

Cancer of the Prostate Presenting as Scalp and Left Supraclavicular Masses

Charles Azuwiki Odoemene

Senior Lecturer/Consultant Urologist, Alex Ekwueme Federal University Teaching Hospital, Abakaliki (AEFUTHA), Nigeria

ABSTRACT

Prostate cancer (PCa) is one of the most fatal cancers and the second most common cancer in men worldwide. The incidence and prevalence vary in different parts of the world. In Nigeria, it is the most common cancer in men with low awareness and majority of the patients presenting with advanced disease. Rarely, this advanced disease may present clinically as supraclavicular lymphadenopathy. This is a case of a 72-year-old man who presented simultaneously with the left supraclavicular and left parietal scalp masses. The serum prostate-specific antigen was 416 ng/ml. A hard prostate was felt on digital rectal examination. Prostatic biopsy showed adenocarcinoma of the prostate. The patient had surgical castration after which both the left supraclavicular and scalp masses regressed within 10 days. There is need to entertain prostate cancer as a differential diagnosis in any middle-aged and elderly man presenting with supraclavicular and scalp masses.

Key words: Metastasis supraclavicular lymphadenopathy, Prostate cancer, Scalp mass

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 diseases.^[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.^[6] 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

Address for correspondence:

Dr. Charles Azuwiki Odoemene, Senior Lecturer/Consultant Urologist, Alex Ekwueme Federal University Teaching Hospital, Abakaliki (AEFUTHA). Mobile: +2348169536450. E-mail: odoemenec@yahoo.com

© 2019 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license.

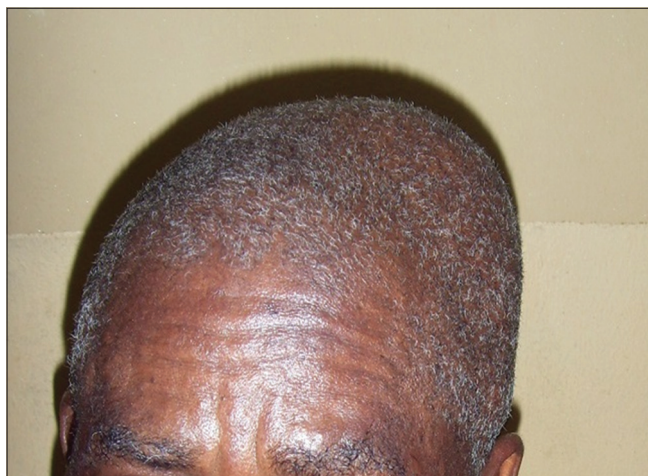


Figure 1: Left scalp mass

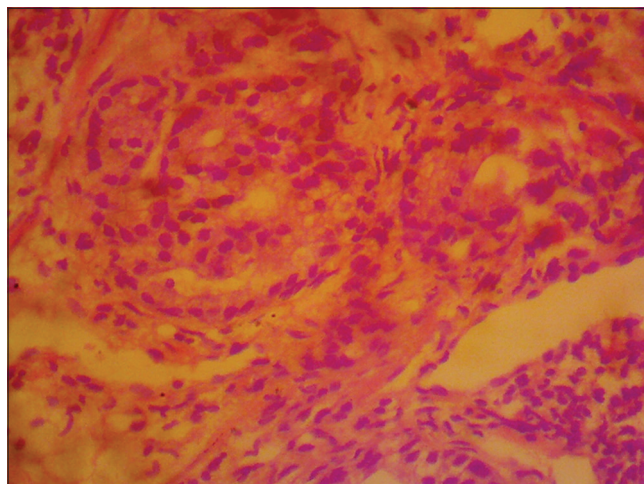


Figure 3: Prostatic biopsy histology (Gleason score 3+4=7)

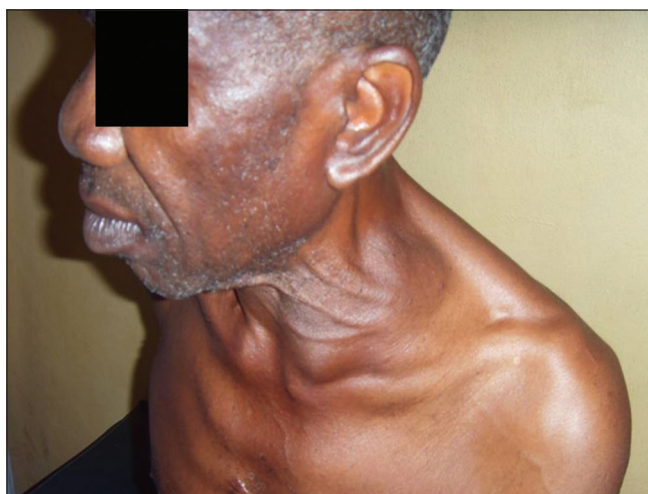


Figure 2: Left supraclavicular lymphadenopathy



Figure 4: Supraclavicular lymphadenopathy completely regressed 10 days post-orchietomy

[Figure 1]. 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 hypoechogenicity 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 orchietomy 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

