

Unexpected Complication During Stent Placement for Esophageal Cancer

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Article Info

Article Note:

Received: December, 2022

Accepted: February, 2023

Publish Online: March, 2023

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Keywords:

Esophageal carcinoma;

Esophageal stenting;

Active bleeding;

Abstract

Background: Due to the delay in esophageal cancer until the late stages, its mortality rate is relatively high. One of the most common presentations of advanced esophageal cancer is dysphagia. Esophageal stenting is a palliative treatment modality to resolve dysphagia and restore oral intake. Despite this advantage, stenting has various complications.

Aim: We reported a case of active bleeding after esophageal stenting.

Case presentation: A case of a complication caused by an esophageal stent placement for carcinoma is presented. The placement of the stent was difficult under fluoroscopic control, which led to some pushing, resulting in a wound in the pharynx with active bleeding without perforation. The bleeding was successfully controlled by the surgeon. Therefore, the patient was postponed a few days later and we preferred this time to put a stent through the scope without complications.

Conclusion: Active bleeding is one of the esophageal stenting complications. In this article, we reported a middle-aged woman with advanced esophageal cancer who underwent esophageal stenting. Afterward, she developed active bleeding, which was successfully managed.

Conflicts of Interest: The Authors declare no conflicts of interest.

Please cite this article as: Sair A, Mrabti S, Benhamdane A, Addajou T, Sentissi S, Rouibaa F, Benkirane A, Seddik H. Unexpected Complication during Stent Placement for Esophageal Cancer. J Otorhinolaryngol Facial Plast Surg 2023;9(1):1-4. <https://doi.org/10.22037/orlfps.v9i1.41645>

Introduction

Esophageal cancer causes more than half a million deaths yearly, accounting for 5.3% of all worldwide cancer deaths (1). Due to the delay in diagnosing esophageal cancer until the advanced stages, its mortality rate is relatively high. Dysphagia is the most frequent manifestation of advanced esophageal malignancy. Stenting the esophagus is a palliative treatment for esophageal cancer, which restores the luminal patency, and thus maintains the oral intake (2).

Esophageal stenting has various serious complications including massive bleeding, esophageal perforation, severe pain, stent blockage due to tumor ingrowth or overgrowth, migration, and fistula formation (3, 4). The following case report describes an unusual

complication that occurred during stent placement.

Case presentation

A 69-year-old woman, who in 2017 had undergone surgery, chemo, and radiation because of cervical cancer, was admitted to the department suffering from dysphagia evolving for one year. The patient was malnourished and thin (BMI = 16 kg/m²) with signs of clinical and biological dehydration. In the middle thoracic part of the esophagus a circumferential wall thickening.

with a stricture (about 5 cm long) was evident in computed tomography (CT) scan (Figure 1) with multiple locoregional lymphadenopathies including a Virchow-Troisier node (26x17mm) and liver metastases.

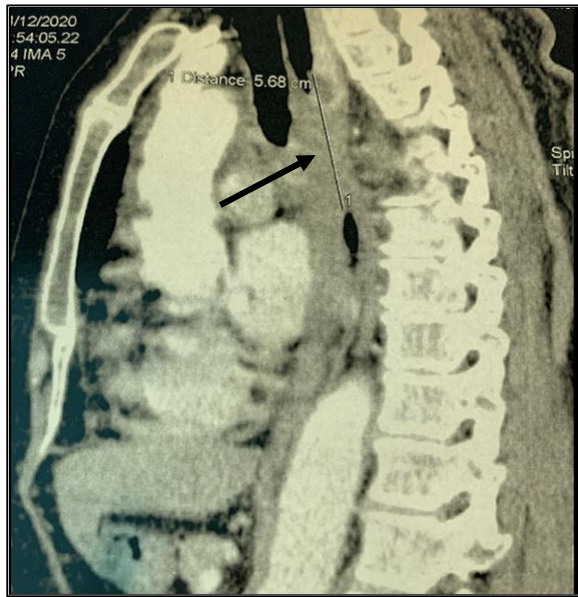


Figure 1. CT scan obtained before the operation shows a stricture caused by esophageal cancer in the middle thoracic portion of the esophagus.

Impassable stenosis in the middle esophagus, 25 centimeters away from the incisor, was revealed in the endoscopy. Biopsy was obtained and squamous cell carcinoma was confirmed in pathological evaluations. Because of extensive invasion, the esophagus tumor could not be resected. A few days after the operation, the patient was referred to our department for palliative esophageal stent placement. The

procedure began with an upper endoscopy, the margins of the stenosis were marked externally using a radiopaque object for fluoroscopic visualization. A guidewire was manipulated into the stomach and the endoscope is removed; the partially covered metal stent is then placed under fluoroscopic control alone. At the time of stent placement, since the stricture is rigid, the stent bent at the level of the pharynx causing a deep wound of the posterior face of the pharynx with active bleeding (Figure 2A). First, the bleeding was controlled by medical treatment including tranexamic acid, and the surgeons were contacted urgently. The otorhinolaryngology surgeons, after good exposure to the wound, which was difficult to access, and after making sure that there was no perforation, sutured the wound and stopped the bleeding (Figure 2B). The patient did not develop emphysema at the time or after the procedure and the placement of the stent was postponed. Ten days later, with the pharyngeal wound healed (Figure 2C), we were able to insert, under endoscopic and fluoroscopic control, an 18-mm-diameter 14-cm-long partially covered metal stent (through the scope) (Figure 3), without immediate or late complications.

