

Case Report

Colonic polyp-rare site of metastasis from primary lung carcinoma: Clinical presentations and outcome

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ABSTRACT

Although majority of lung cancers have distant metastasis at the time of initial diagnosis, colonic metastases are extremely rare. This report presents a rare clinical case which presented with lower limb deep vein thrombosis and found to have colon polyp incidentally detected while evaluating for occult blood positive in stool. Histopathology of the polyp was suggestive of lung primary and on further evaluation PET scan was suggestive of left lung mass with widespread distant metastasis.

KEY WORDS: Colonic polyps, Lung carcinoma, deep vein thrombosis, colonic metastasis

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INTRODUCTION

Lung cancer is the most frequent cause of cancer-related deaths in India and also worldwide. Majority of the patients present with a Stage IV disease with metastases commonly to the liver, brain, adrenal, and bone marrow. Metastases to the colon as polyp are rare to find. We report a case of carcinoma lung with polypoidal metastases in the colon.

CASE REPORT

A 45-year-old female, a known case of Type II diabetes mellitus and hypertension for the last 4 years, presented with pain in the abdomen, anorexia, and right lower limb swelling of 1-month duration. There was no history of cough or breathlessness. There was no history of weight loss, constipation, diarrhea, fever, or any other significant complaint. On evaluation, color Doppler revealed right lower limb edema with contrast

filling defect in dilated extrahepatic inferior vena cava, right common iliac, external iliac vein, femoral and popliteal vein consistent with deep-vein thrombosis. Her hemoglobin was 8.5 mg/dl, and biochemical profile was normal. Stool for occult blood was positive while tumor marker analysis revealed serum CA-125-148 U/ml, serum CA19.9-245 u/ml, serum carcinoembryonic antigen-12.3 ng/mL, and serum lactate dehydrogenase-230 U/L. Chest X-ray showed right lung nodular opacities with sclerotic bony lesions. Upper gastrointestinal (GI) endoscopy was normal while colonoscopy revealed a single colonic polyp in the descending colon [Figure 1]. Positron emission tomography (PET) scan [Figure 2a,b] was suggestive of metabolically active left lung nodular lesions, widespread lymphadenopathy, liver left adrenal and omental deposit with soft-tissue nodules and diffusely metabolically active sclerotic lesions involving the axial

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Figure 1: Isolated polyp in the colon as seen on colonoscopy

and appendicular skeleton. Finally, the biopsy taken from colonic polyp was suggestive of poorly differentiated adenocarcinoma which on immunohistochemistry (IHC) revealed positivity for TTF1, CK7, and negative for CDX2 and CK20. The biopsy from cervical lymph node was also suggestive of adenocarcinoma from lung primary. Based on the final histomorphologic features and IHC staining patterns, the patient was diagnosed with a case of metastatic adenocarcinoma of the lung, and the specimen is further subjected for estimated glomerular filtration rate (EGFR) mutation and anaplastic lymphoma kinase (ALK) translocation studies which came out to be EGFR wild and positive for ALK translocation. The patient was started on palliative treatment with tablet crizotinib 250 mg twice daily in May 2017. Re-evaluation at 3 months with PET scan [Figure 2c] revealed significant response to treatment.

She started having impaired vision in August 2018 and magnetic resonance imaging (MRI) brain (September 18) was suggestive of neuroparenchymal-enhancing lesions and linear leptomeningeal enhancement. Cerebrospinal fluid cytology was negative for malignant cells. She received whole-brain radiation therapy for the brain lesion. She was started on tablet Ceritinib 450 mg daily in November 18 and monthly injection zoledronic acid. PET computed tomography (CT) scan (26.12.18): Metabolically active cavitary right lung lesion, right pleural effusion and thickening with persistent metabolically inactive lymph nodal, liver and sclerotic bony abnormalities. These right lung findings might be infective/inflammatory in nature. No other metabolically active disease elsewhere in the body. MRI brain (26.12.18): Posttyrosine kinase inhibitor status with residual metabolically inactive enhancing supra and infratentorial brain lesions, minimal leptomeningeal enhancement showing good response to therapy, persistent cranial vault bony lesions. She received Ceritinib till March 19 when her PET scan was suggestive of disease progression in lungs and increased leptomeningeal enhancement. After discussing various treatment options, she was started on pemetrexed and carboplatin-based

