

## Aorto-Esophageal Fistula and Metallic Stent

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### 2. Key words

Aorto-esophageal fistula; Metallic stent; Esophageal adenocarcinoma; Side effects; Massive hematemesis

### 1. Introduction

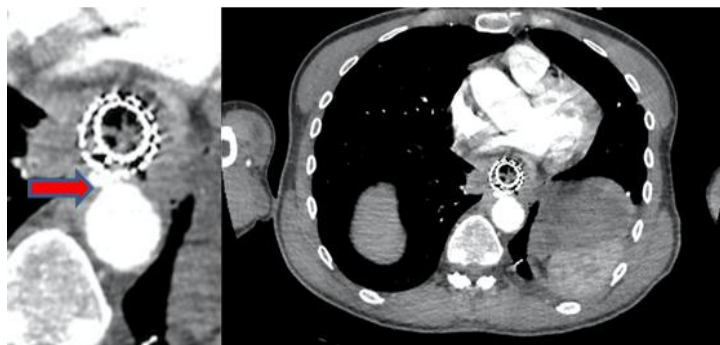
Esophageal metallic stents are indicated in the palliative treatment of malignant dysphagia [1]. The ones usually used are covered or partially covered. They have a low mortality rate directly associated (0.5-2%) [2]. As with any endoscopic therapeutic procedure, it can get complicated. A distinction is then made between early complications (32% of patients) which are immediate after the procedure or at 2-4 weeks, and delayed complications (53-65% of patients) at more than 4 weeks after the procedure [3]. Hemorrhagic complications are most often early and not very important, related to the expansion of the prosthesis on the tumor. But late haemorrhages (haematemesis, haemoptysis) can also be observed, which can concern up to 7.3% of patients [4], and which can in some cases be massive.

### 3. Case

Our patient was 57 years old, with history of metastatic cardia adenocarcinoma. First, he received a chemotherapy and a radiochemotherapy. In February 2018, after failure of a balloon dilatation, he had a first covered metal stent (Boston Wallflex<sup>®</sup>). A second stent was placed upon of the first in June 2018, because of recurrence of dysphagia.

The following months are marked by poor tolerance of the stents, with retrosternal pain. He had response of carcinologic treatment.

He is admitted in February 2019 for an hemorrhagic shock with massive hematemesis after severe chest pain. A thoracic angioscanner revealed a fistulation of the anterior wall of the descending thoracic aorta within the esophagus, in contact with the upper end of the lower esophageal stent (Figures 1, 2).



**Figure 1:** Thoracic angioscan cross section, aorto-esophageal fistula



**Figure 2:** Thoracic angioscan profile section

The patient benefited from the emergency placement of an aortic endoprosthesis, which allowed for the absence of hemorrhagic recurrence. The control CT scan a few days after the procedure showed a permeable vascular assembly, without leakage of contrast material and without local infectious complications (Figure 3).



**Figure 3:** Profile section, aortic and esophageal prosthesis

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One similar case is described by Justin C. R. Wormald et al [5], the management differs with first-line gastroscopy instead of CT scan.

## 5. Discussion

When the indication for the esophageal metallic stent is malignant, the average survival observed in a palliative situation is 120 days, with a re-intervention rate of 25-35%. Complications related to metallic stents are more frequent when the patient has received prior radiochemotherapy [1, 2].

In the study by Wang MQ et al [4], they hypothesize that bleeding complications were more frequent when the upper end of the prosthesis was above or at the aortic arch. The 6 patients who presented with hematemesis all died, three died at home or during transport, and the other three died intra-hospital. Autopsy in one of the patients showed the presence of a perforation of the esophageal wall causing an aorto-esophageal fistula at the proximal end. Five of the six patients had received radiation therapy prior to stenting. On the other hand, the exact cause of bleeding in these cases is controversial, it seems that the tumour itself is responsible and not the stent.

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