CASE REPORTS

Esophageal perforation due to breast cancer metastasis: Case report

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ABSTRACT

Introduction: Breast cancer metastasis to the esophagus is rare and can appear after a long period after remission. The lesions are frequently found on lung, liver, bone, soft tissue, brain and adrenal glands. Although the esophagus is a rare location, the distal part is the most common site of lesions and they can appear with clinical signs of stricture, with an incidence of 4% to 5% in some series reported in the literature.

Case presentation: A 64-year-old woman with history of breast cancer treated with mastectomy, chemotherapy and radiotherapy currently in remission was referred to our center presenting stenosis of the esophagus and perforation that was treated with previously with a pleural patch that presented leakage requiring laparoscopic esophagectomy with gastric ascent. The patient had a good postoperative recovery, and was discharged to continue follow up as an outpatient. The surgical piece was examined with a final pathology report of breast cancer metastasis on the esophagus (ductal carcinoma) at the site of the stenosis and was referred to an Oncology service.

Discussion: Although breast carcinoma represents a frequent source of metastases to the gastrointestinal tract, esophageal lesions are a rare entity. There is a low percentage of patients diagnosed endoscopically in the preoperative period due to the low incidence and the involvement of submucosa which makes obtaining a good sample difficult. These lesions can occur without symptomatology in a large number of patients, dysphagia is the most common symptom. Endoscopic resection is a suitable option with adequate results and is considered a safe method, however, is difficult to identify this pathology before it manifests clinically. In the scenario of complication, the minimally invasive approach provides a good option for a better postoperative recovery.

Key Words: Breast cancer, Esophageal metastasis, Perforation, Laparoscopic esophagectomy

1. INTRODUCTION

Breast cancer metastases to the esophagus are rare and can appear within a long period after treatment and remission. These lesions are frequently seen on lungs, liver, bone, soft tissue, brain and adrenal glands.[1] The distal part of the esophagus is the most common site of lesions and they can appear with clinical signs of stricture,[2,3] with an incidence of 4% to 5% in some series reported in the literature.[4] The diagnosis of breast cancer metastases to the esophagus is difficult because there are no specific symptoms and many cases are found during autopsy or on the postoperative pathology report, there are only a few cases diagnosed with biopsy

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during endoscopic revision because an adequate specimen is difficult to acquire, The importance of identifying them relies on the fact that the only effective treatment is resection, either endoscopic or surgical.[5] This paper presents the case of a patient with stenosis of the esophagus due to breast cancer metastasis identify due to complication with perforation and managed with minimally invasive surgery.

2. Case presentation

A 64-year-old woman was referred to our center with history of breast cancer treated previously with mastectomy, chemotherapy and radiotherapy with adequate response and remission for eight years. She presented with progressive dysphagia with no other symptoms; radiologic tests were conducted on another hospital showing a stenosis of the esophagus that was treated with endoscopic dilatation every 6 months for the last two years.

Three months before admission she presented perforation that was treated with thoracotomy and a pleural patch that presented leakage and was referred to our hospital to continue treatment. Contrast studies and CT scan were performed that documented the leakage at the distal third of the esophagus (see Figure 1). She required esophagectomy with gastric ascent with a minimally invasive approach (see Figure 2). The surgery was performed without complications with a laparoscopic transhiatal esophagectomy and a gastric sleeve using an endoscopic stapler (see Figure 2). We obtained a surgical piece that was examined with a pathology report of breast cancer metastasis (ductal carcinoma) on the esophagus at the site of stenosis with a 1 cm zone containing the perforation and thickening of the adjacent mucosa (see Figure 3). The patient had a good postoperative recovery, with a contrast study that showed no evidence of leakage (see Figure 4), and was discharged to continue follow up as an outpatient and referred to an Oncology service to continue adjuvant therapy.

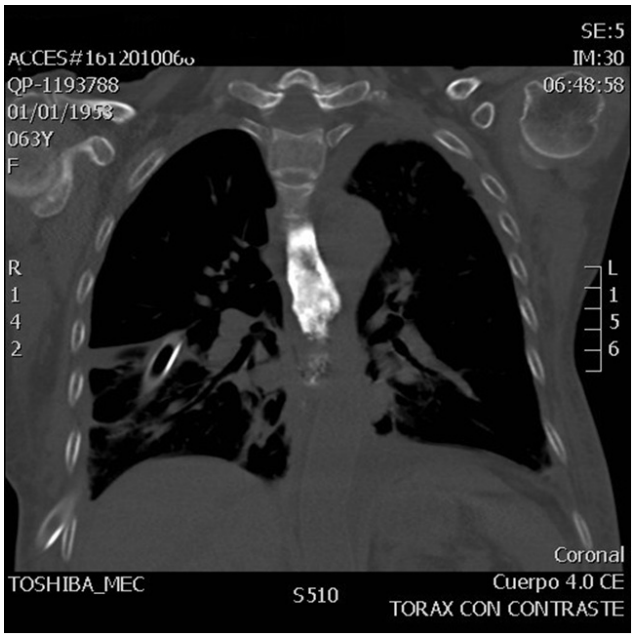

Figure 1. CT Scan of the patient with oral contrast which show the site of stenosis in the middle third of the esophagus

