

## Case Reports

# Endobronchial metastasis from basal cell skin cancer

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### Introduction

Basal cell carcinoma (BCC) is a slow growing, locally invasive neoplasm which rarely metastasizes to distant organs. Lungs are rarely involved, but even more rare are endobronchial metastases. We report a patient with recurrent obstructive pneumonia in the left lower lobe due to endobronchial localization of the metastasis.

### Case Report

A 59-year-old woman, non-smoker, housewife, was admitted to the Pulmonary Department in August 1992 with fever, cough and haemoptysis. She had similar episodes over the previous 6 months which were resolved with antibiotic treatment.

Three years earlier an ulcerated skin lesion was observed in the left axillary area. The lesion was surgically excised and histologic examination disclosed adenoid basal cell carcinoma (BCC). One year later recurrence was evident in the same region and a second and more extensive surgical intervention with amputation of the left arm was attempted because of perineural and perivascular invasion. The patient remained well for 18 months when pneumonia in the left lower lobe was diagnosed.

On examination, the patient was an obese woman, with complete amputation of the left arm, who appeared ill. Her temperature<sup>1</sup> was 38.4°C, blood pressure 120/80 mmHg, heart rate 95 beats min<sup>-1</sup> and respirations 20 min<sup>-1</sup>. The surgical scar showed no ulcerations and no lymph nodes were palpable. The rest of the clinical examination was negative, except for rales on auscultation of the posterior of the lower left hemithorax.

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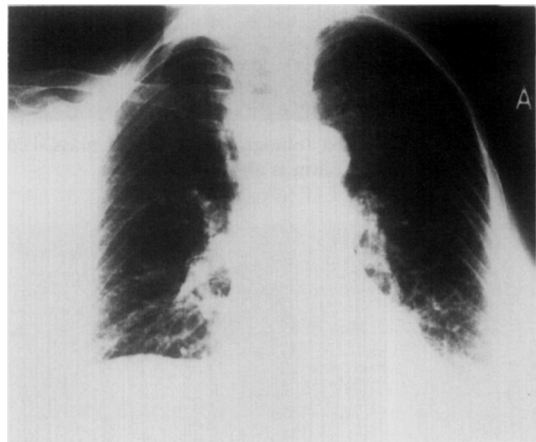


Plate 1 Posteroanterior (A) and lateral (B) radiogram shows an homogenous opacity in the posterior segment of the left lower lobe; absence of the left arm is evident.

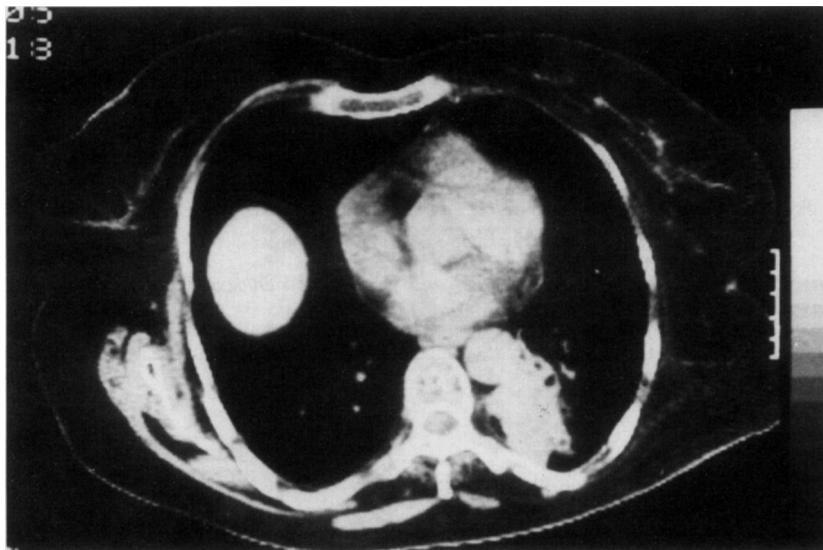


Plate 2 Computerized tomography reveals a mass 4 cm in diameter in the posterior segment of the left lower lobe; amputation of the left arm is also evident.

