



Prostatic Carcinosarcoma: A Case Report and Review of Literature

Vanessa Andrade*

Urology Service, Centro Hospitalar Lisboa Central, Portugal

Abstract

Introduction: Prostatic carcinosarcomas are extremely rare, representing less than 0.1% of all prostate cancers.

Objectives: Clinical report of a case of prostatic carcinosarcoma and review of the literature.

Methods and Materials: We report a case from a patient of our centre diagnosed with carcinosarcoma after a Millin prostatectomy. A review of the literature was also performed.

Clinical Report: We report a case of a 68 years old patient diagnosed due to a surgery to benign prostatic hyperplasia. He had some infectious complications after that, needing admission to the hospital and specific management. He was treated with chemotherapy and hormonal treatment, initially with some response, but later with progression of disease and worsening of his general status, which became fatal after 13 months after diagnosis.

Discussion/Conclusion: Carcinosarcoma is a rare and extremely aggressive entity. Unfortunately, it has a really bad prognosis and, as we seen, became fatal to our patient. Due to the reduced number of cases, it still lacks recommendations regarding the best treatment options. In the majority of patients, surgery, chemotherapy and radiotherapy are valid options.

Keywords: Prostate cancer; Carcinosarcoma; Pelvic Exenteration; Oncology

Introduction

Most primary malignant tumors of the prostate in the elder population are adenocarcinomas, but sarcomas account for less than 0.1% of all prostate cancers and usually appear in a younger age [1]. Commonly, the prostatic carcinosarcoma is observed in the seventh decade of life (mean age, 66 years) [2].

Material and Methods

Analysis of only one case diagnosed in our hospital centre. Clinical data reports of the patient and direct interview was made since the diagnosis and throw all the treatments received. A review of the literature was also performed.

Case Presentation

A 68 years old male patient, with a history of hypertension and previous smoking habits, came from Angola to our hospital for observation. He had an indwelling catheter due to urinary retention. Digital rectal examination revealed an elastic enlarged prostate and he had a Prostate-Specific Antigen (PSA) of 4 ng/mL. A transrectal ultrasound demonstrated an enlarged prostate with 227cc. In March 2020 a retro pubic prostatectomy was performed. During the procedure, when the adenoma was dissected from the prostatic capsule, a collection with a smelly liquid was found.

Histopathologic diagnosis was acinar prostate adenocarcinoma Gleason 7 (3+4) occupying 30% of the observed material.

On day 4, after surgery, an abscess was found and the patient was treated with the appropriate antibiotics. Three months after, he came back to the urgency room and we found a new periprostatic abscess with 88 mm × 87 mm × 88 mm and a cutaneous suprapubic fistula.

A suprapubic laparotomy was performed and a pelvic left laterovesical collection with clots and necrosed tissue was found. This material was sent for histopathologic exam which showed an extensively necrosed sample with a focus of prostatic acinar adenocarcinoma Gleason 7 (3+4)

OPEN ACCESS

*Correspondence:

Vanessa Andrade, Urology Service,
Centro Hospitalar Lisboa Central,
Lisbon, Portugal,
E-mail: andrade.vanessa28@gmail.com

Received Date: 02 Feb 2022

Accepted Date: 22 Feb 2022

Published Date: 03 Mar 2022

Citation:

Andrade V. Prostatic Carcinosarcoma: A
Case Report and Review of Literature.
Clin Case Rep Int. 2022; 6: 1292.

Copyright © 2022 Vanessa
Andrade. This is an open access
article distributed under the Creative
Commons Attribution License, which
permits unrestricted use, distribution,
and reproduction in any medium,
provided the original work is properly
cited.



Figure 1: CT scan of prostatic carcinosarcoma (axial view).



Figure 2: CT scan of prostatic carcinosarcoma (coronal view).

and, adjacent to this area, fragments with morphologic appearance suggestive of carcinosarcoma.

The Computed Tomography (CT) Scan performed in June 2020 showed a large lesion, posterior and inferior to the bladder, involving the prostatectomy surgery site with 8 cm × 8 cm (Figure 1, 2). After retrograde contrast injection, two extra vesical fistulas were shown: one to the anterior abdominal wall and other posterior and inferior until the pelvic wall. Three hypodense lesions with 9, 6 and 4 mm were seen in the right hepatic lobe.

