extension workup which was negative; our patient is currently on his 2nd cycle of chemotherapy for palliative purposes. The aim of our article is to highlight the most important diagnostic features and specific aspects in the primary diagnosis of this tumor, which every urologist should keep in mind, and we will focus on the prognosis and the interest of an early and especially multidisciplinary management.

Keywords: Prostate, adenocarcinoma, mucinous, metastasis, cutaneous.

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INTRODUCTION

Prostate cancer is the most common cancer in men over the age of 50. Mucinous adenocarcinoma of the prostate is an extremely rare histological variant, representing only about 0.2% of all prostatic adenocarcinomas [1-3]. It is defined by the presence of more than 25% of the tumor composed of glandular tissue with extracellular mucin [2, 4].

Because of the rarity of this histological type and the difficulties in localizing the primary tumor and management we report a case of primary mucinous adenocarcinoma of the prostate invading bladder with skin metastasis.

PATIENT AND OBSERVATION

Patient information

The current case report describes a 47-year-old patient with a family history of a father who died of prostate adenocarcinoma and a sister with breast cancer.

The patient was initially hospitalized because of intermittent gross hematuria accompanied by bulky and dark red clots for more than two months, associated with lower urinary tract symptoms including voiding and obstructive symptoms for more than 3 months.

Clinical Findings

Digital rectal examination revealed an irregular hard enlarged prostate. The total value of tPSA was 1.08 ng/ml. During his hospitalization the patient developed subcutaneous nodules on the right thigh and abdomen (Figure 1).

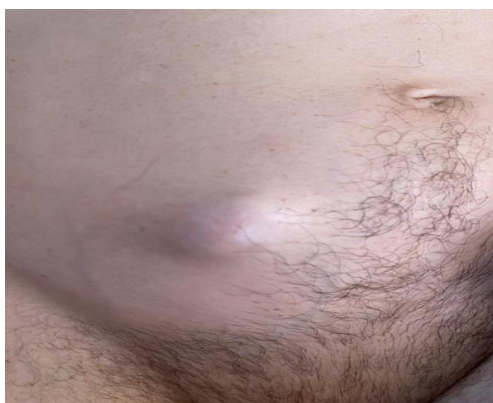


Fig-1: Subcutaneous nodule in the abdomen

Diagnosis approach

CT urogram revealed a 70*75*50 mm irregular prostatic lesion invading the posterior wall of the bladder in front and the seminal vesicles in the back (Figure 2).

Prostatic MRI showed a 60*65*46 mm prostatic mass with capsular effraction and invasion of the posterior wall of the bladder in front and the seminal vesicles in the back, classified as T4N+Mx (figure 3).

An echoguided prostate biopsy was initially performed and revealed a high-grade prostatic intraepithelial neoplasia (Pin) on anatomopathological study with immunohistochemical staining.

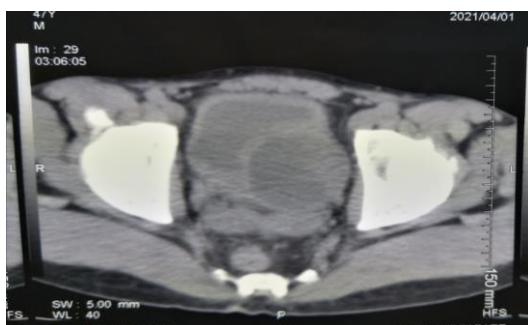


Fig-2: Prostatic lesion process with bumpy contours infiltrating the posterior wall of the bladder

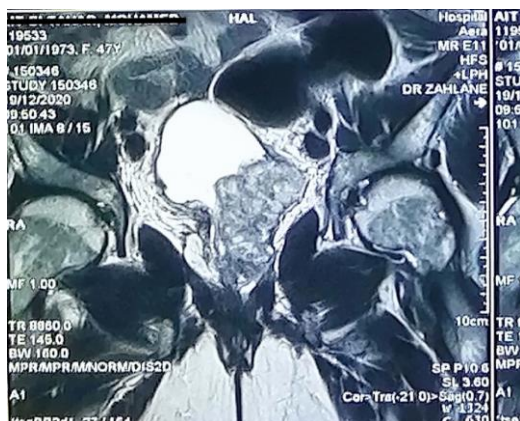


Fig-3: Prostatic mass with capsular effraction and invasion of the posterior wall of the bladder in front and the seminal vesicles in the back

Therapeutic interventions

The patient underwent a cystoscopy under spinal anaesthesia which revealed a huge tumoral process taking the prostate and extended to the whole left hemi-trigon and to the whole left lateral wall of the bladder (figure 4), completed at the same time by a transurethral resection of the prostate and the bladder.

