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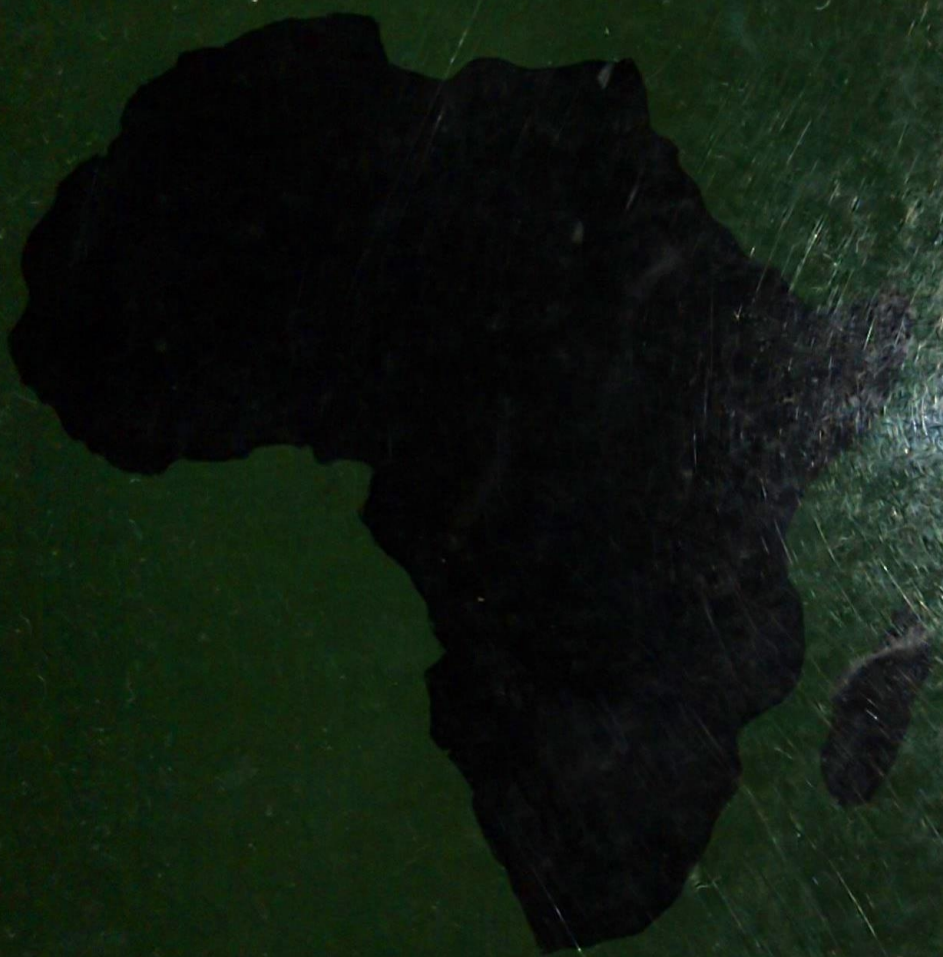

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Multiple malignant lesions involving the orofacial region: a case report

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Summary

We describe a rare finding in a 38 year old patient with previously undiagnosed prostate cancer who presented with multiple facial swellings, mental nerve neuropathy and paraplegia. While the co-existence of paraplegia and mental nerve neuropathy is a possible feature of metastatic prostate cancer involving the spine and mandible, the concomitant occurrence of multiple facial swellings involving the anterior mandible with its related gingival and lip mucosa, frontal bone and parotid glands is a rare finding. This raised a suspicion of two histologically different malignancies co-existing in this patient. Fine needle aspiration cytology (FNAC) of the parotid lesion and incisional biopsy of the gingival lesion were reported as Lymphoblastic lymphoma and Non Hodgkin's Lymphoma respectively. A Transrectal biopsy of the prostate gland confirmed adenocarcinoma of the prostate gland. The patient however died due to a number of intercurrent illnesses and rapid deterioration consequent on his disease condition. Unfortunately, all efforts to carry out an autopsy were unsuccessful due to strong objection of the relatives on religious grounds. Problem associated with the diagnosis and management of such a rare case in a developing economy was highlighted.