Due to persistence of this infection and fistulas, an anterior and posterior pelvic exenteration with definitive colostomy and ileal conduit was performed in the same month, and the patient was discharged at 9th postoperative day, without complications.

The histopathologic exam showed a prostatic carcinosarcoma with acinar adenocarcinoma and pleomorphic sarcoma invading the vesical wall and mesorectum and, focally, the seminal vesicle.

After that, patient had multiple hospitalizations due to the need of IV antibiotics and percutaneous drainage of recurrent pelvic abscess.

The patient repeated a CT scan before being evaluated by oncology, which showed: 5 to 7 nodules in each lung parenchyma measuring from 4/5 mm to 10/12 mm, without mediastinal adenopathies. Posterior nodule in the right liver lobe, without focal lesions. Small lombo-aortic and iliac adenopathies measuring 10 mm to 11 mm. Bone lesions weren't present.

A pelvic MRI describes an entero-urethral fistula and solid nodes, near the penis root, meaning loco-regional relapse.

He was evaluated by medical oncology and started Carboplatin and Docetaxel in November 2020, which was delayed by the multiple infectious intercurrents.

Since the last hospitalization, in December, the patient has nursing care at home who evaluates and do regular drainage and cleaning of the surgical place using an urethral catheter, which is avoiding the accumulation and recurrence of a new pelvic abscess with need of hospitalizations and drainage.

Due to progressive elevation of PSA values, which hit the maximum 192 ng/mL, he started taking medication with LHRH antagonist Degarelix, with some response (PSA April/2021: 39.91 ng/mL).

In April 2021, the patient has done the 5th Carboplatin and Docetaxel cycle, without any major complications or adverse events.

Last CT shows disease progression with multiple pulmonary

nodes, the largest with 14 mm, 17 mm and 24 mm. Mediastinal and hilar adenopathies. Stable hepatic nodules and multiple blastic bone lesions. A huge bone secondary dissemination affecting the axial skeleton and extending to the umeral and femoral extremities ("superscan" pattern) was found in the bone scan.

Due to disease progression the patient was proposed to start second line treatment with doxorubicin, delayed due to the necessity of dental treatments and neutropenia.

In May 2021 he was admitted due to a new infectious intercurrent, which was treated with success with targeted antibiotics.

One month later the patient came back due to deterioration of his general condition, general pain and constipation. Palliative support was given but, unfortunately, he died 13 months after diagnosis.

Discussion

Primary carcinosarcoma or sarcomatoid carcinoma of the prostate, as is also known, is a rare type of prostate cancer [3] and is composed of a mixture of a high grade epithelial component (carcinomatous) and malignant mesenchymal or mesenchymal-like component (sarcomatous), which could be of different types: Osteosarcoma, chondrosarcoma, fibrosarcoma T [3-5].

The pathogenesis of this kind of tumour is still unknown, and some theories have been proposed to explain its development: a) Synchronous development of both carcinoma and sarcoma from different areas of the prostate; b) dual differentiation from immature totipotential cells; c) transformation of adenocarcinoma in sarcoma; d) transformation of sarcoma in adenocarcinoma; e) tumoral dedifferentiation due to some previous therapies like radiation or Hormonotherapy [3,6].

Patients can present with vague urinary symptoms, that can be confused with benign hyperplasia symptoms, such as urinary hesitancy, incomplete voiding, and weak urinary stream and, less commonly, urinary frequency, urgency, dysuria, hematuria or perineal pain [7,8].

PSA is often lower than expected considering tumour volume or not elevated at all, which complicates both the diagnosis and disease monitoring [9-11]. The absence of PSA expression could signify that these tumors are androgen-independent, so anti-androgenic therapy could have a limited benefit in the treatment of these cases [9].

A prostatic carcinosarcoma is a highly aggressive tumor that spreads by adjacent organ direct invasion and also with distant metastasis [3]. The incidence of initial metastatic disease is high, with almost 25% of the patients being diagnosed in this phase [12] and

the prognosis is really poor [3,12]. Non-lymphatic organs are most frequently affected, with lung (43%), spine and bone (26%), liver (17%) and brain (10%) being the most common [3,13].

