Case Report

Renal cell carcinoma manifests primarily as endobronchial mass: An unusual presentation

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ABSTRACT

Endobronchial metastasis (EBM) from renal cell carcinoma (RCC) is a very rare entity, though pulmonary metastasis of RCC is common. Here, we present a case of RCC with EBM, in which the primary tumor was detected after the detection of secondary. A 60-year-old man presented with cough for last 2 months. Contrast enhanced computed tomography (CECT) chest followed by bronchoscopy revealed an endobronchial mass at left bronhi. CECT whole abdomen revealed a left-sided renal space occupying lesion (SOL). CT guided fine needle aspiration cytology of the SOL proved it as a RCC. Palliative bronchoscopic removal of endobronchial mass by snaring diathermy was done.

Key words: Endobronchial metastasis, lung collapse, renal cell carcinoma

INTRODUCTION

Endobronchial metastasis (EBM) was defined as bronchoscopically visible lesions, histopathologically identical to the primary tumor in patients with extrapulmonary malignancies. EBM from extrapulmonary malignant tumors is rare. The most common extrathoracic malignancies associated with EBM are breast, renal, and colorectal carcinomas.[1] Lung is the common site of metastasis for renal cell carcinoma (RCC).[2] However, EBM as a first manifestation of RCC seems to be uncommon.[3,4] The electrosurgical snaring as palliative therapy for endobronchial mass has become widespread, especially to treat obstructive endobronchial tumors.[5] We report a rare case of RCC primarily presented with EBM and palliative recanalization of the left bronchus was done by electrosurgical snaring.

CASE REPORT

A 60-year-old nonsmoker male presented with dry cough for last 2 months. Patient was nonalcoholic with no history of fever or weight loss. On examination, blood pressure was 136/86 with no lymphadenopathy. Percussion and auscultation of the chest revealed dullness and diminished breath sound on the left side of the chest.

Routine hematological and biochemical investigations were within normal limit except raised erythrocyte sedimentation rate (70). Contrast enhanced computed tomography (CECT) chest shows left lower lobe collapse with left upper lobe consolidation with bilateral upper lobe nodules which are probably metastatic [Figure 1].

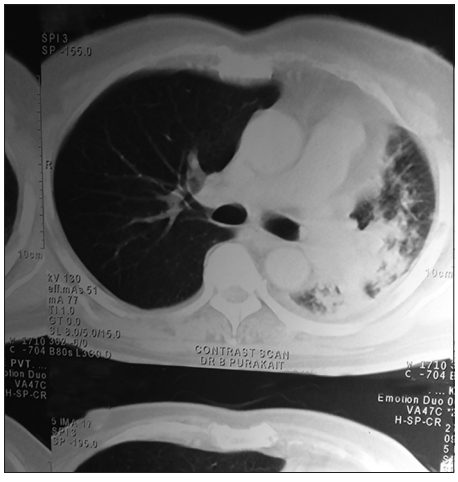

Figure 1: Contrast enhanced computed tomography chest shows consolidation of left lung

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With the increase of respiratory distress, fibreoptic bronchoscopy was done (to exclude any endobronchial mass), which revealed an occluding mass on the left sided large bronchus. Biopsy was taken but the result was unsatisfactory. Repeat bronchoscopy was done for removal of mass by snaring diathermy and palliative recanalization of the left bronchus [Figure 2]. CECT whole abdomen done for detection of primary, which revealed a left sided the renal space occupying lesion (SOL) (posterior aspect), infiltrating into the perinephric fat [Figure 3]. A CT guided fine needle aspiration cytology of renal SOL proved it as RCC-papillary variant [Figures 4 and 5]. Now the patient is planned radical left nephrectomy followed by chemotherapy.

DISCUSSION

The lung is a common site for metastasis from extrathoracic tumors, but EBMs are rare.[6] EBM are a late manifestation in the course of solid tumor.[5,7,8] In the majority of the cases clinical manifestation of the primary extrathoracic tumor antedated the diagnosis of EBM.[5,7,8] Occasionally clinical and roentogenographic features of EBM preceded the recognition of the primary tumor.[3,4] However, the mean interval from the initial diagnosis of the primary tumor to the diagnosis of EBMs ranges from 0 to 112 months.[1,9,10] In our case, patient presented with symptoms of EBM and it is detected before the detection of RCC.

Most typical symptoms of EBM are cough and hemoptysis, while dyspnea is seen less frequently.[8] In our case, patient presented with dry cough without hemoptysis and dyspnea develops later. EBMs can involve any airway level but have a predilection for the right lung in up to 80% of cases, although the reason for this is not clear.[11] This case was rather unique in that the tumor occluded the left main bronchus.