Keywords : *Multiple, malignancy, metastasis, orofacial region.*

Résumé

Nous décrivons les résultats particulier d un patient de 38 ans avec une histoire inconnue de cancer de la prostate ayant des multiples oedemes faciales, une neuropathie du nerf mental et une paraplégie. Ben que la coexistence de la paralegie et de la neuropathie du nerf mental est bien caractérisée, de possible metatastque cancéreuse de la prostate implique la moelle et le mandibule associe a des oedemes faciales du mandibule intérieure avec la gingivite et la mucose de lèvre de l<os frontal et les glandes parotiques est un résultat particulier.Ce résultat augmentait la suspicion de 2 différent désordres histologique coexistant chez ce patient. L'aspiration cytologique a l'aide de l aiguille fin dans la lésion prostatique et la biopsie incisionale de la lésion gingivale étaient reportes comme lymphome lymhoblastique de non Hodgkin respectivement. La biopsie transrectale de la glande prostatique confirmait l'adénocarcinome de la glande prostatique.Consequement, le patient mourait d'un nombre de maladies intercourrante et d'une deteroration rapide de la santé.ceendant des efforts a faire l'autopsie était refusé par la famille sur des bases religieuses. Ce problème associe avec le diagnostic et les soins d'un tel cas rare dans une économie en développement étaient illuminés.

Introduction

The occurrence of multiple malignancies in a single patient is well reported in medical literature. This concept has been used to describe different clinical scenarios in which malignant lesions are diagnosed in more than two target sites in an individual patient [1, 2].

Metastatic spread from a primary cancer site is pathognostic of malignant neoplasm and a prognostic indicator for evaluation and treatment of cancer patients [3, 4]. When a primary site is present and metastatic lesions occur at other site or sites in a patient, the condition can be described as a case of multiple malignant lesions, although in this case a single histological nature is found. Malignant neoplasm of certain tissues or organs has been found to metastasize to known target sites. Examples of these include squamous cell carcinoma of the mouth and breast cancer which do metastasize to the lungs, prostate cancer which metastasizes to the spine and jaws and renal cell adenocarcinoma which often metastasizes to lungs and bones [3, 4, 5].

Another clinical scenario which may be described as multiple malignancy is the synchronous or metachronous existence of one or more histologically malignant lesions developing independent of one another at different sites in a patient. Hanawa *et al* [6] reported a patient with synchronous triple cancers arising in the digestive tract, a combination of esophageal, gastric and colonic cancers. Histological studies confirmed that they were independent lesions. The esophageal cancer was of ulcerated type; histologically it was poorly differentiated squamous cell carcinoma. The gastric and colonic cancers were both of Borrmann type II and well differentiated

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adenocarcinoma respectively. Uetsuji *et al* [2] similarly reported a case of triple cancer involving the lung, stomach and liver.

Multiple cancers are also a feature of the genetic anomaly of Multiple Endocrine Neoplasia {MEN} syndrome [5]. This condition is inherited as autosomal dominant. It is an uncommon syndrome characterized by occurrence of tumours or hyperplasia in more than one endocrine organ in the same individual or in members of a family.

Immunodeficiency state such as Acquired Immunodeficiency Syndrome (AIDS) has been found to predispose to a number of malignant neoplasms such as squamous cell carcinoma, non Hodgkin's lymphoma, and Kaposi sarcoma [4]. A patient afflicted with AIDS can therefore present with multiple malignant lesions.

Here, we report a case of a patient who presented with an unusual clinical condition diagnosed as multiple malignant lesions involving metastatic prostate cancer and non Hodgkin's lymphoma. There was however no evidence of pre-existing immunodepression.

Case history

A 38 year old man was referred to the emergency unit of the University College Hospital, Ibadan on 16th August, 2003, with a history of low back pain of 4/52 duration, inability to walk of 3/52 duration and multiple facial swelling of 2/52 duration [fig. 1a-b].

