Journal of Cancer Treatment and Research
2014; 2(6): 61-63
Published online December 31, 2014 (http://www.sciencepublishinggroup.com/j/jctr)
doi: 10.11648/j.jctr.20140206.12
ISSN: 2376-7782 (Print); ISSN: 2376-7790 (Online)

Advanced prostate cancer presenting as epistaxis only: A case report and literature review

Usman Mohammed Tela[1], Audu Abdullahi Bukar[2], Mala Bukar Sandabe[3], Theophilus Maksha Dabkana[4], Alhaji Bukar Musa[5], Abubakar Sadiq Adamu[6]

[1]Urology unit, Department of Surgery, University of Maiduguri Teaching Hospital, Maiduguri, Nigeria
[2]Department of Haematology, Universiy of Maiduguri Teaching Hospital, Maiduguri, Nigeria
[3]Department of Ear, Nose and Throat (ENT), University of Maiduguri Teaching Hospital, Maiduguri, Nigeria
[4]Departtment of Orthopedics, University of Maiduguri Teaching Hospital, Maiduguri, Nigeria
[5]Department of Histopathology, University of Maiduguri Teaching Hospital, Maiduguri, Nigeria
[6]Department of Anaesthesia, University of Maiduguri Teaching Hospital, Maiduguri, Nigeria

Email address:

umtela@yahoo.com (U. M. Tela), doctorbani@yahoo.com (A. A. Bukar), theophilus_dabkana@yahoo.co.uk (T. M. Dabkana), mbsandabe@yahoo.com (M. B. Sandabe), bukar70@yahoo.com (A. B. Musa), drsadiq20032003@yahoo.com (A. S. Adamu.)

To cite this article:

Usman Mohammed Tela, Audu Abdullahi Bukar, Mala Bukar Sandabe, Theophilus Maksha Dabkana, Alhaji Bukar Musa, Abubakar Sadiq Adamu. Advanced Prostate Cancer Presenting as Epistaxis Only: A Case Report and Literature Review. *Journal of Cancer Treatment and Research.* Vol. 2, No. 6, 2014, pp. 61-63. doi: 10.11648/j.jctr.20140206.12

Abstract: Although Prostate cancer is the most frequently diagnosed cancer among men globally, its primary presentation as Epistaxis alone is quit uncommon. Epistaxis has numerous causes and hence poses early diagnostic challenge. We report a case of 68 year old man who presented with recurrent epistaxis as the main complaint .He was thoroughly evaluated and concluded to have a background asymptomatic advanced prostate cancer with isolated thrombocytopenia. He responded to blood transfusion and combined therapy form of Anti-androgen Deprivation Therapy. High index of suspicion is of paramount importance towards achieving early diagnosis of this unusual presentation.

Keywords: Prostate Cancer, Epistaxis, Thrombocytopenia

1. Introduction

Prostate cancer is the most commonly diagnosed cancer among Nigerian men, just as the case in the developed nations[1,2,3]. Hospital based prevalence in a recognized Nigeria health centre was reported as 182.5 per 100,000 males admission. Most patients present late, and hence were diagnosed at advanced stage of the disease[4]. Where epistaxis presents as a symptom of coagulopathy, it usually co-exist with other prominent symptoms which are pointers towards exposing an established Disseminated Intravascular Coagulation (DIC), as it occurs in prostate cancer. We report an uncommon presentation of isolated epistaxis in advanced prostate cancer.

2. Case Report

68 year old man presented to the emergency unit of our Centre with a worsening episode of recurrent nasal bleeding of 3months duration, as the only complain. Nasal bleeding was initially spotting, but later became profuse. He lost about 300ml of blood in the last episode. No bleeding from other orifices and no petechial hemorrhages. No preceding history of nasal trauma, hypertension, chemotherapy, anticoagulant therapy, exposure to radiation or family history of bleeding disorder. There was no significant lower urinary tract symptoms (LUTS), and no haematuria. No lower back pain, lower limb weakness or weight loss. There was no cough and no jaundice.

