

# Perforation of small intestine due to metastatic lung carcinoma

Shay Brikman, Elena Chertok, Guy Dori

Internal Medicine E, Emek Medical Center, Afula, Israel

**Correspondence to**  
Dr Guy Dori, [guydo@clalit.org.il](mailto:guydo@clalit.org.il)

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## DESCRIPTION

A 66-year-old woman with a history of 40 pack-year cigarette smoking and type II diabetes mellitus presented to the emergency department with unexplained weight loss and cough for a few weeks. These complaints constituted her first clinical manifestation. Physical examination was notable for diffuse abdominal tenderness. Chest and abdominal films ([figure 1](#)) revealed a prominent round opaque lesion in the right lung (arrow) and a large amount of free air under diaphragms with air-fluid levels.

The patient underwent an urgent laparotomy for pneumoperitoneum. Perforation of the small intestine due to a malignant metastasis was detected. The patient underwent a wide resection of the small intestine with closed loop anastomosis. The biopsy specimen was consistent with poorly differentiated squamous cell lung carcinoma staining positively for PDL-1 receptor. Her postoperative course was malignant, including: superior vena cava syndrome treated with a stent, redo operation due to eventration and nosocomial pneumonia, and she was transferred to an oncologic centre for palliative mediastinal radiation. The patient succumbed 6 weeks after admission.

The most common malignancy accounting for gastrointestinal perforation is lung cancer, which



**Figure 1** Upright chest (left) and abdominal (right) films demonstrating round opaque lesion (arrow) and free air under diaphragms and levels of fluid in the stomach and intestine.

tends to primarily involve the small bowel and is usually accompanied by a small amount of free air.<sup>1</sup> Lung cancer frequently metastasises to brain, liver, bones and adrenals. However, small intestine metastasis of primary lung cancer may occur in up to 10.7% of the cases. It has also been reported that about 30% of intestinal metastases of primary lung cancer were squamous cell carcinoma by pathology subtype. Perforation of the small bowel by metastasis of lung carcinoma is a poor prognostic indicator with median survival of 1.5 months.<sup>2</sup>

## Learning points

- ▶ Peritonitis in a heavy smoker patient with unexplained ongoing weight loss may be due to intestinal perforation caused by remote metastasis.
- ▶ The prognosis of a patient with an intestinal perforation due to lung cancer metastasis is poor.

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