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Small intestinal metastases from esophageal carcinoma presenting as a perforation: A case report and review of the literature

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ABSTRACT

INTRODUCTION: Small intestinal metastasis from oesophageal carcinoma is rare. We report a case of small intestinal metastases from oesophageal carcinoma presenting as a perforation and discuss the aetiology with other cases of small intestinal metastasis from oesophageal carcinoma reported in previous literature.

PRESENTATION: An 86-year-old man presented with fever and coughing. He had choked while eating and had history of weight loss. He was diagnosed with aspiration pneumonia. Two days after the admission, he complained of abdominal pain. Physical examination revealed guarding and rebound tenderness in the upper abdomen. A contrast computed tomography of the abdomen showed ascites, free air, and irregular thickness of the small intestinal walls. Small intestinal perforation was noted, and surgical resection of the small intestine was performed. The pathological findings of the resected small intestine revealed ulcers with squamous cell carcinoma, and upper gastrointestinal endoscopy demonstrated oesophageal tumour, whose biopsy revealed squamous cell carcinoma. A diagnosis of small intestinal metastases from oesophageal carcinoma was made, but the patient died one month after the diagnosis.

DISCUSSION: Most cases found in the literature of oesophageal tumour involve squamous cell carcinoma with male patients, and specific symptoms are divided into obstruction and perforation. All patients with small intestinal metastasis from oesophageal carcinoma who survived were treated by a combination of resection and radiation and/or chemotherapy; thus, immediate treatments seem essential to improve the prognosis.

CONCLUSION: Physicians should keep in mind the possibility of small intestinal metastasis when patients with a history of oesophageal cancer have abdominal symptoms.

1. Introduction

Metastatic involvement of the intestinal tract from extra-abdominal sites is uncommon [1]. In oesophageal carcinoma, liver and lungs are the most common sites for metastases, and small intestinal metastasis from oesophageal carcinoma has rarely been reported in the previous literature [2–4]. We report a rare case of small intestinal metastases from oesophageal carcinoma presenting as a perforation and discuss the aetiology with other cases of small intestinal metastasis from the oesophageal carcinoma reported in previous literature. The work in this case has been reported in line with the surgical case report (SCARE) criteria [5].

2. Case presentation

An 86-year-old Japanese man presented with a history of fever and cough. He had sometimes been choked with even soft foods and had 5 kg of body weight loss for the last 3 months. He had a history of diabetes mellitus, chronic renal failure, dyslipidaemia, and dementia and was taking medications including insulin for these conditions. He had been smoking 20 cigarettes per day for 66 years and drinking a glass of sake per day for 60 years. His family history was unremarkable. On arrival, his blood pressure, pulse, body temperature, respiratory rate, and oxygen saturation were 153/56 mmHg, 100 beats/min, 38.5 °C, 16 breaths/min, and 98% under room air, respectively. A physical examination revealed coarse crackles on the bilateral lower lobes and no tenderness on the abdomen. Laboratory studies revealed findings of leucocytosis, an increased level of C-reactive protein (CRP), renal dysfunction, hyperglycaemia, and an increased level of glycated haemoglobin, which indicated uncontrolled diabetes mellitus

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Table 1
Laboratory findings on the admission day.

Complete Blood Count		Biochemistry				Coagulation	
WBC	13.8 $10^3/mm^3$	CPK	39 IU/L	Na	134 mEq/L	PT-%	77.2 %
Neu	91.1 %	T-BIL	0.9 mg/dL	K	4.5 mEq/L	PT-INR	1.13
Lym	5.6 %	AST	20 IU/L	Cl	103 mEq/L	APTT	26.8 sec
Mono	3.0 %	ALT	13 IU/L	Ca	10.1 mg/dL		
RBC	4.55 $10^6/\mu L$	LDH	266 IU/L	Mg	2.1 mg/dL		
Hb	13.0 g/dL	γGTP	19 IU/L	IP	2.1 mg/dL		
Ht	38.7 %	TP	7.9 g/dL	Glu	289 mg/dL		
MCV	85.1 fl	ALB	3.2 g/dL	HbA1c	8.2 %		
PLT	202 $10^3/\mu L$	BUN	32.1 mg/dL	CEA	7.6 ng/mL		
		CRE	1.34 mg/dL	CYFRA	6.9 ng/mL		
		CRP	3.4 mg/dL	SCC antibody	6.6 ng/mL		

