

CASE REPORTS

Intrathoracic Anastomotic Leak after Ivor Lewis Esophagectomy: Non-Surgical Management

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Abstract

We present the case of a 51-year-old patient known with operated cervical disc disease, who presented himself at our hospital with dysphagia and unexplained weight loss. The superior digestive endoscopy indicated the presence of a middle esophagus vegetative tumor. The computer tomography of the thorax and abdomen revealed: a tumor localized in the medium thoracic esophagus, peritumoral and retroperitoneal lymphatic invasion. The bronchoscopy showed a normal oral passage, mobile vocal cords, normal trachea and carina, without tumors in the area visualized. The patient was operated and a Ivor - Lewis esophagectomy with end to end eso-gastric anastomosis and a jejunostomy for postoperative feeding were performed. The postoperative evolution was encumbered by the apparition of an anastomotic fistula, four days after surgery. The leak was diagnosed by superior digestive endoscopy and a 140 mm/24 mm expandable stent was placed. The barium swallow test made after two days showed no leaks. After 7 days from the stent insertion a superior endoscopy was performed which showed a new esophageal fistula and a second stent was placed. After the mounting of the second stent, the evolution of the patient was favorable. The patient was discharged after 36 days of hospitalization. The histopathological exam concluded: squamous esophageal carcinoma low differentiated, with the invasion of the esophageal serosa and a celiac lymph node invasion, which was resected.

Keywords: anastomotic leak, esophagectomy, esophageal stent

Rezumat

Prezentăm cazul unui pacient în vârstă de 51 de ani cunoscut cu discopatie cervicală operată în antecedente, ce se prezintă la spital pentru disfagie și scădere ponderală. Se efectuează endoscopie digestivă superioară ce relevă prezența unei formațiuni tumorale vegetante medio-esofagiană. Examenul computer tomograf (CT) al toracelui și abdomenului superior a concluzionat: tumoră voluminoasă 1/3 medie esofag toracic, microadenopatii peritumorale, adenopatii retroperitoneale. Se practică bronhoscopie ce decelează pasaj oral normal, corzi vocale libere, mobile, simetrice, trahee normală, carină normală, fără elemente proliferative în aria abordabilă endoscopic. Se intervine chirurgical și se practică esofagectomie Ivor - Lewis cu anastomoză eso-gastrică T-T și jejunostomă de alimentație. Evoluția postoperatorie a pacientului este grevată de apariția în a patra zi postoperator a fistulei anastomotice obiectivată prin endoscopie digestivă superioară, atunci când se montează și un stent esofagian expandabil total acoperit de 140 mm/24 mm. Tranzitul baritat eso-gastro-duodenal efectuat la 2 zile de la montarea stentului nu vizualizează traiecte fistuloase. La 7 zile după montarea stentului esofagian se efectuează o nouă endoscopie

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digestivă superioară ce decelează fistulă esofagiană, inserandu-se al doilea stent esofagian. După montarea celui de-al doilea stent evoluția este favorabilă. Pacientul se externează după 36 de zile de spitalizare. Examenul histopatologic al piesei de rezecție a diagnosticat: carcinom scuamos esofagian slab diferențiat, invaziv în adventicia esofagiană, diseminat în limfoganglion celiac, rezecat integral.

Cuvinte cheie: fistulă anastomotică, esofagectomie, stent esofagian

INTRODUCTION

Esophagectomy is the best therapy for the patients with locoregionally advanced esophageal cancer, but carries serious risks of associated morbidity and mortality. Esophageal anastomotic leak is a severe postoperative complication with a rate of mortality that can reach 60%^{1,2}. Clinical presentations of esophageal anastomotic leaks varies from asymptomatic to severe sepsis and death. The prognosis depends on the duration to diagnosis and the severity of contamination. An anastomotic esophageal leak has a great impact on the length of hospitalization, morbidity, stricture formation and dysphagia^{3,4}. The management of intrathoracic anastomotic leaks include conservative, surgical or endoscopic treatment, but the indication between these options of treatment remains controversial^{5,6}.