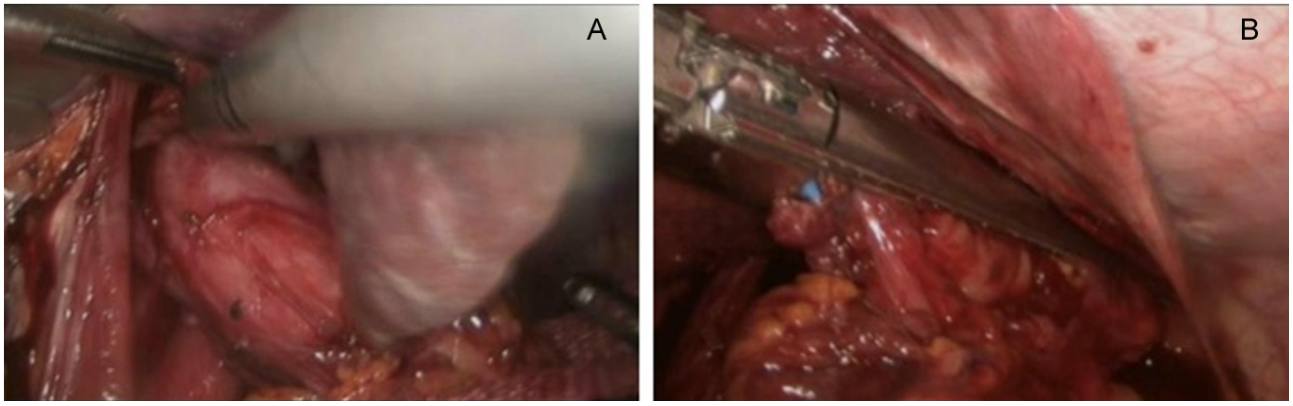

Figure 2. Laparoscopic approach for esophagectomy with gastric ascent

A shows the dissection of the esophagus on the laparoscopic approach; B shows the endoscopic stapler on the site of the gastric ascent.

3. Discussion

Although breast carcinoma represents a frequent source of metastases to the gastrointestinal tract, esophageal lesions are a rare entity, we present a case of stenosis due to this pathology in a patient with remission for eight years. It is important to mention that there is a very low percentage of patients diagnosed with endoscopic biopsy in the preoperative period due to the low incidence of these lesions on this particular population and because of involvement of the submucosa of the esophagus which makes obtaining a good sample for pathologic diagnosis difficult.[2]

