

Multiple Bilateral Cannon-Ball Lung Metastases from Carcinoma of the Prostate: Orchidectomy Induced Remission

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Summary

A 56-year-old man presented with lower urinary tract obstructive symptoms, hemoptysis and progressive dyspnoea. Digital rectal examination showed an enlarged nodular prostate and a tru-cut biopsy confirmed carcinoma prostate. Chest x-ray showed multiple bilateral cannon ball opacities suggestive of metastases. He underwent bilateral orchidectomy and follow up assessment showed significant clearing of the cannon-ball lesions in the lungs. He remained asymptomatic at follow up that has extended to 8 years.

Key Words: Metastases, Carcinoma prostate, Cannon-ball metastases, Hemoptysis, and Orchidectomy

Introduction

Autopsy studies show that lung metastases are not uncommon in advanced prostate carcinoma¹. However, clinically symptomatic lung lesions are rare. The common radiological manifestations of symptomatic lung metastases are either nodular lesions or diffuse carcinomatous lymphangitis. Bilateral cannon-ball lesions have not been reported to the best of our knowledge. The unusual clinical presentation, extensive bilateral lung involvement and the excellent clinical response to hormonal manipulation are the highlights of this case. The possibility of prostate carcinoma should always be considered in these clinical situations as hormonal treatment can

make a difference in the management of these patients to whom nothing could have otherwise been offered.

Case Report

A 56-year-old man presented with a 6 months history of progressively breathlessness associated with generalized weakness. He had hemoptysis lasting 48 hours in Sept 1992. He also complained of obstructive urinary symptoms for 3 months. General physical examination showed a dyspnoei, emaciated old man. Chest examination showed bilateral ronchi and scattered crepitations all over the chest.

This article was accepted:

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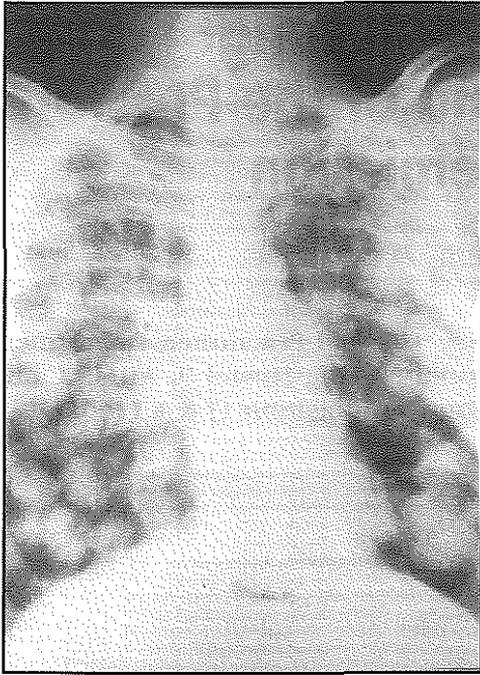


Fig. 1: Chest x-ray showing multiple bilateral cannon ball metastases.

Abdominal examination was unremarkable. Digital rectal examination revealed a hard nodular prostate. Hematological and biochemical investigations were within normal limits. His serum prostate specific antigen (PSA) was 230ng/ml. Chest x-ray showed multiple bilateral cannon ball shadows (Fig.1). He was treated with intermittent oxygenation with mask, antibiotics and bronchodilators till his general condition improved. A tru-cut biopsy of his prostate revealed adenocarcinoma with Gleason grade 3+4. The skeletal survey showed multiple osteoblastic lesions in vertebrae, pelvic bone and ribs. Bilateral orchidectomy was performed and the patient was discharged on 5th day of admission on bronchodilators and flutamide 250 mg three times a day. He gradually started improving and at 3 months follow-up his chest x-ray (Fig.2) showed disappearance of

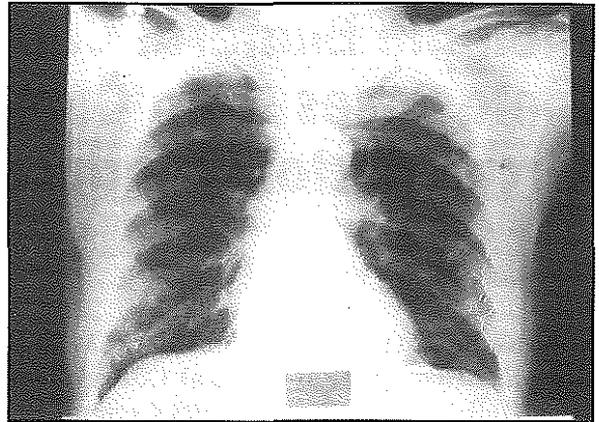


Fig. 2: Chest x-ray 3 months following bilateral orchidectomy and flutamide. Note the improvement in both lung fields.

cannon ball shadows and his PSA was 30 ng/ml. He was asymptomatic at a follow up 8 years later. The last PSA obtained in January 2001 was 20.5 ng/ml.

Discussion

Less than 6% of patients with carcinoma of the prostate manifest clinically² with lung metastases. The pulmonary presentations are, progressively increasing dyspnoea³, hemoptysis⁴, sub acute or chronic cor pulmonale⁵, and nodular lesions on routine chest radiography. Radiologically, pulmonary lesions manifest either as single/multiple discrete nodules or with a linear interstitial pattern⁶. The former are less common than the later. Multiple lung metastases are usually associated with concomitant bony lesions as is seen in the present case⁷. The characteristics of pulmonary involvement are a restrictive ventilatory defect, a decreased capacity and compliance and blood gases showing hypoxemia without hypercapnia⁸. Long-term survival is usually poor, however patients have been

reported to survive as long as 14 years following hormonal manipulation⁹. Awareness that carcinoma prostate can produce progressive pulmonary respiratory insufficiency should be emphasized as this malignancy can readily be detected by a sensitive marker in the form of prostate specific antigen (PSA) and digital rectal examination.

The case highlights the clinical presentation of prominent pulmonary symptoms from a metastatic carcinoma prostate, which on further investigations demonstrated disease spread to the bone. One should, therefore bear in mind prostate cancer in such cases, as long-term survival is possible with simple treatment.

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