CASE REPORT

We report the case of a 51-year-old patient known with operated cervical disc disease, who presented himself at our hospital with dysphagia and unexplained weight loss. The blood tests showed a mild leukocytosis

and thrombocytosis. The superior digestive endoscopy indicated the presence of a middle esophagus vegetative tumor with a length of 7 cm and which occupies 50% of the esophageal lumen. The CT scan of the thorax and abdomen revealed a tumor localized in the medium thoracic esophagus, peritumoral and retroperitoneal lymphatic invasion (Figure 1 and 2). Preoperative, a bronchoscopy is performed which shows a normal oral passage, mobile vocal cords, normal trachea and carina, without tumors in the area visualized. A spirometry test was indicated before surgery, which showed a normal respiratory function.

The patient was operated and a Ivor - Lewis esophagectomy with end to end eso-gastric anastomosis and a jejunostomy for postoperative feeding were performed (Figure 3).

Postoperative, the parenteral nutrition (Kabiven) was started together with enteral nutrition (Fresubin). Signs of anastomotic leak on the pleural drainage tube appeared 4 days after surgery. A superior endoscopy is performed which reveals an anastomotic fistula and a 140 mm/24 mm expandable stent was placed. A barium swallow test was made after two days, which showed no leaks (Figure 4 and 5).

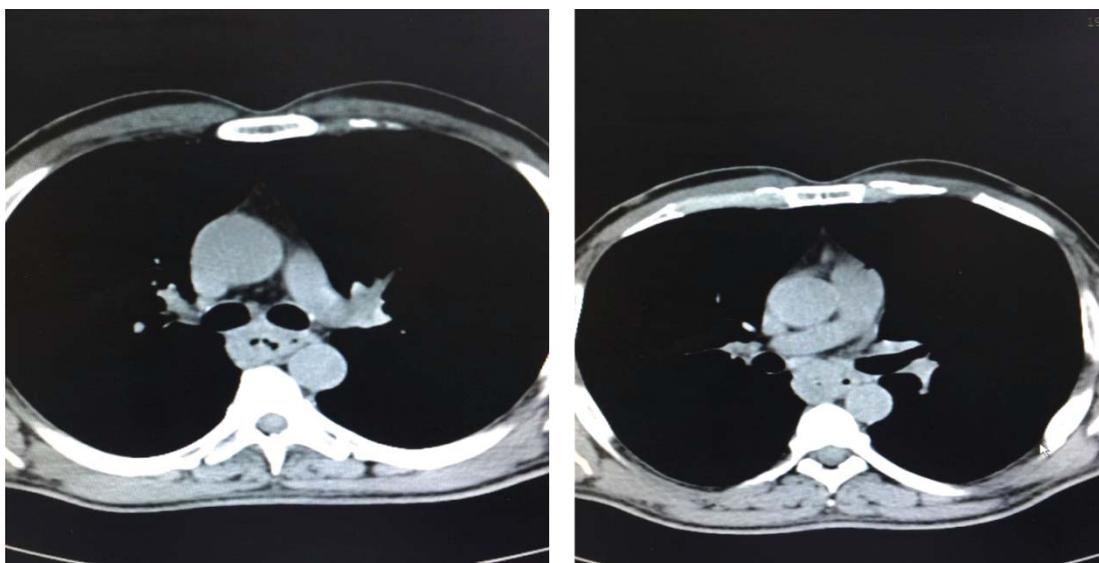


Figure 1, 2. Esophageal tumor.



Figure 3. Patient after surgery.

