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Cutaneous metastasis from prostate cancer in a Nigerian: a case report and literature review

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Abstract

Background: Prostate cancer is the most common male malignancy in Nigeria and most patients present with advanced and metastatic disease. Cutaneous metastasis from prostate cancer is rare worldwide and to our knowledge has not been previously reported in a native African. We hereby report a case in a 62 year old Nigerian.

Case presentation and management: A 62yr old Nigeria man presented with 6 months history of lower urinary tract symptoms that culminated in urinary retention for which he was catheterized. He noticed multiple painless skin nodules about the same time on the neck and trunk. On examination, he had multiple cutaneous nodules on his neck, limbs and trunk. His prostate gland was enlarged, hard and irregular. Prostate biopsy revealed adenocarcinoma of the prostate. He had bilateral orchidectomy with progressive regression of the skin nodules. He had successful trial of voiding without a catheter 3 weeks after bilateral total orchidectomy.

Conclusion: Cutaneous metastasis from prostate cancer is rare in native Africans despite the high incidence of the disease in this population. To our knowledge, this index case is the first report in a native African in the English literature.

Keywords: - *Cutaneous metastasis, prostate cancer, Nigerian*

Résumé

Contexte: le cancer de la prostate est le plus commun mâle maligne au Nigéria et la plupart des patients présents avec advanced et maladie métastatique. Cutaneous métastase du cancer de la prostate est rare dans le monde et à notre connaissance, n'a pas été précédemment signalés dans une Afrique native. Par la présente, nous souhaitons signaler un cas de 62 ans Nigériane.

Présentation de cas et de la gestion : A 62ans homme nigérian présenté avec 6 mois l'histoire des voies urinaires inférieures les symptômes qui ont abouti en rétention urinaire pour laquelle il a été sondé. Il a remarqué que plusieurs indolore nodules cutanés environ le même temps sur le cou et le tronc. Après examen, il avait plusieurs nodules cutanés sur son cou, membres et le tronc. Sa prostate a été élargie, dur et irrégulier. BIOPSIES de la Prostate révélé adénocarcinome de la prostate. Il avait orchidectomy bilatéraux avec régression progressive des nodules cutanés. Il avait réussi son procès de mictions sans un cathéter 3 semaines après bilatérale totale orchidectomy.

Conclusion : La forme cutanée les métastases du cancer de la prostate est rare chez les autochtones africains malgré la forte incidence de la maladie dans cette population. À notre connaissance, ce cas index est le premier rapport d'un Africain natif dans la littérature anglaise.

Introduction

Prostate cancer is the most common male malignancy in Nigeria [1-3].

In sub-Saharan Africa most patients present with advanced and metastatic disease [2,3]. Bony metastases particularly involving the spine is the most common site of involvement [4], but the liver, lungs, brain, spinal cord, skin and palate have also been reported as sites of metastasis [5].

Cutaneous metastasis from prostate cancer is very rare and to our knowledge, has not been documented previously in a native African in the English literature.

We hereby report a case in a Nigerian and review the existing English literature on the subject.

Case report

A 62 year old Nigeria man presented with a 6 month history of mixed lower urinary tract symptoms that culminated in urinary retention. He noticed the appearance of multiple skin swellings about the same time which initially started over his abdomen and later spread to involve his chest and neck (see fig 1 and 2). The swellings were not painful and there was no pruritus. He had low back pains but had no weakness of the lower limbs.

He was pale and had bilateral pitting pedal edema up to the knees. He had multiple non-tender subcutaneous nodules over the abdomen and neck

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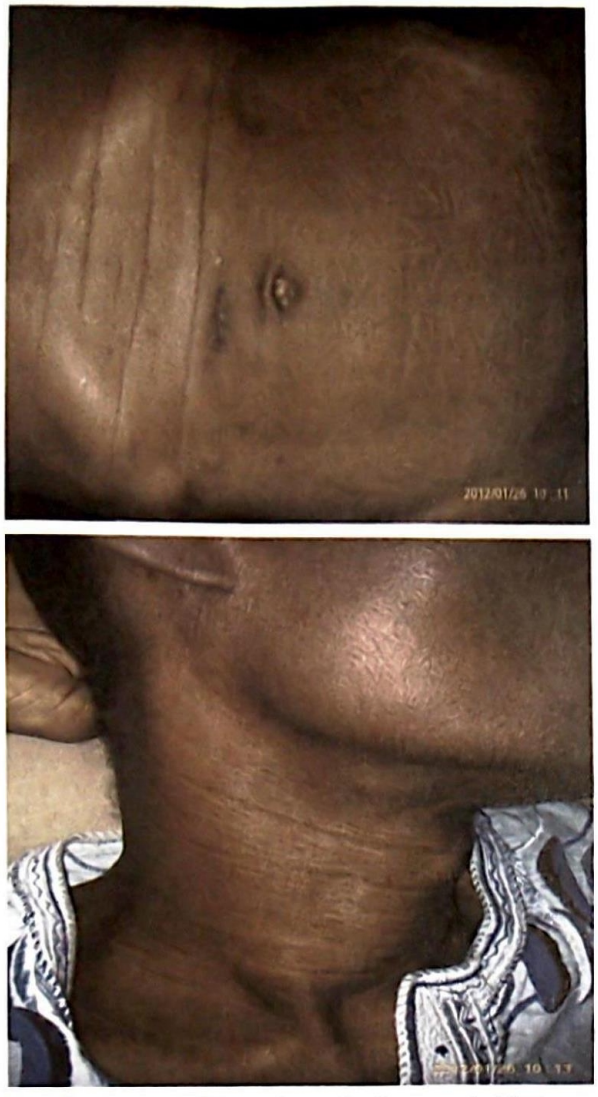
Fig.1: The patient showing subcutaneous nodule over the abdomen with an arrow pointing to one of the nodules

