

LETTERS TO THE EDITOR

Primary Lung Carcinoma With Intestinal Metastases: 3 Cases in a Series of 420 Patients

To the Editor: Metastases of a primary lung carcinoma to the small intestine are not uncommon, but their clinical manifestations are. Such metastases can cause bleeding, malabsorption, or intestinal perforation, although intestinal obstruction is the most common consequence. The prognosis for patients with such metastases is quite poor and survival rarely exceeds 16 weeks.¹ In our hospital 420 patients were diagnosed with lung cancer over a 5-year period, and of those only 3 presented metastases to the small intestine. In 1 patient, initial symptoms were of mesenteric angina and in the other 2 patients the metastases were found by chance during assessment of the extension of the lung tumor.

Case 1. The patient, a 65-year-old man, was a smoker (40 pack-years) who visited the emergency department due to intense abdominal pain that worsened after meals. An increase in lactate dehydrogenase was detected and, suspecting mesenteric ischemia, we performed intravenous contrast-enhanced computed

tomography (CT) of the abdomen and pelvic area that showed a mass with an irregular cavity and containing an air-fluid level in the proximal jejunum. CT-guided fine-needle aspiration identified a neuroendocrine carcinoma that was negative for wide-spectrum cytokeratin antibodies against AE1/AE2. The chest x-ray showed a 5 cm mass in the posterior segment of the upper right lobe as well as an increase in the size of the right pulmonary hilum, with a polylobular appearance. These findings were indicative of a primary lung carcinoma with ipsilateral hilar lymph node involvement that was confirmed by intravenous contrast-enhanced CT of the chest and abdomen (Figure 1) and CT-guided fine-needle aspiration, which yielded a cytologic diagnosis identical to that of the jejunal mass. The patient received chemotherapy and had a good initial response, but with subsequent relapse and progression of both the pulmonary and intestinal lesions.

Case 2. The patient was a 60-year-old man with chronic obstructive pulmonary disease. In the course of preoperative tests prior to surgery for Morton's neuroma, a mass at the base of the right lung and an enlarged ipsilateral hilum with a lobulated appearance were detected. Intravenous contrast-enhanced CT of the chest and abdomen showed a cavitated mass in the lower right lobe, with ipsilateral hilar lymph node enlargement as well as thickening of the

jejunum with an eccentric growth pattern and swelling of mesenteric lymph nodes. Cytology of the lung and intestinal lesions, obtained by CT-guided fine-needle aspiration, was indicative of large-cell undifferentiated carcinoma (Figure 2). The patient developed melena and underwent resection of the intestinal mass with end-to-end anastomosis. Pathology subsequently confirmed the pulmonary origin of the lesions.

Case 3 The patient was a 47-year-old man with chronic liver disease who was admitted with superior vena cava syndrome. Intravenous contrast-enhanced CT of the chest and abdomen showed a solid lobulated mass with areas of necrosis and heterogeneous contrast enhancement in the upper right lobe, with considerable mediastinal node involvement that infiltrated the ipsilateral pulmonary arteries, causing compression (but not thrombosis) of the superior vena cava, with development of collateral circulation. Several nodules in the right lung and a right suprarenal mass of 8 cm, indicative of metastases, were also observed. Cytology of material obtained by CT-guided fine-needle aspiration showed large-cell undifferentiated carcinoma. The patient was treated with radiation therapy and implantation of a stent (Wallstent; Boston Scientific, Tokyo, Japan). A perforated jejunal tumor and peritoneal carcinomatosis were found during surgery. Resection of the tumor with end-to-end



Figure 1. Coronal reconstruction after a study of the chest, abdomen, and pelvis with intravenous contrast enhancement using a 64-detector computed tomography scanner. A mass in the upper right lobe (black arrow) and enlargement of the loops of the small intestine (white arrow) due to a primary neuroendocrine lung carcinoma with intestinal metastases can be seen.

