

## Case Report

# Symptomatic Bilateral Testicular Metastases from Prostate Cancer: A Case Report

M. Bardapure, A. At-Mitwalli, M.S. Azhar, N. Bryan, T. Qayyum\*

Huddersfield Royal Infirmary, Acre Street, Huddersfield, UK

\*Corresponding author: Tahir Qayyum, Huddersfield Royal Infirmary, Acre Street, Huddersfield, HD3 3EA, UK. Email: tahir1@doctors.org.uk

**Citation:** Bardapure M, At-Mitwalli A, Azhar MS, Bryan N, Qayyum T (2018) Symptomatic Bilateral Testicular Metastases from Prostate Cancer: A Case Report. J Urol Ren Dis: JURD-1113. DOI: 10.29011/2575-7903.001113

**Received Date:** 19 August, 2018; **Accepted Date:** 28 August, 2018; **Published Date:** 13 September, 2018

### Abstract

Symptomatic clinical recurrence of prostate cancer manifesting as a bilateral testicular mass is a very rare condition. We report a case of 62-year-old with castrate resistant prostate cancer who underwent a bilateral orchidectomy for testicular masses four years after hormonal manipulation for prostate cancer with subsequent pathology demonstrating metastatic prostate cancer.

**Keywords:** Hormone Refractory; Prostate Cancer; Testicular Metastasis

### Introduction

Testicular metastases are a rare finding with most common primary cause being prostate, lung and gastrointestinal with approximately 200 cases having been reported [1,2]. Testicular involvement from prostate cancer tends to be discovered incidentally at bilateral orchidectomy for advanced disease or at autopsy [3,4]. We report a case of symptomatic, bilateral testicular metastasis from carcinoma of prostate gland detected after four years following initial diagnosis and androgen deprivation therapy.

### Case

A 62-year-old gentleman with family history of prostate cancer was assessed in the urology clinic with haematospermia and a Prostatic Specific Antigen Level (PSA) of 55 µg/ml. Digital Rectal Revealed (DRE) firm suspicious area on the left lobe of prostate gland. Transrectal Ultrasound Scan (TRUSS) revealed a 36-ml prostate gland with patchy echotexture on both lobes, along with mild dilatation of seminal vesicles bilaterally. Five core needle biopsies were taken from each side. Histology was reported as Gleason 8 (4+4) on left side and Gleason 6 (3+3) on right. On the staging investigations the disease was locally advanced (T3bN1M0). After going through the multi-disciplinary process and after discussion with the patient, he was commenced On Luteinizing-Hormone-Releasing Hormone (LHRH) agonist monotherapy with a subsequent PSA nadir of 0.5µg/ml. Three

years later his PSA crept up to 4.1µg/L and his Nuclear Medicine Bone Scan (NMBC) was negative for skeletal metastasis. He eventually developed hormone resistant prostate cancer and his PSA has risen to 113 µg/ml, with a castrate level of testosterone. In the subsequent twelve months he developed bilateral testicular pain and swelling. An ultrasound scan of the testes showed suspicious areas in both testes consistent with malignancy, either primary or secondary. Bilateral scrotal orchidectomy was performed a week later and his PSA dropped down to 7.4µg/ml. Histology revealed diffuse replacement of testes bilaterally with metastatic tumour from prostate cancer.

### Discussion

Secondary testicular tumours are uncommon with the exception of leukaemia and lymphoma with an incidence of 0.06%-2.3% [2,5]. The most common primary cause of testicular cancer is prostate cancer with the majority being diagnosed incidentally whilst in those with metastatic prostate cancer, the incidence of testicular metastases is 0.5% [4] with bilateral involvement of the testes can occur between 8%-14% [6,7]. With the advent of LHRH therapy, orchidectomy is no longer as popular as in the past as a form of treatment and therefore the incidental detection of this type of pathology has become even rarer. The testis is considered to be an unfavourable environment for the establishment and growth of extra-gonadal secondary tumour owing to relatively low temperature of the scrotum. Various mechanisms have been proposed of prostate cancer spreading to the testicles. This can be via retrograde venous extension/ embolism (arterial), lymphatic extension or endocanalicular spread with involvement

of the prostatic urethra also increasing the possibility of testicular metastases [3,4,8].

The histological features of testicular metastases are similar to those of prostate cancer [9]. However rarely they can demonstrate a more aggressive phenotype and with further risk of cancer spread [3,10]. Studies have demonstrated a survival of 12 months with newly diagnosed testicular metastases from prostate cancer with a further decreased survival with other forms of cancer [7,11]. Others have suggested a survival of greater than 2 years in the absence of biochemical recurrence [12]. The exact prognostic role of testicular metastases given the rarity is still largely unknown [13]. In conclusion symptomatic, bilateral testicular metastasis from prostate cancer is a rare clinical phenomenon. The prognostic significance of testicular metastasis for adenocarcinoma of prostate is unknown, nonetheless it is usually considered as an additional sign of advanced, hormone resistant prostate cancer and is associated with poor survival. It is therefore important that on top measuring PSA, it is also vital for continual serial examination of patients.

## References

1. Han M, Kronz JD, Schoenberg MP (2000) Testicular metastasis of transitional cell carcinoma of the prostate. *J Urol* 164: 2026.
2. Dutt N, Bates AW, Baithum SI (2000) Secondary neoplasms of the male genital tract with different patterns of involvement in adults and children. *Histopathology* 37: 323-331.
3. Tu SM, Reyes A, Maa A, Bhowmick D, Pisters LL, et al. (2002) Prostate carcinoma with testicular or penile metastases. Clinical, pathologic, and immunohistochemical features. *Cancer* 94: 2610-2617.
4. Bubendorf L, Schopfer A, Wagner U, Sauter G, Moch H, et al. (2000) Metastatic patterns of prostate cancer: an autopsy study of 1589 patients. *Hum Pathol* 31: 578-583.
5. Tiltman J (1979) Metastatic tumours in the testis. *Histopathology* 3: 31-37.
6. Ulbright TM, Young RH (2008) Metastatic carcinoma to the testis: a clinicopathologic analysis of 26 nonincidental cases with emphasis on deceptive features. *Am J Surg Pathol* 32: 1683-1693.
7. Lu LY, Kuo JY, Lin TL, Chang YH, Chen KK, et al. (2000) Metastatic tumors involving the testes. *J Urol ROC* 11: 12-16.
8. Pienkos EA, Jablokow VR (1972) Secondary testicular tumors. *Cancer* 30: 481-485.
9. Manikandan R, Nathaniel C, Reeve N, Brough RJ (2006) Bilateral testicular metastases from prostatic carcinoma. *Int J Urol* 13: 476-477.
10. Shinn BJ, Greenwald DW, Ahmad N (2015) Unilateral testicular metastasis of low PSA level prostatic adenocarcinoma. *BMJ Case Rep* 2015.
11. Weitzner S (1973) Survival of patients with secondary carcinoma of prostate in the testis. *Cancer* 32: 447-449.
12. Bonetta A, Generali D, Corona SP, Cancarini G, Brenna SG, et al. (2017) Isolated Testicular Metastasis from Prostate Cancer. *Am J Case Rep* 18: 887-889.
13. Kwon SY, Jung HS, Lee JG, Choi SH, Kwon TG, et al. (2011) Solitary testicular metastasis of prostate cancer mimicking primary testicular cancer. *Korean J Urol* 52: 718-720.