Perforation of small intestine due to metastatic lung carcinoma

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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 extravasation 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 tends to primarily involve the small bowel and is usually accompanied by a small amount of free air.

Perforation of the small intestine due to a malignant metastasis was reported 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.

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.

Contributors SB suggested reporting the case, acquired the relevant data, interpreted the data and reviewed the literature. EC acquired the relevant data, interpreted the data and researched the literature. GD studied the literature and wrote the manuscript. All authors reviewed and approved the manuscript.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent Next of kin consent obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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