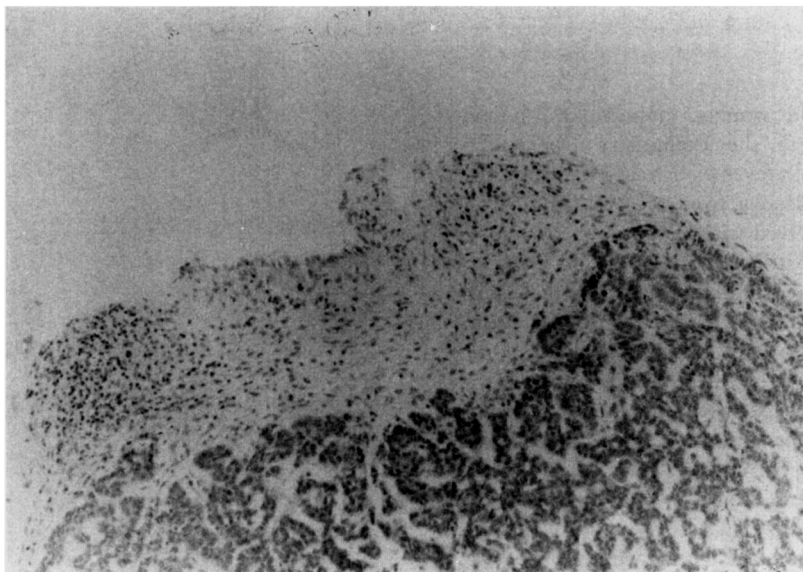


Plate 3 Histology of the endobronchial mass: basal cell carcinoma, adenoid type (H and E).

Erythrocyte sedimentation rate (ESR) was  $66 \text{ mm h}^{-1}$ , white cell count  $6.9 \times 10^9 \text{ l}^{-1}$ . The other laboratory tests were within normal limits. Mantoux tuberculin test was negative. Arterial blood gases in room air were:  $\text{PaO}_2$  8.6 kPa,  $\text{PaCO}_2$  4.2 kPa, pH 7.44 U.

Chest radiogram showed an homogenous opacity of the posterior bronchopulmonary segment of the left lower lobe without air bronchogram (Plate 1). CT-scan disclosed a 4 cm mass occupying the entire

posterior segment of the left lower lobe; no lymph nodes were evident (Plate 2).

Fibreoptic bronchoscopy showed a polypoid mass, totally occluding the posterior basal segmental bronchus. Endobronchial biopsy revealed tubular gland-like structures, with cells arranged in intertwining strands around islands of connective tissue, resulting in a lacelike pattern (Plate 3). These findings are compatible with adenoid basal cell carcinoma (BCC).

The final diagnosis was lung metastasis from BCC.

The patient refused surgery. She was treated with radiotherapy and is still alive and in fairly good health 12 months after the diagnosis.

## Discussion

Basal cell carcinoma (BCC), the most common form of skin cancer in humans, is a slow-growing, locally invasive neoplasm which rarely gives distant metastases. The incidence of metastasis has been calculated to be between 0.0028% and 0.1% in different centres (1,2). The low incidence of metastatic BCC seems to be related to the stromal dependence of basal cells that cannot survive without this mutual relationship (3). Up to 1991 there have been 257 cases of metastatic BCC reported (2).

The typical case history of a metastatic BCC is that of a large, ulcerated, locally invasive and destructive primary lesion that has recurred despite repeated surgical procedures, radiotherapy or other treatment (4). Most observers have found no specific histologic type of BCC that is more capable of metastasizing than others (5,6). However, some authors assert that the basosquamous type of BCC is the most likely to metastasize (7). Among the pure BCCs the histological types which metastasize more frequently are morpheaform, adenocystic and metatypical (7,8). Our patient had adenoid type BCC, locally very aggressive.

Eighty-eight percent of primary tumours which metastasize are located on the head and neck (7); the axilla has been reported once as the site of the primary lesion of metastasizing basal cell carcinoma (MBCC) (2). The average interval from the onset of the primary tumour to the time of metastases is reported to be 9.6 yr (7). Survival after signs of metastasis ranges from <1–192 months (9); the average survival time is 8 months (9). Metastases in 70% of cases occurred in the lymph nodes, 20% in the lungs, 18% in the liver and 17% in the bones (10).

Secondary neoplastic infiltration of the bronchial wall, of any histological type of cancer, is usually caused by direct extension from either a parenchymal tumour or an involved lymph node in the hilum or mediastinum or by a more or less diffuse

mucosal infiltration, as part of lymphangitic carcinomatosis. The majority of cases are incidental microscopic findings observed by the pathologist at autopsy. Occasionally, however, involvement of a bronchial wall may be relatively well localized, and considerable intraluminal growth can then occur (11). The commonest extrathoracic cancers presenting this way are breast, colorectum, kidney and malignant melanoma. However, to our knowledge, no mention of solitary, obstructive endobronchial metastasis from BCC has been previously reported.

In conclusion, lung metastasis and pneumonitis secondary to bronchial obstruction may be an unusual mode of presentation of metastasizing BCC of the adenoid type.

## Acknowledgement

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