On examination he was calm looking elderly man, pale, afebrile and anicteric with a blood stain in the left nostril, otherwise ear nose and throat examinations were normal. Cardiovascular and respiratory systems were also normal. Abdomen was flat no tenderness or organomegaly, external gentalia was normal, good anal sphincter tone and Prostate was enlarged, hard in consistency and nodular. Musculoskeletal and nervous system were normal.

An initial clinical diagnosis of bleeding disorder possibly

secondary to background metastatic prostate cancer was made. Urologist was then included in the evaluation. Abdominal Ultrasound scan revealed enlarged prostate gland of about 110g, with normal bladder wall. Skull, chest and lumbosacral X-rays revealed osteocytic/ lesions, which necessitated a differential diagnosis of Multiple Myeloma. We later requested for Prostate Specific Antigen (PSA) which raised to 15ng/ml, and histology of trucut prostate biopsy revealed Adenocarcinoma as shown in figure 1. Cytology of bone marrow biopsy revealed infiltration by malignant cells which are not native to the marrow as shown in figure 2. There was also depressed erythrocytes and megakaryocytes. There was no increase in plasma cells. The findings strengthened our effort toward further evaluation of paired organs especially the prostate gland as as possible primary site of malignancy. Haemoglobin concentration dropped to 6g/dL and the platelets count was $80x10^9$/L. Electrolytes, Urea and Creatinine were normal. A final diagnosis of isolated thrombocytopenia in advanced prostate cancer was made.

Patient was resuscitated at presentation. The epistaxis was controlled by anterior nasal packing and series of blood transfusion. His general condition significantly improved. He was later counseled and had bilateral orchidectomy, and was discharged home on Tablet Bicalutamide 50mg daily. He was to come to the clinic after two weeks, but lost to follow up, this is a common attitude among patients in sub-Saharan Africa.

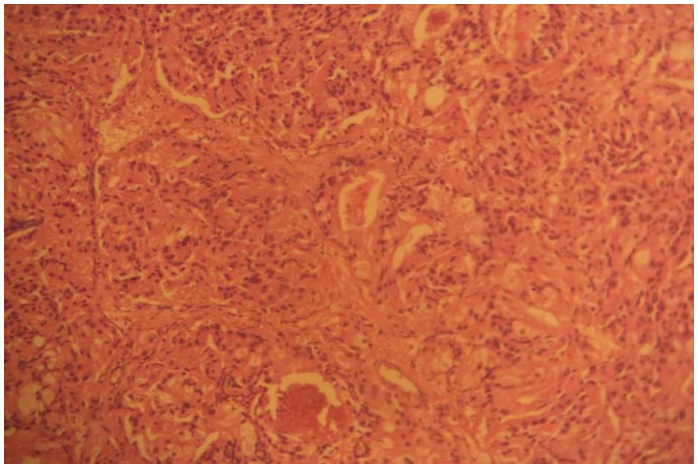

Fig. 1. *Histology of Prostate cancer.*

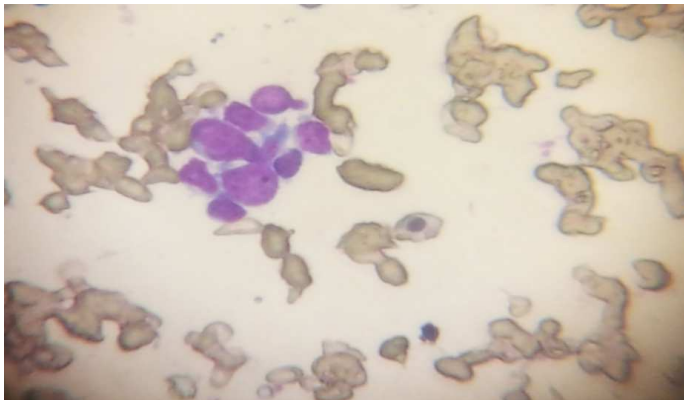

Fig. 2. *Cytology showing cluster of malignant cells not native to the bone marrow.*