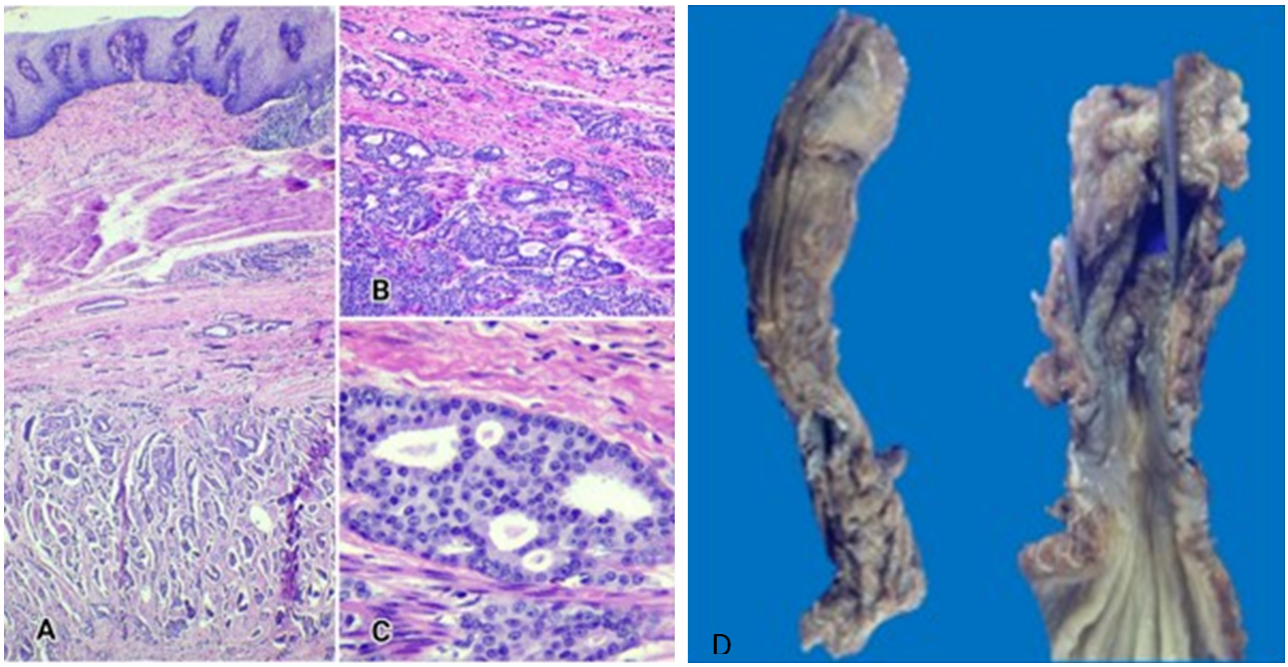

Figure 3. Macroscopic and microscopic histopathologic findings on the surgical piece

A) Ductal carcinoma, infiltrating neoplasia on the muscular and submucosa of the esophagus; B) Tumor showing glands, cords and nests of neoplastic cells; C) Cribriform glandular pattern of pleomorphic cells with lumpy chromatin and an evident nucleolus; D) Surgical piece, esophagus with site of stenosis with a 1 cm zone of perforation and thickening of the adjacent mucosa.

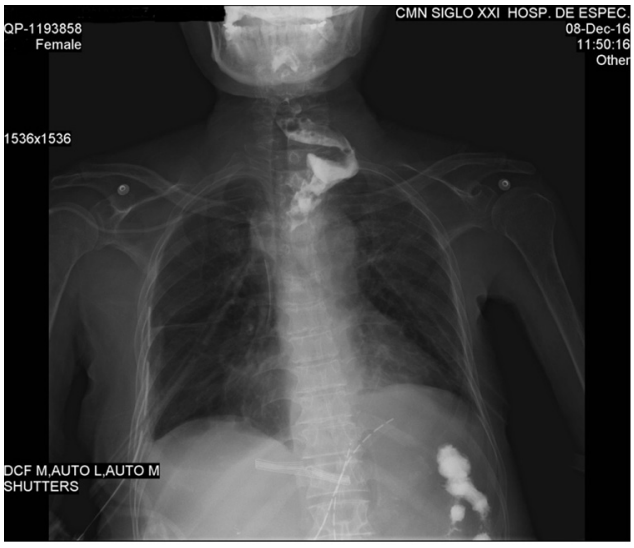

Figure 4. Postoperative contrast radiography which shows no stenosis on the anastomosis and no leakage

These lesions can occur without symptomatology in a large number of patients as has been described in literature, for example in the study by Abrahms et al., reporting 7 patients with metastases to the esophagus out of 167 autopsies with previous diagnosis of breast carcinoma. Asch et al. also reported an autopsy series of 337 patients with diagnosis of breast cancer and only 20 cases of esophageal metastases, of which none had specific gastrointestinal symptoms on their previous medical history.[5]

On this group of patients, dysphagia is the most common symptom and has been reported to appear within eight years of the primary diagnosis of breast carcinoma,[5] as presented on the patient exposed in this case report. There are many practices accepted regarding treatment for these patients. Studies had reported that endoscopic resection technique is a suitable option with adequate results and is considered a safe method,[5] however, is difficult to identify this pathology before it manifests with a complication like stenosis or perforation. In the scenario of complication, like the case presented in this paper, the minimally invasive approach with laparoscopic surgery provides a good option for a better postoperative recovery and a prompt referral to an Oncology service to continue treatment providing a better chance to a good survival in these patients.

Conflicts of Interest Disclosure

The authors declare they have no conflict of interest.

REFERENCES

[1] Ambroggi M, Stroppa EM, Mordeti P, et al. Metastatic breast cancer to the gastrointestinal tract: report of five cases and review of the literature. Int J Breast Cancer. 2012; C(2012): 439023.

[2] Anaya AD, Yu M, Karmy-Jones R. Esophageal perforation in a patient with metastatic breast cancer to esophagus. Am Thorac Surg. 2006; 81: 1136-8. PMid: 16488749. https://doi.org/10.1016/j.athoracsur.2005.01.052

[3] Ayantunde AA, Agawal A, Parson SL, et al. Esophagogastric cancers secondary to a breast primary tumor do not require resection. World J Surg. 2007; 31: 1597-1601. PMid: 17578645. https://doi.org/10.1007/s00268-007-9099-y

[4] Abrams HL, Spiro R, Goldstein N. Metastases in carcinoma; analysis of 1000 autopsied cases. Cancer. 1950; 3(1): 74-85. https://doi.org/10.1002/1097-0142(1950)3:1<74::AID-CNCR2820030111>3.0.CO;2-7

[5] Sunada F, Yamamoto H, Kita H, et al. A case of esophageal stricture due metastatic breast cancer diagnosed by endoscopic mucosal resection. Jpn J Clin Oncol. 2005; 35(8): 483-86. PMid: 16006575. https://doi.org/10.1093/jjco/hyi123