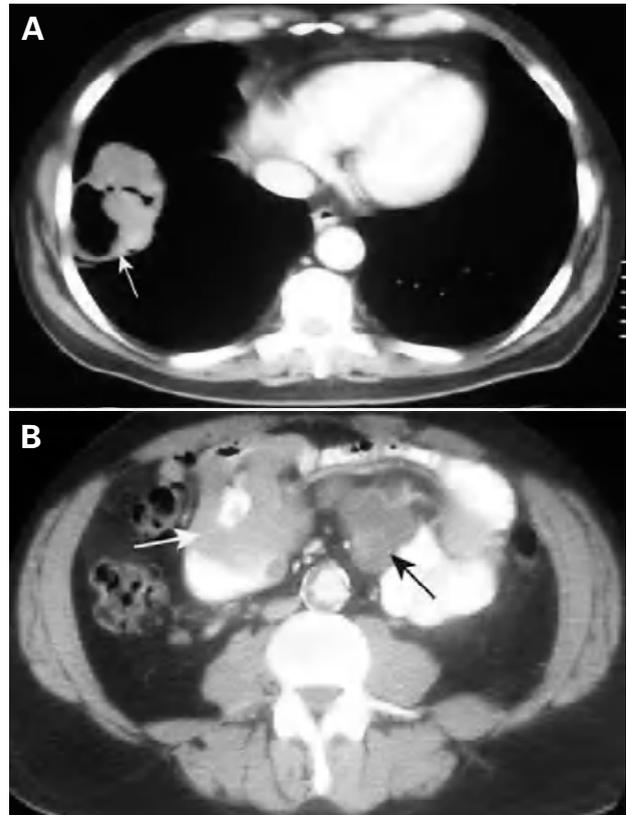


Figure 2. (A) Intravenous contrast-enhanced computed tomography (CT) image of the lower lobes of the lung, in which a cavitated solid mass (white arrow) can be observed in the lower right lobe. (B) Intravenous contrast-enhanced CT image of the lower abdominal cavity, in which enlargement of the loops of the small intestine (white arrow) and enlarged mesenteric lymph nodes (black arrow) can be seen. Those findings were associated with metastasis of a primary large-cell undifferentiated lung carcinoma.

anastomosis was performed, with a favorable postoperative outcome. Pathology confirmed the pulmonary origin of the lesions.

Primary lung carcinoma is the most frequent cause of cancer deaths among men in the West.² At the time the disease is diagnosed, about half the patients present metastases, most frequently to the brain, bones, liver, suprarenal regions, and lymph nodes. The esophagus, by direct extension, is the area of the digestive tract that is most often affected,¹ while metastases to the small intestine, although rare, are more common than was originally believed. In a review of 431 autopsies of patients who had died of lung cancer, McNeill et al³ found only 46 patients with metastases to the small intestine, only 6 of whom had presented symptoms. De Castro et al⁴ reported 51 cases of intestinal metastases over a 49-year period. Of those, only 1 was from pulmonary carcinoma, while the majority were from kidney or cervical cancer. Of the 129 cases of metastasis to the small intestine reported by Ushio et al,⁵ only 10 were of pulmonary origin. In a series of 1544 patients with lung cancer evaluated over a 12-month period, Berger et al⁶ found only 6 who developed clinical symptoms due to metastases to the small intestine.

We reviewed a total of 420 cases of lung cancer diagnosed in our hospital in the last 5 years and found only 3 patients (0.71%) with intestinal metastases. Of those, 2 presented digestive symptoms. While intestinal metastases were present from the outset in all 3 patients, in only 1 patient was the intestinal mass diagnosed first, with lung cancer diagnosed subsequently. The jejunum is the most frequent location of lung cancer metastases to the small intestine,⁷ and this was the case in our series.

Surgical resection is indicated in the absence of other metastases or as palliative treatment in the presence of severe bleeding, obstruction, or perforation. Survival may increase with surgery, although it rarely exceeds 16 weeks. Rouhanimanesh et al⁸ reported the case of a patient who survived for 17 months and Berger et al,⁶ that of a patient who survived for 22 months. Our first patient is still alive after 11 months, while the second patient survived for 3 months and the third for 4 months.

In the presence of iron deficiency anemia in a patient with lung cancer, we should therefore not overlook the possibility of intestinal metastases as one of the possible causes of bleeding.

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