Localized disease can be treated with radiation or surgery, like radical prostatectomy or radical cystoprostatectomy [3]. Sometimes, due to local invasion, it is necessary to do more extended resections, as the example of our patient. However, even with wide and complete resections, the incidence of local recurrence and/or distant metastases is high compared to other prostate tumors.

Locally advanced or metastatic diseases have a very poor prognosis. Regarding a series of 42 patients with carcinosarcoma, the risk of death at 1 year after the diagnosis was 20%, confirming the poor prognosis of this tumour [2].

Squamous-cell carcinoma, small-cell carcinoma, and mesenchymal tumors of the prostate such as leiomyosarcoma, rhabdomyosarcoma, malignant fibrous histiocytoma and synovial sarcoma should be included as potential differential diagnosis [14].

Conclusion

In summary, carcinosarcoma is a rare and highly aggressive disease that leads to a poor outcome, despite clinical intervention. The diagnosis is difficult due to the non-specific symptoms and usually low expression of PSA. The early recognition of this tumour is very important because of the rapid progression and fatal outcome of this patient, with lower chances of survival as the disease progresses. Due to its rarity, there is no definitive recommendation regarding best treatment.

References

- Melicow MM, Pelton TH, Fish GW. Sarcoma of the prostate gland: Review of literature; table of classification; report of four cases. *J Urol.* 1943;49(5):675-707.
- Hansel DE, Epstein JI. Sarcomatoid carcinoma of the prostate: A study of 42 cases. *Am J Surg Pathol.* 2006;30(10):1316-21.
- Fukawa T, Numata K, Yamanaka M, Miyamoto T, Kurokawa Y, Kanayama HO, et al. Prostatic carcinosarcoma: A case report and review of literature. *Int J Urol.* 2003;10(2):108-13.
- Humphrey PA. Histological variants of prostatic carcinoma and their significance. *Histopathology.* 2012;60(1):59-74.
- Canfield SE, Gans TH, Unger P, Hall SJ. Postradiation prostatic sarcoma: *De novo* carcinogenesis or dedifferentiation of prostatic adenocarcinoma? *Tech Urol.* 2001;7(4):294-95.
- Wick MR, Young RH, Malvesta R, Beebe SD, Hansen JJ, Dehner LP. Prostatic carcinosarcomas: Clinical, histologic, and immunohistochemical data on two cases with a review of the literature. *Am J Clin Pathol.* 1989;92(2):131-9.
- Zizi-Sermpetzoglou A, Savvaidou V, Tepelenis N, Galariotis N, Olympitis M, Stamatou K. Sarcomatoid carcinoma of the prostate: A case report. *Int J Clin Exp Pathol.* 2010;3(3):319.
- Açıköz O, Gazel E, Zengin Nİ, Kasap Y, Çamtosun A, Yazıcıoğlu AH. Sarcomatoid carcinoma of the prostate. *Case Rep Urol.* 2013:631809.
- Leibovici D, Spiess PE, Agarwal PK, Tu SM, Pettaway CA, Hitzhusen K, et al. Prostate cancer progression in the presence of undetectable or low serum prostate-specific antigen level. *Cancer.* 2007;109(2):198-204.
- Grignon DJ. Unusual subtypes of prostate cancer. *Mod Pathol.* 2004;17(3):316-27.
- Subramanian VS, Coburn M, Miles BJ. Carcinosarcoma of the prostate with multiple metastases: Case report and review of the literature. *Urol Oncol.* 2005;23(3):181-3.
- Markowski MC, Eisenberger MA, Zahurak M, Epstein IJ, Paller CJ. Sarcomatoid carcinoma of the prostate: Retrospective review of a case series from the Johns Hopkins Hospital. *Urology.* 2015;86(3):539-43.
- Dundore PA, Cheville JC, Nascimento AG, Farrow GM, Bostwick DG. Carcinosarcoma of the prostate. Report of 21 cases. *Cancer.* 1995;76(6):1035-42.
- Altay C, Seçil M, Demir Ö, Tuna B, Yörükoğlu K. Imaging findings of prostate carcinosarcoma: A case report. *Clin Genitourin Cancer.* 2014;12(4):139-41.