Fig. 1a: Anterior facial profile of patient. Arrows show frontal, parotid and chin swellings

The patient was apparently well until the onset of low back pain which was soon complicated with paraplegia and anaesthesia of the lower limbs, bisphincteric incontinence and loss of penile erection. A few days later, there was sequential development of swellings on the left parotid gland, sublingual region, mental area and the frontal bone. Progressive numbness of the skin of the lower lip and mental region was also observed.

Fig. 1b: Lateral facial profile of patient. Arrow show parotid and frontal swellings

The patient was reviewed by the neurosurgical team and a clinical impression of metastatic lesion to the spine from a primary parotid tumour was suspected and therefore the maxillofacial surgery team was requested to review and take over the management.

Subsequent upon the above clinical findings the following impressions were made:

i. Metastatic lesions to the skull, jaws and spine from suspected primary prostate carcinoma
ii. Multiple Myeloma
iii. Non-Hodgkins lymphoma with central nervous system involvement in an immuno-compromised adult patient.

These impressions were based on the multicentric skeletal and extranodal site involvements, history of low back pain complicated with paraplegia, paraesthesia and anaesthesia of lower limbs and lower lip, and a small, hard but non-nodular prostate found on digital rectal examination.

Retroviral screening was non reactive, Packed Cell volume (PCV) was 42%, full blood count was essentially normal with the white blood cell count(WBC) 5.2 x 10^9/mL (Neutrophils 64%, eosinophils 2%, and lymphocyte 34%), Blood film appearance was also reported as normal. The clotting profile gave an INR of 1.00. Urinary Bence Jones Protein was negative and Plain radiographs of the skull and jaws and the thoraco-lumbar spine revealed no pathology. However, the ESR was raised being 140mm/hr (Westergreen), and the Prostate Specific Antigen (PSA) was also significantly raised being 24.5ug/L. Computerised Tomogram (CT) Scan of the skull and the spinal col-

umn was ordered to be taken in a centre outside since the Hospital CT Scan Machine was faulty and under repairs but patient could not afford the cost.

Based on the abnormally raised PSA, the urological team was invited and a transrectal prostate biopsy was performed. The histopathology report confirmed adenocarcinoma of the prostate [fig. 2]. FNAC of the parotid swelling was done and was reported as suspicious of lymphoblastic lymphoma, incisional biopsy of the gingival lesion was also reported as Non- Hodgkin's lymphoma [fig. 3].

Fig. 2: Histopathological appearance of prostate biopsy showing well differentiated adenocarcinoma (H & E x 40)

Fig. 3: Histological appearance of the lower gingival swelling showing sea of monotonous lymphoblasts with large nuclei and prominent nucleoli, interspersed within which are macrophages with clear cytoplasms giving a "starry sky" appearance (Haematoxylin & Eosin x 100)

A provisional diagnosis of malignant lymphoma of the orofacial region co-existing with primary prostate carcinoma with possible spinal metastasis was made. Joint management involving the oral and maxillofacial, urological and haematological teams was instituted. However, the patient deteriorated rapidly developing features of urinary tract infections, frank haematuria, psychic depression, decubitus ulcer, and haemorhagic diathesis through the ears, nostrils and mouth. The PCV dropped progressively to 22%. Broad spectrum, highly potent antibiotics were administered. Intermittent catheterization, regular turning in bed and daily dressing of ulcer were ensured. Disseminated intravascular coagulopathy was suspected and patient benefited from haematological review and transfusion of fresh whole blood. However, he developed sudden dyspnoea and died on 17th October, 2003.

Discussion

Prostate cancer is relatively common among men above 50 years of age and it is rarely found in men below this age [7]. Also, Non-Hodgkin's lymphoma is a lympho-proliferative malignancy which can affect both children and adult [8]. The co-existence of both conditions in an individual patient to the best of our knowledge has not been reported in our environment. This case was of a diagnostic challenge to us as the presenting clinical features did not point to any particular disease entity.

