

Malignant duodenal obstruction: palliative endoscopic treatment using self-expanding metal prosthesis

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INTRODUCTION

Pancreas uncinata process carcinoma (PUPC) is responsible for up to 10% of all cases of pancreatic carcinomas (PC)¹. The clinical manifestations are generally late complications, resulting in diagnosis at a more advanced stage of the disease or metastasis. The surgical treatment consists of pancreatoduodenectomy, presenting mortality and morbidity rates from 1% to 4% and 20% to 40%, respectively²; however, due to the close relationship between the uncinata process and the mesenteric veins and retroperitoneum, PUPC presents lower resectability and a worse prognosis when compared to other types of equivalent pancreatic head carcinomas. Duodenal obstruction is one of the complications of advanced PC, present in approximately 10% to 20% of patients³, causing nausea, vomiting, and cachexia. The surgical approach by gastrojejunostomy (GJ) for obstruction relief is indicated in those cases with the best prognosis and life expectancy⁴. For this reason, the endoscopic placement of self-expanding metal prostheses (SEMPs) could be a palliative alternative for severe patients with advanced disease, presenting satisfactory results, besides being less invasive when compared to the surgical method for re-establishing luminal patency of the gastrointestinal tract.

OBJECTIVE

To report a case of an advanced PUPC patient in whom a SEMP was placed by endoscopic pathway for treatment of malignant duodenal obstruction.

CASE REPORT

A 91-years-old female patient bearing an advanced tumor visualized on topography of the uncinata process of pancreas presented an external increase towards the lower region, leading to a total obstruction of luminal patency at the third duodenal portion level. Seriography of the esophagus, stomach, and duodenum (ESD) demonstrated no signs of contrast pathway from the third duodenal portion, but significant upstream duodenal

loop dilation. Upper digestive endoscopy under deep sedation and local anesthesia was performed using fluoroscopy and videocolonoscopy. After endoscopic evaluation of the obstruction, the intestinal lumen was catheterized using a guide-wire and a balloon-catheter with a calculi-extracting device. After passage of a self-expanding duodenal prosthesis named Evolution (COOK Medical), which was 9 cm in width and partially covered and was placed through stenosis, an immediate release of the digestive tract was observed (Figure 1). A fluoroscopy immediately the endoscopic passage of the prosthesis showed partial expansion of the prosthesis in the area corresponding to the obstruction (Figure 2). An ESD exam, performed 24 hours after the procedure, revealed re-establishment of the luminal patency and adequate contrast pathway through the dilated segment, in addition to greater prosthesis expansion (Figure 3).

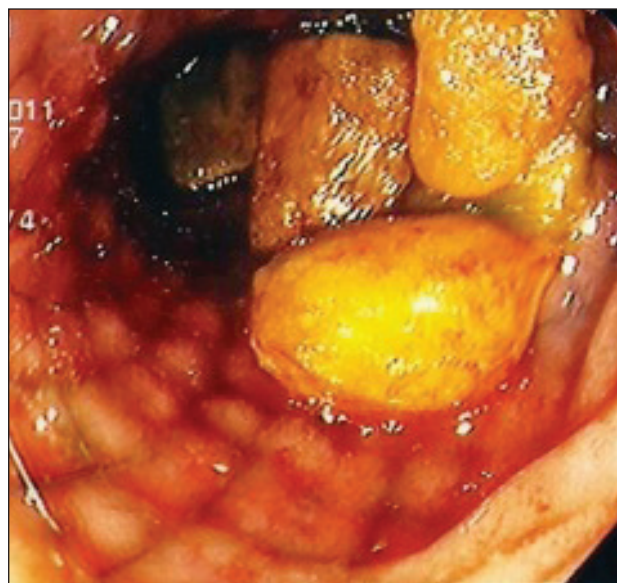


Figure 1 – Endoscopic image soon after the passage of prosthesis. A metal net from the prosthesis proximal end, allowing for a partial clearance and progression of food remains through the intestinal lumen, can be identified.

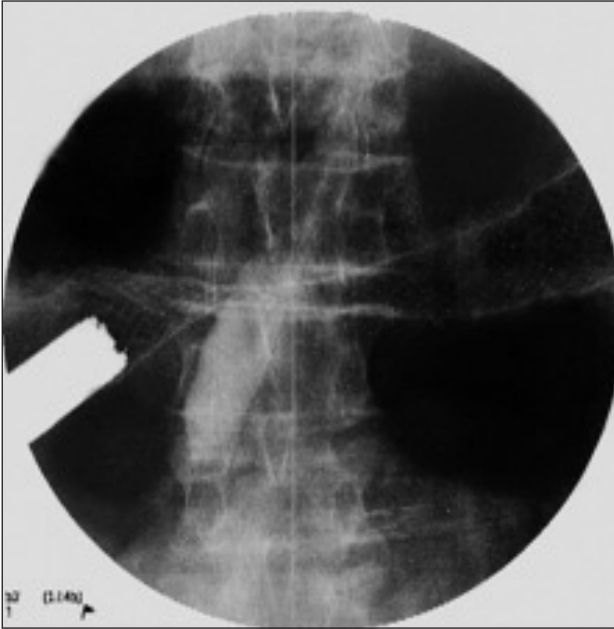


Figure 2 –Radiologic image immediately after the passage of prosthesis under fluoroscopy. It is possible to observe its partial expansion in the local corresponding to the obstruction.



Figure 3 – Radiologic images 24 hours after the passage of prosthesis. It is possible to observe its enlargement, allowing for adequate contrast pathway through the dilated segment.

DISCUSSION

PC present higher rates of mortality, considering that up to 85% of patients showed non-resectable tumors due to the metastatic invasion of adjacent structures⁵. Patients diagnosed with PC on topography of the uncinate process have an average survival rate of only five months, and a worse prognosis than other types of PC^{6,7}. In this context, the placement of metal prostheses is critical for improving the quality of life in those cases when surgery is not possible, as well as for relieving the symptoms of advanced PUPC complications, such as intestinal obstruction and jaundice, which are present in 90% of PC patients⁸. The intestinal obstruction palliation using this method is performed without the need to resort to nutrition by using a nasogastric tube or GJ, which are

uncomfortable approaches, especially for patients in a terminal stage. The placement of duodenal SEMP presents a success rate from 92% to 100%, and rare severe complications, such as stent migration and perforation of duodenal wall. The placement of prostheses, when compared to gastrojejunostomy, demands less hospitalization time, provides a shorter time interval for reintroducing the diet, and lowers mortality and costs⁹⁻¹¹.

CONCLUSION

Although it must be performed by an experienced endoscopist, the placement of a SEMP appears to be an effective and safe method for re-establishing the gastrointestinal tract, after malignant obstruction due to advanced pancreatic tumor, securing a better quality of life to patients with a restricted life expectancy due to disease virulence.

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