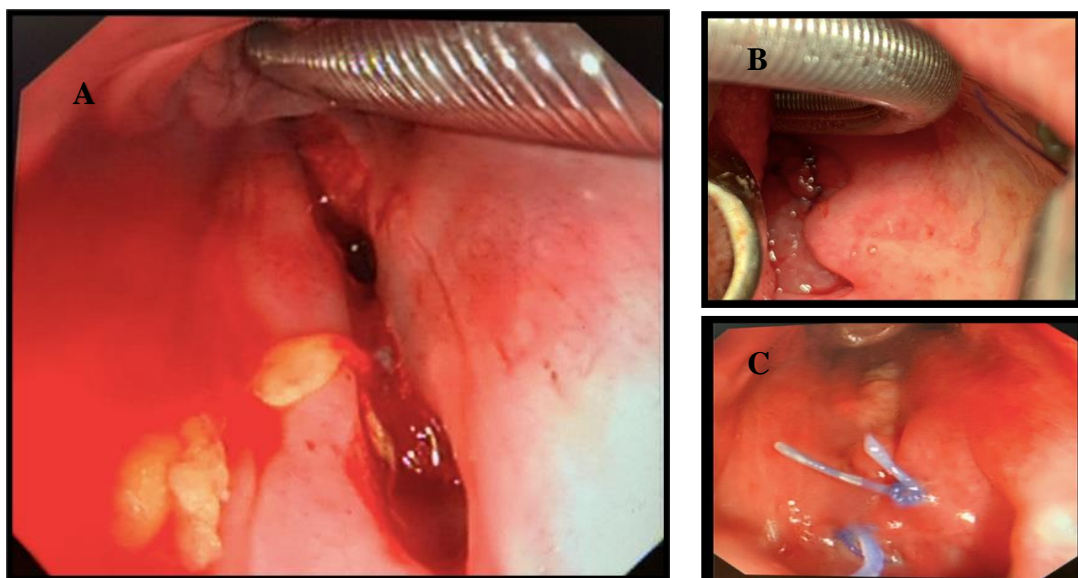


Figure 2. The wound of the posterior face of the pharynx. (A) With active bleeding before surgery (B) After immediate suture (C) 10 days later.

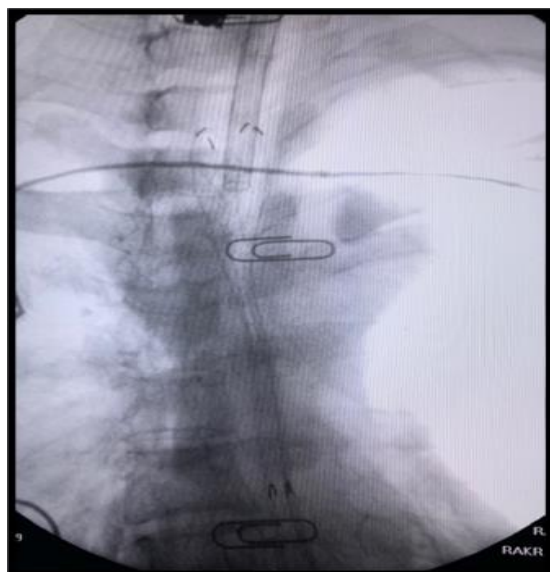


Figure 3. Scopic control of the placement of the partially covered metal stent.

Discussion

Esophageal stents were initially introduced in 1970. This device rapidly evolved from a rigid tube to a self-expanding metallic stent (SEMS) (5). The SEMS are cylindrical metallic frames that apply forces to expand until they gain their maximum diameter (6). Utilization of SEMS in esophageal malignancy was initially reported in 1990 by Domschke et al. (7). Afterward, metallic stents were widely used in patients with advanced esophageal malignancy, for whom surgery is not a choice (8). Advanced esophageal cancer usually manifests with progressive dysphagia, weight loss, and malnutrition. This dysphagia can lead to frequent aspiration, pneumonia, and eventually death. Since the per-oral tolerance and intake increases, almost all patients who undergo esophageal stent placement experience clinical improvement (9). However, it is important to bear in mind that endoscopic stent adjustments or exchanges are often needed to keep the clinical benefit.

Stent placement has two types of complications including early and delayed. Early complications happen immediately or up to four weeks later. Bleeding and perforation are two common early complications in patients with esophageal cancer who are treated with stent.

About five percent of patients experience small amounts of bleeding within one to two days after SEMS placement. While only less than a percent have major bleeding that requires intervention (10). Several studies reported that perforation during or soon after SEMS placement occurred in <1% patients (11-12). Perforation is far more among patients who received chemo and/ or radiation therapy. The full thickness perforation is exceedingly rare (12). Delayed complications which happen after two to four weeks, are more common than early complications, occurring in nearly 65 % of patients (13). In our case, the complication was immediate and was bleeding from trauma to the pharynx caused by the prosthesis, but this bleeding was quickly controlled. However, what should be remembered from the following case, at the time of the stent placement, it is necessary to avoid using too much force in the event of a feeling of resistance, and the stent placement under endoscopic and fluoroscopic control can be a good alternative in these cases.

Conclusion

Active bleeding is one of the esophageal stenting complications. In this article, we reported a mid-aged woman with advanced esophageal cancer who underwent esophageal stenting. Afterward, she developed active bleeding, which was successfully managed.

Acknowledgments

Not declared.

Conflicts of Interest

The authors declare no conflicts of interest.

Financial Support

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Patients' perspective : written consent was obtained from the patient. The whole process of examination and the purpose of the article was thoroughly explained.

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