The history of low back pain and the consequent features of spinal cord involvement (anaesthesia and paraplegia of lower limbs, bisphincteric incontinence and loss of penile erection) definitely suggested a spinal lesion at T12/L1 level. The history and clinical findings also permitted a consideration of possibilities such as Metastatic spinal lesion and Multiple myeloma, especially in view of the multicentric nature of the disease. Adult Non-Hodgkins lymphoma was also considered due to the multiple extranodal site involvement. The presence of mental nerve neuropathy in these conditions has also been reported [9, 10]. This thus informed our clinical impressions.

Multiple myeloma was soon ruled out due to the absence of characteristic punched out osteolytic lesions from the radiographs of the skull, jaws and thoraco-lumbar spine. In addition, urinary Bence Jones proteins test was negative. The possibility of metastatic lesions thus became a stronger consideration.

The prostate is a known primary site of malignancy with metastasis to the spine and jaws [7, 9, 11]. Other primary sources of metastasis to similar target sites are gastrointestinal tract, breast, thyroid, lungs and kidney [12-16]. No clinical features suggestive of involvement of any of these organs were found in this patient. Rather, what was found was a small, hard, non nodular prostate on digital rectal examination. The small size and non nodularity of the prostate has however, been said to be an insufficient evidence to rule out a possible existence

of prostate malignancy [1, 7]. The PSA was significantly raised being 24.5ug/L. This substantiated the suspicion of primary prostate carcinoma. While the presence of features suggestive of spinal metastasis was in support of this diagnosis, the age of the patient which was only 38 years left us in doubt, as prostate cancer is rarely ever found at this age [7]. Also, the concomitant multiple facial swellings could not be explained based on this diagnosis. Prostate cancers do metastasize to the mandibular bone but gingival and lip mucosae as well as parotid glands are unlikely sites for such metastases, these being target sites for primaries from the lungs, kidney and gastrointestinal organs [11]. However adenocarcinoma of the prostate was confirmed with a transrectal prostate biopsy in this present case.

Having established this diagnosis, it became necessary to provide explanation for the multiple facial and parotid swellings with the attendant mental nerve neuropathy in this patient. Metastasis to the oral cavity and jaws is very rare, constituting only 1% of all malignant oral tumours [11]. Features usually include; idiopathic jaw pains, numb chin syndrome with or without jaw swelling. Jaw radiographs will often reveal osteolytic lesions [11]. In a few cases, radiographs may appear normal and further investigations such as isotopic bone scan and immunuhistochemistry are thus required [9, 11].These are not available in our centre. In this patient, fine needle aspiration and cytology of the parotid gland was obtained and it was reported as suspicious of lymphoblastic lymphoma. Incisional biopsy of the gingival lesion was also reported as non-Hodgkin's lymphoma. Based on this report, we concluded that the facial lesions were not metastases of the prostate cancer but rather a lymphoproliferative malignancy co-existing with it.

Adult Non-Hodgkin's lymphoma is usually found in older male patients especially when such patients are immunocompromised [8]. Retroviral screening in this patient was non reactive. Also, no features of autoimmune disease or inherited immune disorder were found. The only blood film and cell counts initially obtained in this patient were essentially normal. Further investigations such as lymph node biopsy, PET scan, MRI, gallium scan and/or bone marrow biopsy could have been useful for confirming this diagnosis [8]. However, the combination of non availability of facilities, non affordability by patient, and the rapid deterioration of the patient due to intercurrent illnesses prevented further investigation before the patient died.

The features of disseminated intravascular coagulopathy which manifested in this patient and which probably contributed to patient's death could be explained by the multiple predisposing factors. These include prostate cancer, infections and prolonged non ambulatory condition [17].

In conclusion, it is necessary to accept that a more thorough investigation could have further confirmed the diagnosis in this patient. An autopsy would have been more conclusive. Although we were unable to carry out all these investigations, the reporting of this case is still justifiable in view of the rarity of this type of presentations. The co-existence of such histologically diverse malignancies in a patient especially where an immunodeficiency could not be established is of special interest and underscores the need for extensive and prompt investigations.

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