Metastatic Bronchoalveolar Carcinoma Presenting as Chronic Esophageal Stricture

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ABSTRACT

We report a case of chronic esophageal stricture resulting from metastatic bronchoalveolar carcinoma in a patient without a prior diagnosis of malignancy. The diagnosis was made on pathologic examination of the resected specimen after esophagectomy. Further workup subsequently revealed additional sites of metastasis.

INTRODUCTION

Most esophageal strictures result from long-standing gastroesophageal reflux disease, which accounts for 70% to 80% of adult cases. Metastasis from a distant primary to the esophagus is uncommon and a rare cause of esophageal stricture. Clinical diagnosis, by endoscopy, is often difficult because the disease is extramucosal. Most cases are diagnosed on autopsy or after surgical resection. In this report, we describe a patient with a chronic esophageal stricture and no history of malignancy who underwent Ivor-Lewis esophagectomy. The resected specimen revealed metastatic bronchoalveolar carcinoma within the stricture and in surrounding lymph nodes.

CASE REPORT

A 65-year-old White woman with a history of chronic obstructive pulmonary disease (COPD) and long-time heavy smoker was referred to the thoracic surgery service for dysphagia. The stent had been placed 8 months earlier at another hospital during a prolonged and complicated hospitalization after surgery for colonic diverticulitis. She underwent tracheostomy and gastrostomy during that hospitalization as well. According to the medical records, the esophageal stent was placed for management of a benign peptic stricture. Physical examination revealed a frail middle-aged woman in a wheelchair. She had a patent tracheostomy stoma and a gastrostomy tube in the left upper abdomen. Barium swallow revealed a focal stricture at the proximal extent of a distal esophageal stent. The stent was removed, and the stricture dilated. However, the dysphagia and stricture continued to reoccur, requiring multiple stricture dilations. A year after the initial consultation, the patient underwent Ivor-Lewis esophagectomy for refractory esophageal stricture. Intraoperatively, there were few pleural adhesions with pleural thickening. No discrete palpable lung or esophageal mass was identified. Histopathologic examination of the resected specimen revealed an area of ulceration involving the gastroesophageal junction. The underlying muscularis propria, muscularis mucosae, and submucosa surrounding the ulcerative region contained desmoplastic-type fibrosis and numerous dilated lymphatics, which were expanded by neoplastic glands (Figure 1). The neoplastic cells were positive for cytokeratin 7, thyroid transcription factor 1, and napsin A and negative for estrogen receptor, cytokeratin 20 (weak nonspecific staining), and caudal-type homeobox 2 (Figure 1), characteristic of a bronchoalveolar adenocarcinoma. In addition, 4 of 6 periesophageal and perigastric lymph nodes evaluated were involved by metastatic adenocarcinoma. Extensive gross evaluation of the resected specimen did not demonstrate a discrete mucosal mass, and histologic analysis demonstrated no dysplastic changes within the epithelium. A subsequent chest/abdominal/pelvic computed tomography scan revealed postoperative changes in the right chest, with multiple areas of nodular patchy consolidation in both lungs and subpleural nodules of...
the left lung (Figure 2). There were also multiple areas of mixed lytic and sclerotic infiltrative bony changes involving the pelvis, spine, and ribs, consistent with metastasis.

On postoperative day 3, the patient had an aspiration episode with resultant sepsis, necessitating intubation and subsequently tracheostomy. She was unable to wean from the ventilator and eventually died after the family decided to withdraw support.

DISCUSSION

Esophageal stricture secondary to metastasis from a distant site is a rare occurrence. Metastasis to the esophagus is a distinct entity and differs from the more common invasion because of contiguous spread. The first case of esophageal metastasis was reported in 1942, from the prostate. Diagnosis is often difficult owing to the submucosal location of the metastasis, and thus, commonly used superficial mucosal biopsies are generally nondiagnostic. Endoscopic ultrasound with fine-needle aspiration and endoscopic mucosal resection have been applied successfully in some cases. In this case, the patient had a chronic esophageal stricture from an undiagnosed bronchoalveolar carcinoma. She was high risk for primary lung cancer based on her smoking history and underlying COPD.

Before surgery, there were no clinical signs or symptoms suggestive of underlying malignancy. Preoperative evaluation consisted of routine laboratory tests and chest x-ray, which were unremarkable, except for mild changes consistent with COPD. Once the pathologic diagnosis became known, a computed tomography scan showed multiple lung nodules and bony metastasis.
This case demonstrates a rare etiology of an esophageal stricture. In high-risk patients, metastatic malignancy should be considered in the differential diagnosis of a new or chronic esophageal stricture. While conventional endoscopy is often nondiagnostic in establishing the diagnosis, other modalities such as endoscopic ultrasound with fine-needle aspiration and endoscopic mucosal resection should be considered as upfront modalities in reoccurring esophageal strictures in high-risk patients.

DISCLOSURES

Author contributions: D. Gwan-Nulla drafted the manuscript, conducted literature review, and is the article guarantor. K. Rizzo analyzed the pathological findings and conducted literature review. HR Alappan conducted literature review and edited the manuscript. All contributors approved the final manuscript.

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