

# Transhiatally treated esophageal adenocarcinoma surgery in a low-income country like Madagascar

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## Abstract

Upper polar oesogastrectomy associated with lymph node dissection constitutes the gold standard treatment for adenocarcinomas of the oesophagus in the localized stage. The objective of our observation is to discuss the difficulty of transhiatal esophagectomy in a limited structure. A 70-year-old man had presented with a budding lesion at the esogastric junction. Histology confirmed adenocarcinoma. Esophagectomy was approached transhiatally. An esogastric anastomosis with fundoplicature according to Toupet was performed. The transthoracic route remains the gold standard, but the transhiatal route is a good alternative in the presence of comorbidity.

**Keywords:** Adenocarcinoma; Esophagus cancer; Madagascar; Proximal oesogastrectomy

## Introduction

Adenocarcinoma of the esophagus is defined by malignant tumour proliferation. It is the 11th leading cause of cancer-related death in France and the 6th in the world [2]. In lower oesophageal cancers, an exclusive transhiatal abdominal approach may be used to perform anastomosis resection, but the healthy margins for resection remain limited and anastomosis is often difficult, requiring the use of mechanical suture forceps. We report the case of a 70 years old man with esophageal adenocarcinoma, operated transhiatally in a limited structure to discuss the difficulties encountered.

## **Observation**

It was a 70-year-old man, entered for an organic dysphagia with the notion of losing 10 kg in 2 months. The patient's history had revealed active smoking at 15 packet-years and chronic obstructive pulmonary disease with a Maximum Expiratory Volume per Second (FEV1) of 750ml. Upper gastrointestinal fibroscopy revealed a budding, hemorrhagic lesion in the esophagus, 35 cm from the dental arch, at the esogastric junction, which was partially passable. Histological examination had found a moderately differentiated adenocarcinoma. Thoracoabdominal CT confirmed parietal thickening of the abdominal esophagus, with no evidence of secondary localization (Figure 1). The surgical team opted for first-line surgical treatment after multidisciplinary consultation. A thoracoabdominal Lewis-Santy approach was initially considered, but because of the patient's condition and the presence of associated comorbidities, an abdominal approach alone was chosen, allowing a transhiatal upper polar esogastrectomy to be performed (Figure 2), with esogastric anastomosis (Figure 3) and fundoplicature of the anastomotic suture according to Toupet. Two abdominal drains were placed. The nasogastric tube was kept in siphonage for 12 days. The patient was discharged from the hospital at D20 post-operatively.

## **Discussion**

The main risk factors for esophageal adenocarcinoma are gastroesophageal reflux disease (GERD), endobrachyoesophageal disease (EBO), smoking, low-fructose diets, and obesity [3]. Our patient was a chronic smoker with known COPD. The classification of esophageal adenocarcinomas was established by Siewert [1]. For Siewert's cardiac adenocarcinoma type 1, surgery gives hope for an R0 resection [4]. It then consists of an esogastric resection. In our observation, the adenocarcinoma was discovered at an early stage, in the localized, still resectable stage. Postoperative mortality is in the order of 5 to 8%, while survival after curative resection was 20 to 30% at five years. In addition, the hemostatic effect of the surgery is immediate [4]. For lesions extending 35 to 40 cm from the dental arches, with little or no gastric extension, upper polar esogastrectomy (UPG) is indicated. Our team had chosen the transhiatal abdominal approach because the technical platform did not allow a laparoscopic approach. The anastomoses were made manually because there were no mechanical forceps, which significantly prolonged the operating time.

In the literature, esophagectomy can be performed either by the transthoracic route (OTT) or Lewis-Santy procedure, or without thoracotomy, by the transhiatal route (OTH) [4].

The latter reduces postoperative morbidity and mortality compared to the OTT. It reduces postoperative morbidity, which is an important argument if the patient presents co-morbidities and/or severe alterations in general condition. However, it has the disadvantage of limiting mediastinal healing [5]. The Lewis-Santý procedure is the reference technique for esophageal tumours with en bloc esogastric resection by double abdominal and right thoracic route, lymph node removal from both fields (mediastinal, abdominal and thoracic) [6]. It allows better for tumor and lymph node dissection. However, it is associated with high post-operative morbidity and requires a longer operation time. Several randomized controlled trials have compared transthoracic and transhiatal exeresis. According to Huslscher's study, there was a trend towards better overall survival in the OTT group but with increased respiratory morbidity and increased risk of chylothorax. OTT (with clearance of two fields, abdominal and lower mediastinal) has good results for tumours limited to the esogastric junction, with excellent quality of excision [7]. It is performed only in cases of respiratory contraindications to thoracotomy [8]. In our observation, the tumour was localized (stage T2). Surgery alone remains the reference treatment for T1-T2, N0 tumours. Surgery alone remains the reference treatment for T1-T2, N0 tumours and provides a 5-year survival of 50 to 64% for these localized tumours [9]. Our patient had a simple surgical follow-up without major complications apart from postoperative pain for the first five days and anemia that was corrected by red blood cell transfusion. The postoperative course can be grafted with many complications. The most feared are fistula and pneumopathy. Pneumopathy is the cause of death in 50% of cases [10]. Anastomotic fistula is detected by injecting methylene blue into the nasogastric tube. The passage of the blue in the drain proves the existence of an anastomotic fistula. Two options are available, with either immediate re-intervention or a conservative approach by placing a covered stent combined with parenteral nutritional re-feeding [4]. Half of the fistulas treated with covered stents heal within one month, and almost all within two months. Some authors allow re-feeding as soon as the stent is placed and the fistula is "plugged" in esogastric transit. The risk of secondary fistula reopening is very low [4].

### **Conclusion**

Surgical treatment is the only curative treatment option for a localized tumor. Polar upper esogastrectomy by the transthoracic route remains the preferred technique, however the transhiatal route represents an alternative of choice in the presence of comorbidity, although surgical procedures may be difficult in a structure limited by the technical platform.

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### **Conflict of interest :**

The authors contributed equally to the study

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