African Journal of Urology (2015) **21**, 57–61

HOSTED BY

Pan African Urological Surgeons' Association

African Journal of Urology

www.ees.elsevier.com/afju
www.sciencedirect.com

Case report

Penile metastases from primary bronchus carcinoma – A case report and literature review

D.E. Du Plessis *, A. Van Der Merwe , C.F. Heyns

Department of Urology, Faculty of Health Sciences, University of Stellenbosch/Tygerberg Campus, P.O. Box 19063, Tygerberg 7505, South Africa

Received 29 August 2014; received in revised form 22 October 2014; accepted 27 October 2014

KEYWORDS
Penis;
Penile;
Metastases;
Lung cancer

Abstract

Introduction: The penis is an uncommon site of secondary metastases, and in most cases the primary tumour is found in the bladder, prostate, rectum or sigmoid colon. It is an extremely rare secondary metastatic site of lung cancer, with only 28 cases found in a review of the current literature. The majority of these cases were squamous cell carcinoma, with only 3 cases of adenocarcinoma.

Case presentation: Our case is a 55-year-old builder who presented with a painfully enlarged penis and loss of weight. He had a smoking history and was cachectic, with generalised lymphadenopathy and a firm mass on his left olecranon. His penis contained multiple firm nodules. Complete laboratory and imaging workup were done. Findings revealed a bronchial adenocarcinoma with multiple distant metastases, with the penile deposits as presenting symptoms. Management was with single high dose palliative half body irradiation. He survived 2 months after the presentation of penile metastasis.

Conclusions: Cases of metastases to the penis are very rare and often carry a grave prognosis, as it is a late manifestation of malignant disease. The average survival from the diagnosis of penile metastases in our review was just under 4 months. It is however important to be aware and recognise this rare phenomenon, and differentiate it from primary penis cancer. Treatment of penile metastases is mostly palliative, but much can be done to improve the patient's quality of life. Early correct diagnosis may also alter the treatment of the primary tumour.

Introduction

The penis is an uncommon organ for tumours to metastasise to, irrespective of the primary tumour, with just over 400 cases reported in the literature. The majority of metastases to the penis originate from cancers of the prostate (32%), bladder

* Corresponding author.
E-mail addresses: duplessisdanelo@gmail.com (D.E. Du Plessis), arvdm@sun.ac.za (A. Van Der Merwe), cfh2@sun.ac.za (C.F. Heyns).

Peer review under responsibility of Pan African Urological Surgeons' Association.

http://dx.doi.org/10.1016/j.afju.2014.10.005

(30%) and rectum and sigmoid colon (15%) [1–3]. Rarer sites include the kidneys, the respiratory tract, bone, testes and pancreas [1,2,4,5].

To our knowledge only 29 cases, including our own, of penile metastasis from lung cancer have been reported (see Table 1). The majority of these cases were squamous cell carcinoma (20/29 = 69%), with only three cases of penile metastasis from bronchial adenocarcinoma. Metastasis to the penis is usually associated with advanced metastatic disease, and a poor prognosis, regardless of tumour origin [3,5–9]. Preferred target organs for bronchial carcinoma are the brain, liver, adrenals, bone and regional lymph nodes, although virtually all organs may be affected [10]. Penile metastases are usually located in the corpus cavernosum, with the corpus spongiosum and glans penis rarely involved [11]. The most common presenting symptoms and signs are priapism, penile mass, pain, ulcer formation and obstructive urinary symptoms.

In this case report we will discuss a patient who presented with penile metastasis as the initial symptom of lung cancer. We also conducted and present a review of the current literature on penile metastasis from lung cancer.

Case presentation

Our case was a previously healthy 55-year-old builder, of mixed descent, who presented with a 3-month history of a painfully enlarged penis and loss of weight. He had a history of smoking (8 pack years) and a chronic cough. At diagnosis he complained of a painful glans penis, lower backache, swelling of the penis, poor stream, hesitancy and loss of weight.