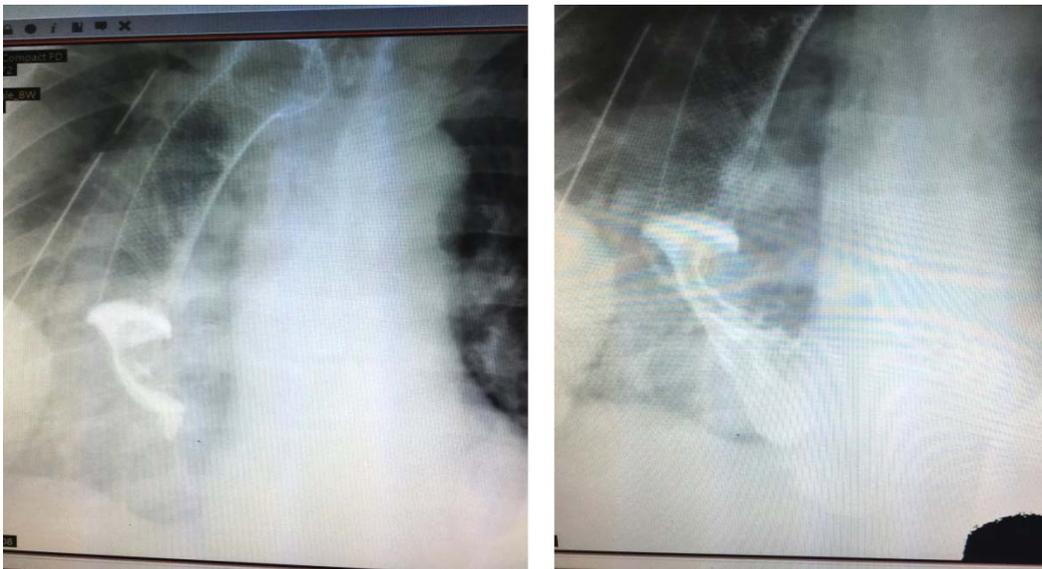


Figure 4, 5. Images of barium swallow test which shows no leaks.

After 7 days from the stent insertion, a new endoscopy was made, which showed a esophageal leak and a second 150/24 mm expandable, total covered stent was mounted (stent in stent) (Figure 6 and 7).

After the placement of the second stent, the evolution was favorable with normal values of the blood tests and no other signs of leaks. The patient was discharged after 36 days of hospitalization. The histopathological exam concluded: squamous esophageal carcinoma low differentiated, with the invasion of the esophageal serosa and a celiac lymph node invasion, which was resected. (pT3N3 G3)

DISCUSSIONS

There are not many studies in the literature reporting the endoscopic treatment of esophageal anastomotic leaks⁸. Kauer et al published their experience in 10 patients with esophageal anastomotic fistulas treated with stents. The inserted stents were metallic, between 8 and 11 cm long, coated with silicon and had large extremities in order to prevent migration. All patients benefited also from fistula drainage. The authors claimed a success in 9 out of 10 patients, even though four patients presented with stent migration and had stent replacement⁷. The actual recommendations regarding the usage of esophageal stents are: long stents (between 12 and 15 cm) with enlarged extremities and to place the proximal 2 thirds of the stent in the esophagus and

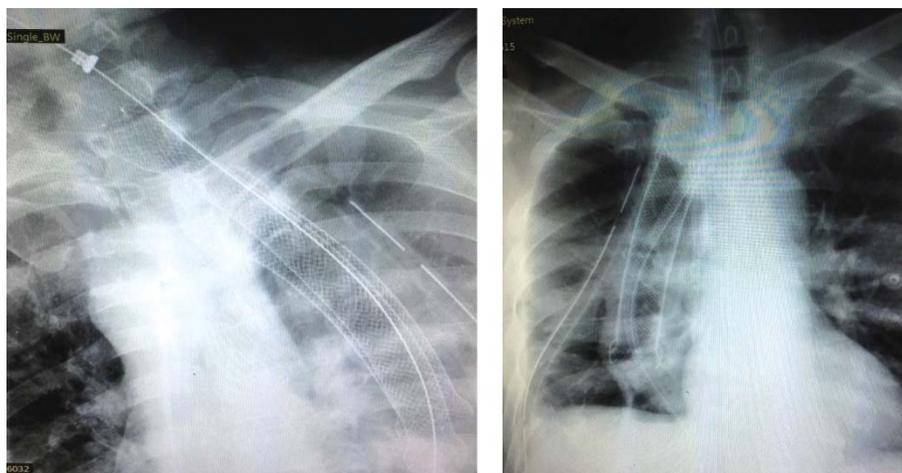


Figure 6, 7. Chest X-rays showing the 2 esophageal stents.

the distal third as a bridge at the anastomosis level⁹. The best moment to remove the stent is 2 weeks after the insertion, in order to avoid complications¹⁰.

CONCLUSION

Early diagnosis and treatment of esophageal anastomotic leaks decreased leak-associated mortality. Endoscopic treatment of intrathoracic esophageal anastomotic leaks is a good therapeutic strategy, especially in mild symptomatic patients. It is also important to abandon

the endoscopic management when the leak is not resolved by the stent and the general state of the patient is worsening. The results seem to improve after endoscopic stent insertion and pleural drainage in the case of intrathoracic esophageal leaks smaller than 30%¹¹.

Conflict of interest: The authors declare that there is no conflict of interests regarding the publication of this paper.

Author contribution: All authors contributed equally to this work.

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