3. Discussion

Epistaxis refers to nose bleeding, an otorhinolaryngology emergency. The nasal septum has rich blood supply arising from the branches of internal maxillary and ethmoidal arteries. These join to form the kisselbach plexuses in the little's area, and 90% of epistaxis occur at this site. Local causes of epistaxis are predominantly idiopathic, others include inflammatory, traumatic neoplastic iatrogenic and vascular anomalies like hereditary haemorrhagic telangiectasia. Systemic causes include Hypertension, organs failure, platelets dysfunction, coagulopathies and thrombocytopenia as in the index case presented [5].

Thrombocytopenia is defined as decrease in platelets count. It could be Mild when ranging from 100,000 to 150,000/microL, or Moderate ranging from 50,000 to 100,000/microL or Severe when less than 50,000/microL. In the blood film[6]. It usually manifest with bleeding when less than 100,000/microL, this correlates with the platelets count of our index case. Thrombocytopenia is one of the abnormalities in haematological profile of patients with advanced malignancies, particularly those that metastasizes to the bone marrow, like prostate cancer and others[7]. These

tumors interferes with normal haemopoesis and result in thrombocytopenia, anaemia, leucopenia, or even pancytopenia[7]. Our index patient presented with thrombocytopenia including anaemia, which could also be a sequel of the chronic blood loss from the recurrent epistaxis he developed. Advanced stage of bone marrow infiltration by the tumor cells is even worse, and can result in thrombocytopenia and bleeding manifestation[7,8]. This is the likely aetiopathogenesis of thrombocytopenia and consequently resulting to epistaxis in our patient. Previous studies also revealed epistaxis in patients with prostate cancer, but those patients have associated Disseminated Intravascular Coagulation (DIC) [9,10,11]. Our patient was evaluated and DIC was ruled out.

Laboratory investigations targeted at assessing these category of patients, and excluding other causes of bleeding disorders such as DIC should consist of Absolute platelets count, Full blood count, blood film, clotting profile (prothrombin time, activated partial thromboplastin, and INR), Serum fibrinogen, plasma concentration of d-dimers, Plasma levels of factors V, VII, XIII, and activated protein C, as well as liver function and renal functions[12]. Bone marrow biopsy can reveal features of cytopenia and presences of malignant cells particularly in cancer patients with bone metastasis.

Where the patient has advanced prostate cancer as in our index patient, the goal of treatment is to control the bleeding and palliate the advanced malignancy. This could achieved by blood transfusion, Androgen deprivation by either monotherapy (Leutenizing Hormone releasing Hormone agonist or bilateral orchidectomy) or combined therapy by adding anti-androgens.

However, when the patient developed Hormone refractory prostate cancer, chemotherapy should be considered as an option of treatment. Docetaxel, a member of the Taxane family acts by inducing apoptosis in hormone refractory cancer[13]. Also recent understanding of the molecular mechanisms of bone metastasis in hormone refractory prostate cancer, particularly in those regarded as metastatic Castration Resistant Prostate Cancer (mCRPC), this knowledge resulted in the development of new bone targeted therapy. Because bone involvement in these mCRPC patients is a potential source of morbidities like pain and Skeletal Related Events (SREs) such as Spinal cord compression and pathological fractures. Among these various classes of new drugs include Zolendronic acid, Denosumab and Radiopharmaceuticals likes Strontium 89. These functions by either preventing, delaying or palliating bone pain and SREs[14].

4. Conclusion

Although Prostate cancer remains the commonest cancer in men globally, it continues to pose challenges against early diagnosis as long as it presents in an uncommon pattern. High index of suspicion is of paramount importance. We need to focus more towards achieving early diagnosis particularly in the developing nations.

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