INTRODUCTION

In the context of growing world population and economy, prostate cancer is a growing concern in global epidemiology with more than 1 million cases diagnosed annually and mortality burden of over 300,000 deaths per year becoming the fifth leading cause of cancer death among men.\(^1,2\) It is the most common diagnosed cancer among Nigerian men with a community-based prevalence of 1046 per 100,000 men 40 years and above in a study done in Lagos Nigeria.\(^3\) Majority of the patients present with advanced disease.\(^3,4\) Risk factors include age, family history, race, genetics, and diet.\(^5\) Common sites for metastasis of prostate cancer include local lymph nodes, bones, and lungs.\(^5,6\) Lymphatic metastasis is most often to the obturator, common iliac, the presacral, and the para-aortic lymph nodes.\(^6,7\) Occasionally, metastasis to the supraclavicular lymph nodes has been documented, and rarely, this supraclavicular lymphadenopathy may be the initial clinical presentation of the patient\(^6,7\) with a reported incidence rate of 0.28% and 0.36% for supraclavicular lymph node and cutaneous metastasis, respectively.\(^8\) Eight cases of scalp metastasis have been reported in literature.\(^2\)

Below is a case of a prostate cancer patient who presented simultaneously with the left supraclavicular and scalp masses and his management.

CASE REPORT

A 72-year-old Nigerian male with progressively growing painless left supraclavicular and scalp masses was referred to our urology clinic on account of markedly raised serum prostate-specific antigen (PSA) level of 416 ng/ml. There were no lower urinary tract symptoms, hematuria, and no bone pains. There was weight loss. He was moderately pale, anicteric, no hepatomegaly, and no pedal edema. The muscle powers in both lower limbs were Grade 5. A digital rectal examination (DRE) showed enlarged hard prostate with obliteration of the median sulcus. A painless mass, 2.8 cm × 1.6 cm was palpable at the left parietal scalp region

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Odoemene: Atypical presentation of prostate cancer

Furthermore, at the left supraclavicular fossa, a hard non-tender mobile mass, 1.4 cm × 1.8 cm was palpable [Figure 2]. He had a hemoglobin of 8.6 g%, erythrocyte sedimentation rate of 95 mm/h, and platelet count was 110,000/mm³. The liver and renal functions were normal, fasting blood sugar was 4.3 mmol/L, and urine culture and sensitivity yielded no bacterial growth. A transrectal US showed hypoechoicinity of the prostate. The prostate measured 4.2 cm × 4.9 cm × 4.8 cm with a volume of 50.9 cm³. Para-aortic and iliac lymph nodes were seen on transabdominal US. Bone scan was negative. Facilities for immunohistochemistry studies were not available and biopsies for the neck and scalp masses were not done. A transrectal digital-guided biopsy of the prostate showed adenocarcinoma with Gleason score of 3 + 4 = 7 [Figure 3]. After counseling, the patient had bilateral total orchiectomy and oral bicalutamide 50 mg daily. The anemia was corrected with blood transfusion. Within 10 days postoperatively, both the neck and scalp masses regressed completely.
Odoemene: Atypical presentation of prostate cancer

[Figures 4 and 5, respectively]. At 12 weeks postoperatively, the total serum PSA was 2.1 ng/ml. He was lost to follow-up after 42 months and the last total serum PSA was 0.24 ng/ml with a performance status of 100%.

**DISCUSSION**

Prostate cancer is the most common type of cancer in men and spread is by direct invasion, lymphatic, and hematogenous extension.[6-10] Metastasis is commonly to the axial skeleton, lymph nodes, lungs, urinary bladder, liver, and adrenals.[8-11] Furthermore, percentage metastases to these sites are bone (66.8%), regional lymph node (68%), lungs (49.1%), bladder (39.2%), liver (35.6%), and adrenals (17.3%).[10] Extraskeletal non-regional lymph node metastasis to the cervical region is rare in the neighborhood of 0.5% or less.[9,10,12-15]

Majority of cancers that send metastasis to the cervical lymph nodes are from primary cancers of the head and neck involving the mucosa of the upper aerodigestive tract, non-mucosal head and neck primaries from salivary glands, thyroid, thoracic, and gastrointestinal tumors.[7-12]

The left supraclavicular node otherwise called Virchow’s node is known for its association with distant metastasis. The first documented involvement of this node in distant metastasis was by the pathologist Rudolf Virchow in 1848 as regards its involvement in metastatic malignancy from the abdomen and pelvis.[11,12,16] Two theories try to explain metastasis of prostate cancer to the supraclavicular lymph nodes. The first is by hematogenous, where Batson postulates that cancer cells spread through the vertebral venous system.[13,15] However, this theory does not explain the bias or predilection for the left supraclavicular nodes. The second hinges on the fact that the thoracic duct joins the central venous circulation at the junction of the left subclavian and internal jugular veins. The end node of the thoracic duct is the so-called Virchow node and lies near or at this jugulo-subclavian venous junction.[6,11-13,15] Furthermore, Mizutani et al., in 2005, found that the thoracic duct divided into 3–10 collateral ducts that surround the Virchow node. [12,16] Lymph nodes at the left supraclavicular region will have afferent drainage that includes the thorax, abdomen, and pelvis. [8] Thus, prostate cancer metastasis to the left supraclavicular lymph node and scalp in the index patient explained.

The first line of treatment for those that are hormone sensitive is androgen deprivation therapy (ADT) as was done on the index patient. Prostate cancer metastasis to the supraclavicular lymph nodes is regarded as extensive case of systemic disease and poor prognosis with mean survival of 19.8 and 29.7 months.[6,13] However, cases with long remission of disease after ADT who are clinically and biochemically quiescent have been reported.[13,17,18] A case report of a patient with cervical lymphadenopathy being symptom free for 9 years had been reported.[13,19] The index patient was followed up for 42 months and the total serum PSA was 0.24 ng/ml at last visit before he was lost to follow-up.

**CONCLUSION**

Prostate cancer should be considered as a differential diagnosis in middle-aged and elderly men presenting with cervical lymphadenopathy and scalp mass. Furthermore, DRE and PSA testing should be a part of initial evaluation.

**REFERENCES**


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