

Testicular Mass In The Presence of Prostate Cancer - A Rare Site of Metastasis

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Abstract

Adenocarcinoma of prostate metastasizing to testis is a rare occurrence and is usually detected in orchiectomy specimens incidentally. We describe a case of a patient with known prostate cancer who underwent orchiectomy for a solid right testicular lesion that was subsequently pathologically confirmed as metastatic prostatic adenocarcinoma. This case highlights the need to consider metastases in the differential diagnosis particularly in the presence of biochemical recurrence of known metastatic disease.

INTRODUCTION

Although adenocarcinoma of the prostate is the most common cancer amongst men, metastasis to the testis is an extremely rare event. Sites of prostatic cancer metastases are usually the bone, liver and lungs⁵. Testicular metastases are generally accepted as a sign of advanced disease and it is usually accompanied by multiple metastases to other organs. Herein, we describe a case of testicular metastasis derived from prostate neoplasm whose clinical presentation as a single metastasis was similar to that of a primary testicular neoplasm.

CASE REPORT

A 72 year old man presented with painless right testicular swelling of 3 months duration. The size of the right testicular mass had prompted him to seek medical review. He had been diagnosed with prostate cancer 6 years previously. Previous CT and Bone Scans were negative for metastases. He was initially treated with external beam radiotherapy and adjuvant Combined Androgen Blockade (CAB) for 3 years duration. His post radiotherapy course was complicated by recurrent urethral strictures. These were managed with recurrent urethral dilation. The PSA nadir was 0.03 while on hormonal treatment.

Clinically, a firm solid lesion could be palpated along the superior pole of the right testis with noted thickening over the epididymis. Scrotal skin, spermatic cord and the left testicle were normal and there was no evident lymphadenopathy on examination. The CAB had been

ceased 5 years previously and the PSA was 3.3. The β -HCG, AFP, and LDH were normal. Subsequent scrotal ultrasound confirmed a 2cm solid lesion which protruded beyond the capsular margin of the testis. There was also noted tubular ectasia of the rete testis within the right testicle.

A right radical orchiectomy was performed. Pathological examination revealed a metastatic adenocarcinoma measuring 15x11x11mm. The tumour abutted the tunica albuginea and on immunoperoxidase staining was positive for PSA. Lymphovascular invasion was noted. No tumour was visualised within the cord, and the surgical margin was clear.

Subsequent Bone Scan showed significant metastatic bone disease involving: left 3rd and 4th ribs anteriorly, medial clavicle, T10-T12, upper sacrum, mid to lower cervical spine on the right. His CT scan showed multiple nodules in his lungs consistent with metastases. He was re-commenced on CAB.

DISCUSSION

Clinically detectable testicular metastases from prostate adenocarcinoma are rarely reported. More often, these secondary tumours are identified incidentally after bilateral orchiectomy for hormonal management, or at autopsy. Most commonly they are unilateral [8] bilateral involvement indicating advanced disease[7]. The proposed mechanisms for the spread of lesions to the testis include: (i) retrograde venous extension or embolism; (ii) arterial embolism; (iii) lymphatic extension; and (iv) endo-canalicular spread

[9-11].

Testicular metastases from prostate cancer are thus rare events and consequently the prognosis is not well understood. Korke et al demonstrated median survival of 5.3 months, and a one year survival rate of 0% [6]. However, this study only identified 3 of 1643 (0.18%) cases of testicular metastases from prostate cancer [6]. All patients had a Gleason score of 8 or 9 with all having bone and lung metastases [6]. In comparison metastatic prostate cancer has a mortality rate of 10% at 5 years [1-4]. The poor prognosis associated with testicular metastases is likely due to the high disease burden, and small sample size of the population studied.

This case report highlights the rare finding of testicular metastasis from prostate adenocarcinoma despite low PSA. As most testicular masses are tumours of Germ cell origin it was not thought likely that this mass would represent a metastasis. However, this case shows the need to consider metastases as a possibility when examining a testicular mass in the presence of known prostate cancer. Further, the detection of metastatic spread from prostate cancer necessitates the re-evaluation of the patient with Whole Body Bone Scan and CT imaging of the abdomen and pelvis.

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