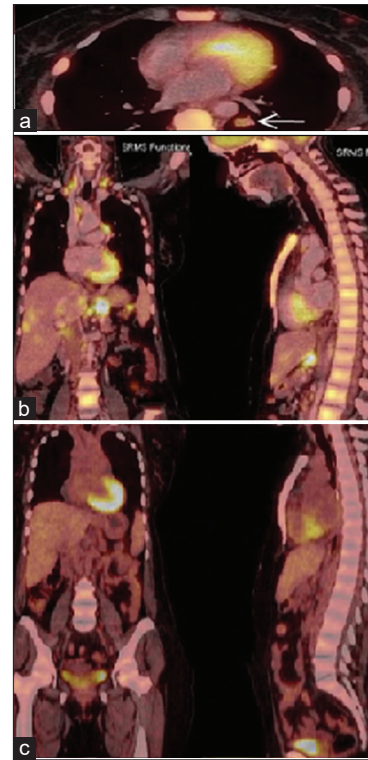


Figure 2: (a,b) Positron emission tomography scan showing metabolically widespread lymphadenopathy, liver left adrenal and omental deposit with soft-tissue nodules. (c) Positron emission tomography scan showing good partial response to treatment

chemotherapy with intrathecal chemotherapy in April 2019. After receiving the first cycle, the patient was lost to follow-up.

DISCUSSION

Lung cancer is one of the most common cancers in men worldwide, and majority of the patients are diagnosed in the advanced stage. The common sites of metastasis include liver, adrenals, brain, bone, and contralateral lung^[1]. GI metastases from primary lung cancer are rarely diagnosed and small bowel is the most common part of the GI system if involved.^[2] The actual incidence of these metastases is not known. There are few case reports and retrospective studies only in this context. GI metastases were found in only 0.19% of 5329 patients of lung cancer as per Kim *et al.*^[3] Ryo *et al.* have also reported the incidence of GI metastases among lung cancer patients, 0.5% were to colon and 1.5% to stomach and small intestine.^[4] Yang *et al.* found only six patients with GI metastases among 339 patients with lung cancer.^[5] GI metastases are probably under diagnosed as most of the related symptoms such as pain abdomen and vomiting are considered a result of drugs or enteritis. As per Berger *et al.*, lung cancer involves esophagus by direct continuity and small intestine and stomach due to hematogenous dissemination and colon is least commonly involved.^[6] This case presented primarily with extrathoracic lesions and PET-CT was suggestive of

lesion at gastroesophageal junction, lung nodule, liver involvement, and omental deposits with generalized lymph node involvement. Differential diagnosis included primary being GI junction, carcinoma ovary, carcinoma colon, and lung cancer. Awaiting the cervical lymph node, biopsy report upper GI endoscopy and colonoscopy was also done in search of primary and although asymptomatic, a polyp was detected in the colon from which a biopsy was taken. Cervical lymph node biopsy was suggestive of adenocarcinoma and IHC was suggestive of lung as primary. Biopsy from the colon polyp was also suggestive of adeno-carcinoma so to rule out synchronous carcinoma colon further IHC was done which revealed CK-7 and TTF expression positive and it was negative for CDX-2 and CD 20. The patient had a PFS of 18 months on crizotinib as compared to the median PFS of 10.8 months seen in profile 10,104 study for first line crizotinib.^[7] It is usually difficult to diagnose the origin of GI tumor by CT scan and even by endoscopies, and lung cancer involving the gastrointestinal tract has no peculiar features often mimicking a GI primary. Thus, IHC with TTF-1, CDX 2, CK 7, and CK 20 is an essential tool to distinguish primary GI tract tumor from metastasis of lung cancer.^[8]

This is the first case till date to the best of our knowledge with colonic metastasis as a luminal polyp which turned out to be EML-ALK4 positive. This again re-emphasizes the importance of IHC in diagnosing unusual metastasis in the clinical practice.

CONCLUSION

This report presented a rare case of colonic metastasis from primary lung cancer. Patients with advanced primary lung cancer that complain of abdominal symptoms may therefore have GI metastases from lung cancer, and their GI tract should be actively examined to allow the early detection and treatment.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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