Fig.2: The patient at presentation showing a subcutaneous nodule on the neck.

measuring averagely 2cm in diameter. He had a firm non tender palpable suprapubic mass equivalent to about 18 week uterine size. The digital rectal examination revealed a hard and irregular prostate gland. The suprapubic mass persisted after urethral catheterization and was assumed to be prostatic in origin. The total serum PSA was 7.9ng/ml. Prostate biopsy confirmed moderately differentiated adenocarcinoma of the prostate gland, Gleason grade 3, score 6. Biopsy of one of the skin nodule on the right arm showed metastatic adenocarcinoma. Serum testosterone was 2ng/ml (3-12ng/ml).

He had bilateral orchidectomy and by the third week after hormonal ablation, the skin lesions were regressing and had almost cleared (fig 3a and 3b) and the suprapubic mass had disappeared. The



Figs. 3 a and b: The patient after hormonal ablation with the subcutaneous nodules already regressing.

cutaneous lesions were therefore assumed to be metastatic from a prostatic primary, particularly as there was no clinical evidence to suggest a concurrent malignancy especially of colonic origin. He had successful trial of voiding without catheter 3 weeks after bilateral total orchidectomy with an average flow rate of 10.1mls and maximum flow rate of 27.0mls on uroflometry. The post-operative serum testosterone was 0.2ng/ml.

He was seen in the surgical outpatient clinic thrice over a four month period and had a sustained clinical improvement but was however lost to follow up subsequently.

Discussion

Cutaneous metastasis from prostate cancer has not been reported previously in a native African. This may be due to underreporting as it is well established that prostate cancer is common in Africans [1-3]. Alternatively, it may represent another sub-population difference in the epidemiology of the disease.

Cutaneous metastasis of internal malignancy is uncommon with the reported prevalence varying from 0.7% to 10% of all patients with cancers [6]. Cutaneous metastases from genitourinary cancers are rare [7] but in particular cutaneous and subcutaneous metastases from carcinoma of the prostate gland are even rarer. Despite the prevalence of the disease worldwide, there were fewer than 80 reports of cutaneous metastasis of prostatic adenocarcinoma in 50 years spanning from 1962 to 2009 [9,10].

In a meta analysis of data on cutaneous metastasis after excluding primary skin cancers, prostate cancer had a 0.7% incidence of metastasis to the skin [8]. In a review of cutaneous malignancies in the English literature between 1993 to 2003, dermatologic spread from primary urologic malignancies of the bladder, prostate or kidney accounted for 116 (1.1%) of 10,417 cases. Out of these, only 8 cases (0.36%) of metastatic to the skin from a series of 2197 patients with prostate cancer were found [7]. Although the commonest histologic type of prostate cancer is adenocarcinoma, other histologic variant like the small cell carcinoma has been reported to cause cutaneous metastasis [13].

Cutaneous metastases from prostate cancer may present as subcutaneous nodule, papules or ulcerations on the skin or may have a zosteriform distribution or a pyodermalike pattern and these lesions could be solitary or multiple [11]. They could also occur on any part of the body but common sites include the inguinal region, penis, abdomen and chest [10]. The mechanism of skin involvement include direct extension of the tumor, dissemination via the lymphatics, embolization through blood vessels and perineural invasion [10,11].

Our patient presented among other signs bilateral pitting pedal edema and a nontender suprapubic mass which persisted after catheterization. The suprapubic mass was probably prostatic as there was gradual disappearance of the mass after orchidectomy. The pedal edema might have been due partly to pelvic lymph node enlargement and lymphatic drainage obstruction.

The occurrence in this patient of partial androgen deficiency is worth noting. This has been defined as serum testosterone levels less than 3ng/ml which has been found to be associated with high grade prostate cancer with a corresponding poor prognosis [12]. Although the histologic pattern of

prostate cancer in this patient was moderately differentiated (Gleason score 6), and despite the early good response to androgen ablation, the presence of skin metastasis has been noted to be an indicator of poor prognosis [13].

Cutaneous metastasis from prostate cancer usually portends a poor prognosis so treatment options for these lesions are limited and are usually supportive [14]

Conclusion

Cutaneous metastasis from prostate cancer is rare, despite the high incidence of prostate cancer in Africa and the index case is the first report in a native African in the English literature.

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