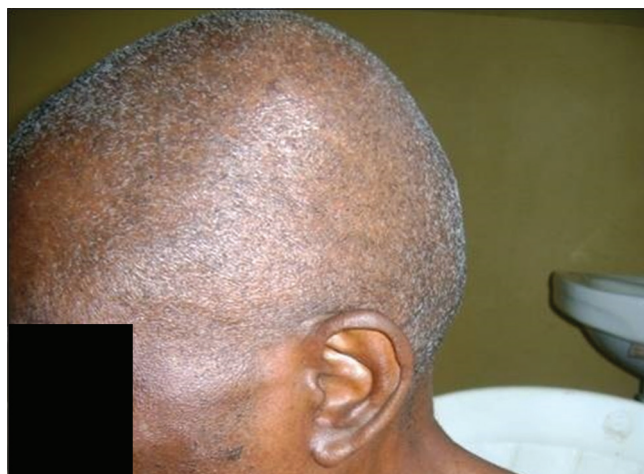


Figure 5: Left parietal mass completely regressed 10 days post-orchietomy

[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.^[8-10] 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] Extraskelatal non-regional lymph node metastasis to the cervical region is rare in the neighborhood of 0.5% or less.^[8,10,12-15]

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 documentation of 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.^[8,11-13,15] 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

- Cooperberg MR, Chan JM. Epidemiology of prostate cancer. *World J Urol* 2017;35:849.
- Esquivel-Pinto IA, Torres-Alvarez B, Gómez-Villa RJ, Castanedo-Cázares JP. A case of prostatic carcinoma manifesting as cutaneous facial nodule. *Case Rep Urol* 2018;2018:5265909.
- Ikuero SO, Omişanjo OA, Bioku MJ, Ajala MO, Mordi VP, Esho JO, *et al.* Prevalence and characteristics of prostate cancer among participants of a community-based screening in Nigeria using serum prostate specific antigen and digital rectal examination. *Pan Afr Med J* 2013;15:129.
- Badmus TA, Adesunkanmi AR, Yusuf BM, Oseni GO, Eziyi AK, Bakare TI, *et al.* Burden of prostate cancer in southwestern Nigeria. *Urology* 2010;76:412-6.
- Fradet Y, Klotz L, Trachtenberg J, Zlotta A. The burden of prostate cancer in Canada. *Can Urol Assoc J* 2009;3:S92-S100.
- Çulpan M, Yıldırım A, Turan T, Çaşkurlu T. Supraclavicular lymph node as the first presentation and late skin metastasis: An unusual clinical course for prostate cancer. *Turk J Urol* 2018;44:75-8.
- Ajape AA, Kuranga SA, Ibrahim KO, Babata A. An unusual lymphatic metastasis of cancer of the prostate. A report of 3 cases. *East Cent Afr J Surg* 2014;19:59-64.
- López F, Rodrigo JP, Silver CE, Haigentz M Jr, Bishop JA, Strojan P, *et al.* Cervical lymph node metastases from remote primary tumor sites. *Head Neck* 2016;38 Suppl 1:E2374-85.
- Davarci M, Gokce A, Guven EO, Yalcinkaya FR, Esen H, Sevinc A, *et al.* Metastatic prostate adenocarcinoma presenting as supraclavicular lymphadenopathy: A report of two cases. *Contemp Oncol (Pozn)* 2012;16:53-5.
- Dubhashi SP, Kumar H, Nath SR. Prostate cancer presenting as cervical lymphadenopathy. *Am J Case Rep* 2012;13:206-8.
- Park EJ, Stroe FA, McArdle BJ, Psutka SP. Metastatic adenocarcinoma of the prostate presenting as supraclavicular and bulky generalized lymphadenopathy with a benign digital rectal exam. *Urol Case Rep* 2017;13:128-30.
- Werner RA, Andree C, Javadi MS, Lapa C, Buck AK, Higuchi T, *et al.* A voice from the past: Rediscovering the Virchow node with prostate-specific membrane antigen-targeted ¹⁸F-DCFPyL positron emission tomography imaging. *Urology* 2018;117:18-21.

13. Sepulveda L, Gorgal T, Pires V, Rodrigues F. Prostate cancer metastatic to the cervical lymph nodes. *Case Rep Urol* 2015;2015:263978.
14. Wagh A. Cervical lymph nodes. A hot bed for metastasis of malignancy. *Clin Oncol* 2018;3;1497.
15. Phillips JK, Sabo A, Naraine R, Lyras L, Devito P. Metastatic prostate cancer presenting as a Virchow's node. *Asclepius Med Case Rep* 2018;1:1-3.
16. Mizutani M, Nawata S, Hirai I, Murakami G, Kimura W. Anatomy and histology of Virchow's node. *Anat Sci Int*. 2005;80:193-198.
17. Wang HJ, Chiang PH, Peng JP, Yu TJ. Presentation of prostate carcinoma with cervical lymphadenopathy: Report of three cases. *Chang Gung Med J* 2004;27:840-4.
18. Bhattar R, Maheshwari A, Yadav SS, Tomar V. Unusual presentation of prostate carcinoma: A case report. *J Clin Diagn Res* 2017;11:PD06-7.
19. Chitale SV, Harry L, Gaches CG, Ball RY. Presentation of prostatic adenocarcinoma with cervical lymphadenopathy: Two case reports and review of the literature. *Otolaryngol Head Neck Surg* 2001;125:431-2.

How to cite this article: Odoemene CA. Cancer of the Prostate Presenting as Scalp and Left Supraclavicular Masses. *Clinic Res Urol* 2019;2(1):1-4.