*Thorax*, 1981, **36**, 183–184

# Endobronchial metastasis from renal adenocarcinoma simulating a foreign body

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ABSTRACT A patient was seen with right lower lobe collapse which partially re-expanded after removal of an endobronchial mass, initially thought to be a foreign body. The pathology revealed clear cell carcinoma identical with the primary removed from his kidney three years before.

Metastases in the lung parenchyma are fairly common,[1] but metastases in the large bronchi are thought to be rare, and so are seldom considered in the initial diagnosis.[2] When these endobronchial metastases do present they usually simulate, clinically and radiographically, bronchial carcinoma.[3] This case, in its presentation, simulated a foreign body in a bronchus.

## Case report

A 76-year-old Caucasianman presented in September 1979 with recent loss of weight which, though difficult to quantify, was estimated to be in excess of 20 lb over a few weeks. There were no respiratory symptoms. A chest radiograph showed collapse of the right lower lobe. The haemoglobin was 10 g/dl and a blood film showed normocytic, normochomic anaemia. Bone marrow was normoblastic. Erythrocyte sedimentation rate was markedly raised at more than 125 mm in the first hour.

It was thought that there was an endobronchial lesion, probably neoplastic. Sputum cytology, was negative for malignant cells. Fibreopticbronchoscopy showed a large, whitish, soild mass almost completely obstructing the bronchus intermedius. It was impossible to remove this mass by the flexible bronchoscope so the rigid bronchoscope was introduced, and the mass was almost completely removed. The mass was thought to be an inspissated mucous plug or foreign body. The chest radiograph now showed partial re-expansion of the right lower lobe. The pathology report was clear cell carcinoma. Further inquiry revealed that the patient had had a nephrectomy three years earlier for hypernephroma. The operative report at that time showed that the tumour was stretching but did not penetrate the renal capsule. The renal pelvis, artery, and vein were intact. The slides of the primary renal tumour were obtained and it was found to be identical with the endobronchial biopsy (figs 1, 2).

A search for other metastases was negative. This included whole lung tomography and bone, liver, and brain scans. A Gallium 67 scan showed increased uptake at 48 and 72 hours only, in the location of the right lower lobe. The patient continued to deteriorate steadily with generalised weakness, wasting, proximal myopathy, anorexia, and depression. He and his family refused any active treatment. He died after five months. Un-

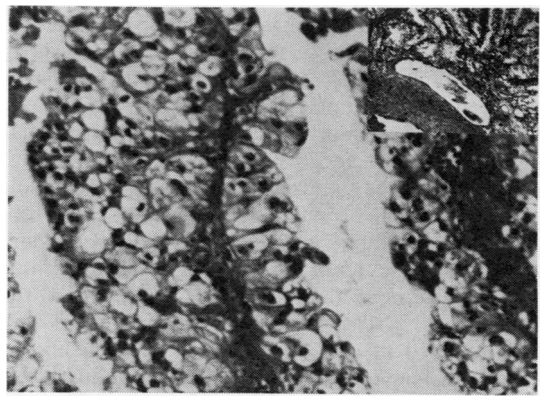

Fig 1 *Photomicrograph showing the primary carcinoma of the kidney. Cells with clear cytoplasm and hyperchromatic nuclei are seen. Inset shows a low power picture of the tumour. Haematoxylin and eosin, original magnification ×190.*

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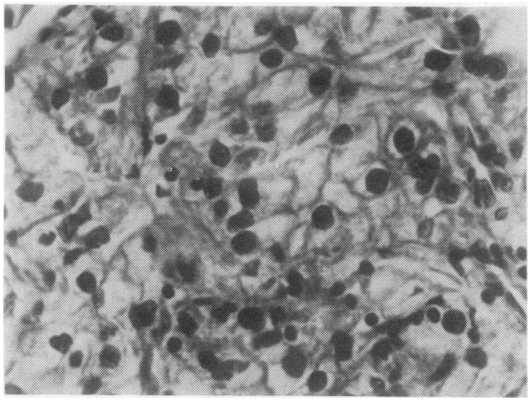

Fig 2 *Photomicrograph showing the metastatic endobronchial carcinoma with clear cells and hyperchromatic nuclei. Haematoxylin and eosin, original magnification ×380.*

fortunately, the family agreed to a necropsy limited to the abdomen only, which showed no evidence of any tumour in the kidney, liver, or gastrointestinal tract.

## Discussion

In this patient, the evidence shows that the clear cell carcinoma is a metastasis in the bronchus from the primary renal adenocarcinoma. The diagnosis is highly unlikely to be clear cell primary carcinoma of the lung because clear cell carcinoma of the lung is rare,[4] the slides of the renal and bronchial tumours were identical, and it is more logical to think of a single pathology rather than two separate pathological conditions.

The evidence also suggests that the involvement of the bronchus is through direct metastasis to the bronchial wall rather than direct invasion of the bronchus from nearby parenchymal metastasis. This is further supported by the following: (1) the radiographic and bronchoscopic findings, with lack of any other pulmonary metastasis on whole lung tomography and $^{67}$Ga scan; (2) the bronchoscopic finding of intraluminal extension, marked to the point of occlusion of the whole bronchial lumen; and (3) the re-expansion of the lobe, pointing to the fact that the bronchial wall was involved at one site (the site of the deposit) while the rest of the wall of the bronchus along the circumference was not involved and thus giving the possibility of re-expansion.

A review of the published cases revealed that endobronchial metastasis is more common than is generally thought.[5] The tumours most frequently associated with endobronchial metastases are those of the breast, kidney, colon, and pancreas.[6] Much less common are metastases from the prostate,[1] uterine leiomyosarcoma,[7 8] melanoma and choriocarcinoma, and most of these were single cases. Gerle and Felson[9] thought that renal adenocarcinoma was the most common to metastasise to the bronchus, but later publications[2 10-12] showed that breast cancer is more common.

We would like to express our appreciation to Ms Valerie Simms for her helpful secretarial assistance.

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