



Prostate Cancer – Ignorance Isn't Always Bliss

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Case Presentation

This 52-year-old high school teacher of African descent (brought into office in a wheelchair), presented with a two-week history of cramping pain and numbness in the lower chest region, lower back and both lower limbs. He claimed to have had intermittent low back pain for years due to a previous back injury. He said the cramping pain and numbness were such that they had begun to affect his walking in the last four days prior to presentation. He denied any cough, fever, and weight loss or micturition symptoms. He was, otherwise, not known to have any chronic illness.

His physical examination revealed evidence of dense paraparesis in both lower limbs (power of grade 1/5 bilaterally) with brisk knee jerk reflexes. He had a single moderately large and mobile left inguinal lymphadenopathy. Percussion of his vertebral column elicited mild tenderness in the region of about the 7th to 9th thoracic vertebrae. His digital rectal examination revealed a large, firm, nodular and craggy prostate gland. Anal sphincter tone was, however, intact.

Further history revealed that he had never had, or sought, a prostate examination before – neither digital rectal exam nor serum prostatic specific antigen (PSA) test.

A tentative diagnosis of metastatic prostate carcinoma with possible cord compression and dense paraparesis was considered.

Results of his investigations showed PSA >100 ng/ml (normal range 0-4.0 ng/ml). Urgent MRI- Scan of his thoraco-lumbar spine showed vertebra plana deformity at T8 due to a pathologic fracture, with greater than 50% decrease in vertebral body height. He also had thoracoabdominal lymphadenopathies and soft tissue masses infiltrating as well as compressing the spinal canal from about T4 to T9 vertebrae, suspicious for metastatic disease (Figures 1 & 2). He was immediately immobilized, given intravenous push of high dose Dexamethasone (40 mg) to stabilize and minimize neurological deficits, then referred for urgent neurosurgical/orthopedic consult for consideration of surgical stabilization of the spine. Biopsy of his prostate gland showed undifferentiated prostatic malignancy, confirming (along with clinical and radiographic findings) stage 4 disease – at least Gleason 8 or higher. He subsequently had emergency radiation therapy for the spinal cord compression (followed by further palliative radiation for the metastatic disease). He was then commenced on a three-monthly androgen suppression therapy along with neuro-rehabilitative care and followed up by a team of Urologic, Oncology/Radiation-Oncology, Orthopedic and Neurosurgical specialists.

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Discussion

Prostate cancer continues to be a major health problem worldwide with an estimated 1.1 million cases diagnosed in 2012 [1]. It is the most commonly diagnosed cancer in men. “Men of African ethnicity are well known to be of high risk for developing prostate cancer” [2]. And in the Caribbean, specifically Jamaica, it is highly prevalent and the leading cause of cancer-related deaths in men [2]. At least 11.6% of all men will be diagnosed with prostate cancer during their life time, most being diagnosed between age 55 and 74 (median age of 66) [3,4]. There is evidence that reduced screening with prostate-specific antigen (PSA) leads to increased incidence of advanced or metastatic disease [3-6]. While 79% of prostate cancer cases are localized at diagnosis, there is local spread to regional lymph nodes in 12% and distant metastasis in 5% [3]. Patients with distant metastasis or advanced disease have 29.8% relative 5-year survival rate compared to 100% in localized or regional disease [3,4]. The later underscores the need for early screening.

Clinical presentation of metastatic prostate cancer may vary depending on the organs and/or extent of involvement/sequelae of metastasis. Consequences of metastatic disease include “anemia, bone marrow suppression, weight loss, pathologic fractures, spinal cord compression,

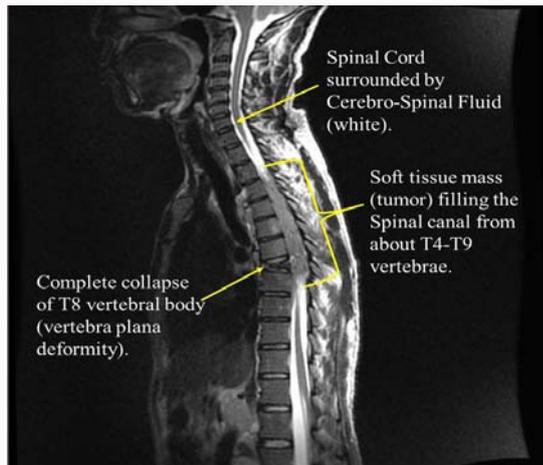


Figure 1: Sagittal T2-weighted MRI image of the Thoraco-lumbar spine.

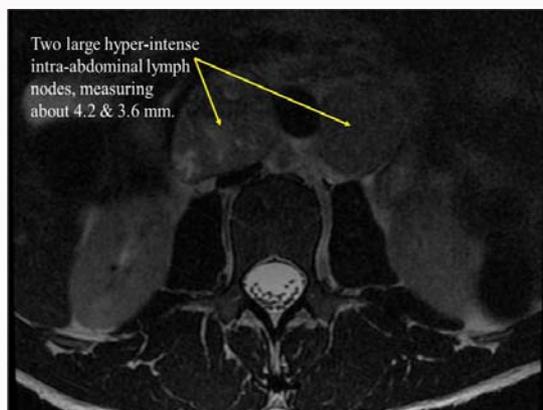


Figure 2: Axial T2-weighted MRI sequence at the level of L2 vertebra.

pain, hematuria, ureteral and/or bladder outlet obstruction, urinary retention, chronic renal failure, urinary incontinence and other symptoms related to bony or soft-tissue metastases” [3]. In patients with pathologic fractures and spinal cord compression (as in this case), neurologic manifestations may range from numbness and neuropathic pain in the lower limbs to partial or complete paralysis.

Treatment of advanced metastatic prostate cancer is not only challenging but can be perplexing and disappointing for both physician and patient. It often calls for a multidisciplinary approach requiring therapies ranging, where appropriate, from external beam radiation therapy, long-term androgen suppression, neurosurgical and orthopedic intervention in cases with pathologic fractures complicated by spinal cord compression and other medical supportive care as needed. Surgical intervention is mandatory for pathologic fractures involving weight bearing bones and if spinal cord compression is present, immediate bilateral orchidectomy must also be considered [3].

Conclusion

The practice of prostate specific antigen (PSA) testing and subsequent biopsy is becoming more widespread allowing for early diagnosis, management and possible cure but not all at risk men are availing themselves of this development. In our experience, most men are terrified about finding out that they have prostate cancer; some claim a feeling of being violated by digital rectal examination. As a result, many men choose not to be screened but being diagnosed with an advanced disease always proves to be regrettably devastating (as in this case).

Prostate cancer-related deaths remain more than twice as high in men of African origin compared to other groups [5]. Also at diagnosis, it is often at a higher grade in men of African origin with a more aggressive and progressive course [3,7,8]. More needs to be done to encourage all men above the age of forty, especially those with a family history or other significant risk factors (including being black) to be screened, at least, annually as outcome is directly related to stage of disease at the time of diagnosis. And since most prostate cancers are diagnosed by Primary Care Physicians and Internists, emphasis should be placed on heightened awareness for preventive screening by these practitioners.

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