Figure 4: Endoscopic image of the tumor process taking the prostate and extended to the left lateral wall of the bladder.

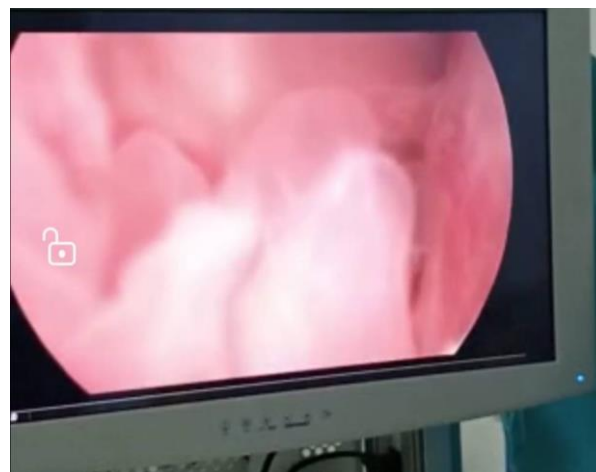


Fig-4: Endoscopic image of the tumor process taking the prostate and extended to the left lateral wall of the bladder

Follow up and outcome of interventions

The anatomopathological study completed by an immunohistochemical staining revealed a bladder localization of a mucinous prostate adenocarcinoma.

For pelvic and distant staging a thoraco-abdomino-pelvic CT scan and a bone scintigraphy were performed, and did not reveal any distant metastasis; however, biopsy of the subcutaneous nodules revealed metastasis of mucinous adenocarcinoma of the prostate. The evolution was marked by the appearance of hepatic and splenic metastasis 3 months after his first CT scan.

Patient consent

Written informed consent was obtained from the patient for publication for this case report.

DISCUSSION

Mucinous adenocarcinoma of the prostate is one of the rarest histological variants, accounting for only about 0.2% of all prostatic adenocarcinoma [1- 3].

By definition, prostatic mucinous adenocarcinoma is defined as a tumor composed of more than 25% of the tumor composed of glandular tissue with extracellular mucin, acini and cribriform structures [2, 4].

The grading of prostatic mucinous adenocarcinoma remains subject to much controversy, for some authors mucinous adenocarcinoma of the prostate corresponds to a Gleason 8 score (4+4) [1]; other authors consider it to be a Gleason 7 [2, 3]. In the series of Johnson *et al.* 38% of mucinous adenocarcinomas were Gleason 3+4, 54% were Gleason 4+3 and 8% were Gleason 4+4 [3].

Lower urinary tract symptoms including voiding and obstructive symptoms are the most frequently found clinical signs [5], and may be associated with gross hematuria [5, 6]. In addition, mucinous adenocarcinoma cells secrete large quantities of mucus present in the interstitial spaces; these mucous flocculations can be evacuated from the bladder during micturition or at cystoscopy, which is the case for our patient.

The immunohistochemical staining using specific markers is essential to differentiate between a primary prostatic adenocarcinoma and a colorectal or bladder adenocarcinoma, as prostatic mucinous adenocarcinoma is generally positive for PSA and NKX3 and negative for CDX-2 [1, 7].

The prognosis of this tumor is very controversial, some authors consider that mucinous prostatic adenocarcinoma does not have a poor prognosis compared to conventional [3, 7]. In the series of Lane *et al.* there was no difference between mucinous and conventional prostatic adenocarcinoma with regard to biological recurrence and survival [4]. Osunkoya *et al.* in a series of 47 cases showed an excellent prognosis for mucinous adenocarcinoma of the prostate treated by radical prostatectomy [7]. However, these data should be taken with caution because of the small number of cases reported in the literature.

For our patient, in addition to cutaneous metastasis, he developed liver and spleen metastasis, the patient was referred to oncology for further treatment. He received palliative chemotherapy and is currently undergoing his 2nd cycle of chemotherapy.

CONCLUSION

Primary mucinous adenocarcinoma of the prostate is a very rare malignancy with poor prognosis. The immunohistochemical study has a primordial role in differentiating between adenocarcinoma of prostatic origin and colorectal or bladder origin. Management must be multidisciplinary and especially early in order to improve prognosis and survival.

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