Renal cell carcinoma metastasizes most frequently to the lungs (50–60% of patients with metastases) and also commonly to the bones, liver, renal fossae, brain, and

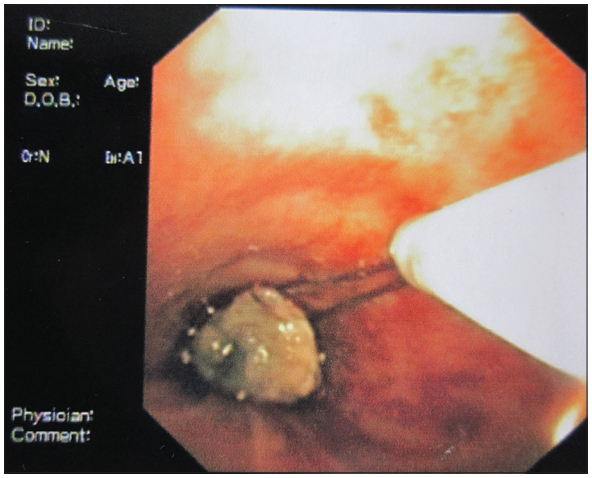

Figure 2: Bronchoscopic photograph shows an occluding endobronchial mass (at left main bronchus) removal by snaring diathermy

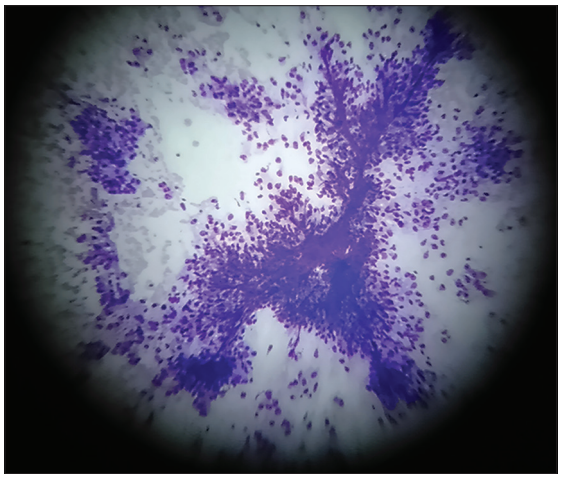

Figure 4: Photomicrograph of fine needle aspiration cytology (×40) shows papillary structures with prominent fibrovascular core, lined by malignant cells

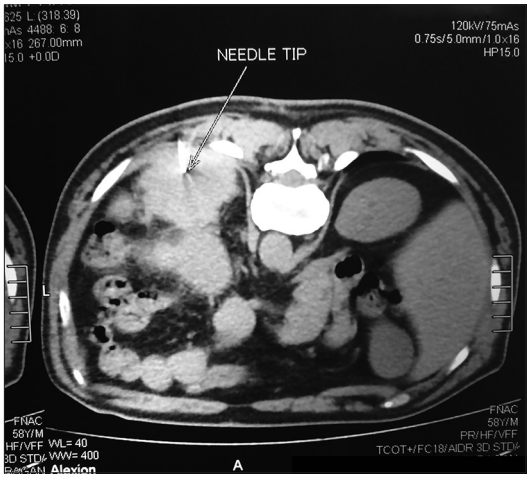

Figure 3: Contrast enhanced computed tomography (CT) abdomen during CT guided fine needle aspiration cytology (FNAC) shows a left renal space occupying lesion (SOL) and FNAC needle within the SOL

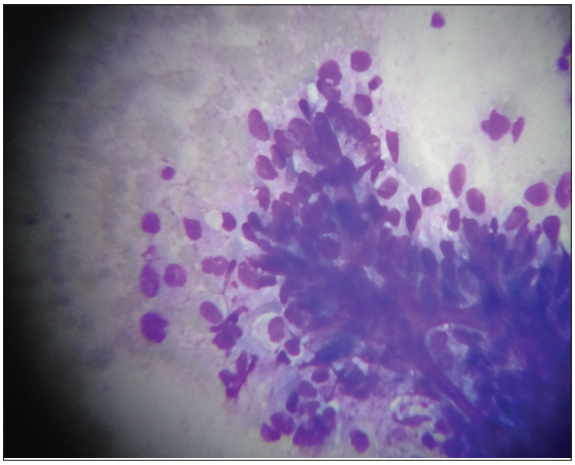

Figure 5: Photomicrograph of fine needle aspiration cytology (×100) shows papillary structure lined by pleomorphic cells with large nuclei, prominent nucleoli and moderate amount of clear cytoplasm, favoring features of renal cell carcinoma (papillary variant)

by direct extension, beyond Gerota's fascia.[12] Metastasis usually occurs by hematogenous spread to the parenchyma of other organs. For patients with lung metastases, hilar or mediastinal lymph node involvement (or both) occurs in 22–30% of cases and is associated with worse outcomes.[11,13] Radiological changes of atelectasis are usually the earliest indication of endobronchial disease,[14] and obstructive atelectasis most often associated with obstruction of lobar bronchi.[15] In our case, patient having both upper lobe collapse and lower lobe atelectasis of left lung along with multiple metastatic nodules at upper lobe of both lungs without any hilar or mediastinal lymphadenopathy.

The therapeutic approach to an endobronchial tumor is determined by the characteristics of the primary tumor, biological behavior, anatomic location of the EBM, and the patient's performance status.[13] We choose snare diathermy for its convenience and safety. In conclusion, endobronchial techniques, such as snare diathermy, can relieve obstruction, providing symptom palliation even in advanced disease.

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