He was pale and cachectic, with fixed lymphadenopathy (Virchow Trossier node, right supraclavicular, and bilateral hard inguinal nodes). He had a firm rubbery mass of 4 cm × 3 cm extending from his left olecranon. He had a swollen circumcised penis, with areas of ulceration on the glans. The rest of penile skin was not affected. The clinically obvious abnormality was the corpus spongiosum, which was hard and nodular along its entire palpable course. Both corpora cavernosa contained multiple nodules (±1 cm). The testes and scrotum were normal, with a benign feeling prostate of normal size, ±25 g. He had tenderness over his lumbar vertebrae, but no bony masses were palpable. He was HIV negative with a prostate specific antigen of 0.4 μg/l, and a corrected calcium level of 3.49 mmol/l.

Abdominal ultrasound revealed a Bosniak II cyst in the lower pole of the right kidney. His kidneys, liver, gallbladder and spleen appeared normal. His prostate was of normal size and echogenicity. Flexible urethrocystoscopy revealed an inflamed erythematous irregular urethral mucosa.

Chest X-ray showed a large mass in the upper lobe of his left lung, compressing the left main bronchus (Fig. 1). Urethrogram showed multiple areas of external compression (Fig. 2).

CT scan of chest, abdomen and pelvis revealed a primary lung carcinoma with a left-sided perihilar tumour nodal complex measuring 94 mm × 86 mm. The mass encased the left-sided pulmonary artery as well as major branches of the left-sided main bronchus. Pathological lymphadenopathy was noted within the left hilar, right hilar, subcarinal, retrocaval, anterior mediastinal and supraclavicular region. Bilateral pulmonary and renal metastases were demonstrated (Fig. 3).

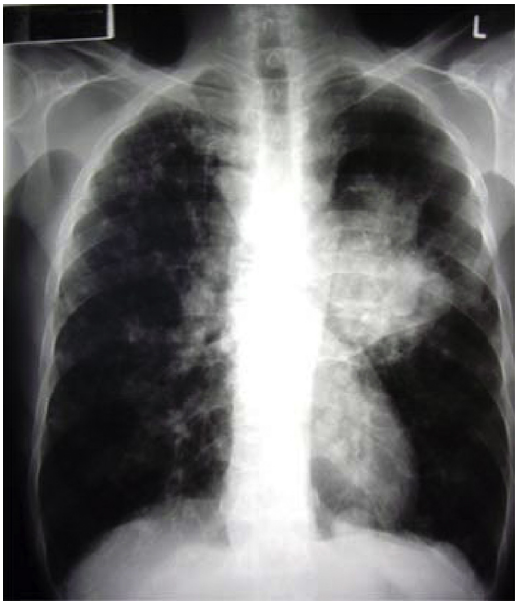

Figure 1 Primary lung carcinoma.

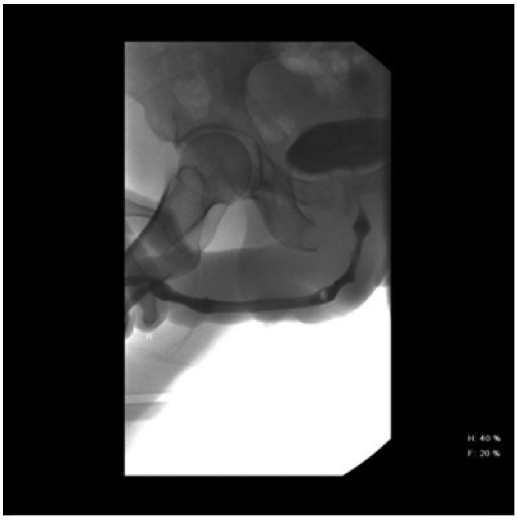

Figure 2 Urethrogram showing external compression.

There were bony metastases to the right acetabulum, bilaterally in the pubic body and inferior pubic rami (Fig. 4). Metastatic lesions to the corpora spongiosa were also noted. The liver, spleen and adrenal glands appeared normal, with no metastatic lesions. His CT scan was therefore compatible with a primary bronchus carcinoma stage T4 N3 M1.

Fine needle aspiration of the Virchow Trossier node showed cytology compatible with metastatic adenocarcinoma. The immunohistochemistry profile of CK7 positivity and CK 20 negative marker was strongly suggestive of metastatic adenocarcinoma of lung origin.