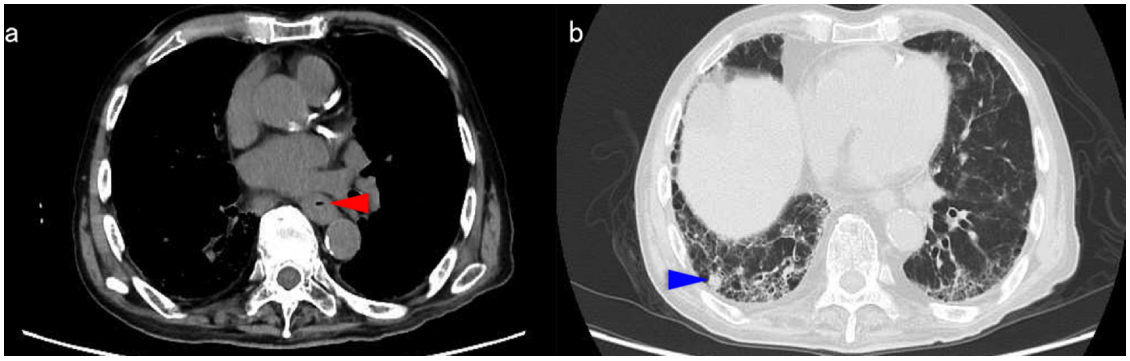

Fig. 1. a) A marked thickening of the middle intra-thoracic oesophageal wall (red arrow). b) A bilateral infiltration and a mass (blue arrow), 10 × 10 mm in size, in the right S9 lesion.

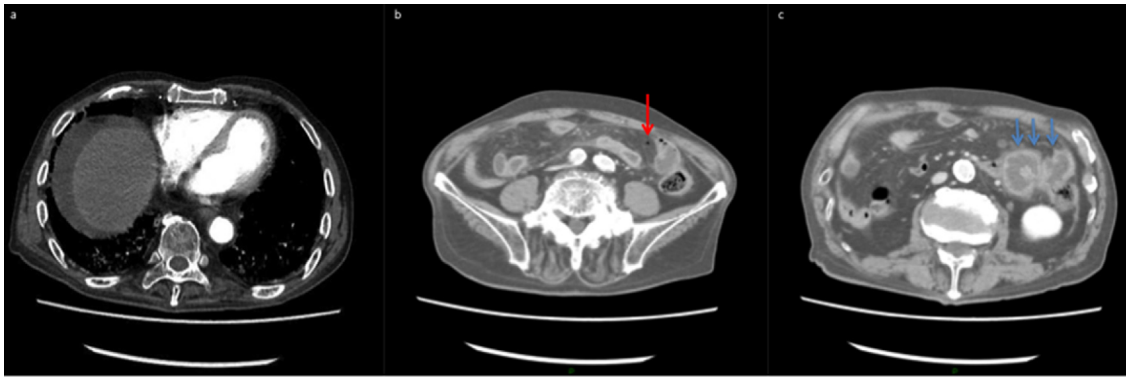

Fig. 2. A contrast CT of the abdomen showing ascites (a), free air (b; red arrow), and irregular thickness of the small intestinal walls (c; blue arrows).

(Table 1). A computed tomography (CT) scan of the chest showed marked thickening of the middle intrathoracic oesophageal wall, bilateral infiltration, and a mass, 10 × 10 mm in size, in the right segment 9 (S9) lesion (Fig. 1). Thus, we diagnosed the patient with aspiration pneumonia and suspected lung and oesophageal carcinoma and started broad-spectrum antibiotics. Two days after the admission, the patient suddenly complained of abdominal pain. Physical examination revealed muscular defence and rebound tenderness in the upper abdomen. A contrast CT scan of the abdomen showed ascites, free air, irregular thickness of the small intestinal walls, and mesenteric lymphadenopathy (Fig. 2). Emergency laparotomy was performed. Intraoperative findings showed that a non-perforated ulcer with a submucosal nodule approximately 80 cm distal from the ligament of Treitz and a perforated ulcer approximately 110 cm distal from the ligament of Treitz (Fig. 3). A diagnosis of small intestinal perforation was made, and surgical resection of the small intestine 30 cm in length, end-to-end anastomosis, and saline lavage in the abdominal cavity were performed. Markers panel like p63 and cytokeratin 5/6 is highly sensitive and specific for distinguishing squamous cell carcinoma from adenocarcinoma, and immunohistochemical results of these two ulcerative lesions positive for both p63 and cytokeratin 5/6. Thus the pathological findings of the resected small intestine revealed ulcers with squamous cell carcinoma, which suggests the primary site of carcinoma is different since the other sites of the small intestine did not have any findings of malignancy and primary squamous cell carcinoma of the small intestine is extremely rare. (Fig. 4a–e). On postoperative day 7, upper gastrointestinal endoscopy was performed, and ulcerative and localised type of oesophageal tumour as the macroscopic classification was