Laparogastroscopy and Esophageal Stenosis

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Rezumat


Rezultate: Din 162 de cazuri, 33 de cazuri (20%) cu neoplasm esofagian cervical, 66 (41%) de cazuri cu neoplasm esofagian toracic şi 63 (39%) de cazuri cu neoplasm esofagian abdominal. Tipul histopatologic este reprezentat de 37% adenocarcinoame şi 63% carcinoame scuamoase. Din numărul total de cazuri, 87 (54%) nu au prezentat metastaze, iar 75 (46%) au avut determinări secundare. Cea mai frecventă localizare a metastazelor este la nivel pulmonar, urmată de hepatic (Fig. 1) şi osos. Analiza acestei intervenţii a demonstrat că s-au înregistrat complicaţii mult mai reduse atât din punctul de vedere numeric cât şi al gravităţii lor, se asigură o durată mai lungă de supravieţuire cu un indice de satisfacţie mult mai mare.
Introduction

Esophageal cancer occupies the 6th place as mortality due to aggressive nature and is steadily increasing, which is why this pathology requires increased attention in diagnostic and treatment modalities. In current practice it is one of the least studied pathologies (1).

The most constant symptom, dysphagia, is also a sign of poor prognosis. Although Romania is one of the countries with a low incidence of esophageal cancer (1.6 / 100,000), the diagnosis of the disease is most often at a stage where any therapeutic intention of radicality is a desideratum, most of the time unrealistic. In the majority of cases, we have to treat weakened
patients, caesectic, with poor protein and energy resources with grade 3 or 4 dysphagia (Mellow and Pinkas classification) (2-5).

Esophageal endoprosthesis, a non-invasive solution, is often impossible or endoscopically avoided. Therefore, we thought of a mini-invasive treatment method with minimal attack on the body and preservation of the patient's protein and energy resources. At the same time, the aesthetic substrate and the quality of life were taken into account (6,7).

In esophageal surgery we started with esophageal shunt surgery (colic and gastric, iso and anisoperistaltic), then progressed using esophagectomy, using iso and anisoperistaltic gastric translations or translocations (right and left colon, transverse colon, iso and anisoperistaltic). Late detection and disappointing results in esophageal cancer forced me morally to find an alternative palliative approach. Palliation has meant miniinvasiveness, as a more humanely solution (6,8).

The relatively good results in esophageal stenosis scar surgery, in context of invasive esophagectomy with triple or double approach, led us to attempt reducing miniinvasivity and stent application in these cases as well, mentioning that stenting a scar stenosis is more risky (6).

Esophageal endoprosthesis (Figs. 2, 3) through laparo-gastroscopic approach was thought and used for the first time in 1997 (Prof. Dr. Dan Sabau) and improved over time, after two intentions of stenting in open surgery. This method was also used in patients with...
gastric and colorectal neoplasia with questionable results. In the absence of this method, patients can benefit from feeding stomas (gastrostoma, jejunostoma or faringostoma) with the disadvantage of removing the food bowl from the physiological circuit, the patient’s dependence on food preparing devices, depriving patients of food taste, unaesthetic appearance and stoma complications (6).

Description

The unique method in the world, presented in 2005 at the 6th International Congress of Gastric Cancer in Yokohama where it received the grand prize. The key to success of this intervention is in transtumoral passage with a “blind” catheter or endoscopic catheter insertion (tube, guide wire). In case of failure of the orogastric or guidewire insertion, we performed retrograde, gastro-oral catheterising with different silicone or flexometallic wires, tube with mandrel or plastic stripper. Some tumor formations behave as a flap on the esophageal enterance, not allowing the tube to pass anterograde but just retrograde. Sometimes laparo-gastroscopy has been associated with upper digestive endoscopy with spectacular results (rendez-vous technique) (6).

The prostheses used have been specially developed, especially in pharyngo-esophageal or cardiac locations.

Laparogastroscopy is initiated by making the pneumoperitoneum with the veress needle inserted juxtaombilical and supraombilical (we can also opt for the left iliac fossa or the Palmer point in the case of umbilical hernia or cicatriceal abdomen), inserting the scoping trocar and the telescope with double chambers (Fig. 4) for intraabdominal cavity inventory that can highlight intraabdominal metastases, especially hepatic, diaphragmatic and possible synchronic tumor formations (6,9).

Focusing our attention on the stomach by calculating a suitable angle for making the laparogastroscopy and a facile view of the eso-gastric junction. We prefer an approach on the greater curvature on the anterior face that is marsupialized at left subcostal region on the midclavicular line. Minimizing pneumoperitoneum we will reduce tension in the gastric wall. Introducing a scoping trocar and telescope with double chamber in the stomach can lead us to starting our exploration. Gastro-oesoscopy will be performed using the rigid telescope through which we can visualize mid or lower oesophageal tumor formations and taking biopsies as well. sometimes we can ascend the area of vision by inserting a long telescope (40 cm) with a diameter of 5 mm through the inserted telescope. We will fix the tip of orogastric tube outside of the left subcostal minim incision. At the proximal site of the orogastric tube, an endoprosthesis system consisting of increasing diameter tubes will be installed up to the distal edge of the prosthesis. Cranio-caudal traction of the tubes (Fig. 5) will be carried out, which leads to the installation of the prosthesis in the tumor area. After dilatation or transstenosis drilling, we prefer silicone semi-plastic stents, con-like or with distal plateau, that autoblocks in proximal site of the tumor (6,10,11).

In the case of upper tumors, the prosthesis is fixed to retropharynx (Fig. 6), and in case of inferior tumors we used prosthesis with anti-reflux device. The gastro-oral hydro-pneumoo passage or liquid passage is a good sign of the permeability of the prosthesis and the confirmation of its placement in the tumor area, also by laparo-gastroscopy we can visualize the prosthesis and its permeability. Also, in the case of upper endoprosthesis, we have used the mobile endoscope and the laryngoscope with display to visualize the hypopharynx or even the rigid telescope as an esophagoscope (6,10).
Subsequently, after fixation into the stenotic area, the internal prosthesis that is fixed with a wire at the proximal end is extracted through the oral cavity. After the gastroraphy, we consider fitting a drain tube near the gastrostomia. This method of esophageal stenosis does not require food abstinence; the prosthesis is checked immediately after waking the patient with some liquid, and from the first day the patient is allowed to consume liquid and semi-liquid products. After 3-5 days post operative he can consume solid foods (well chewed)(12,13).

To prevent obstruction of the prosthesis, preprandial a teaspoon of olive oil (lubrifiant effect) is recommended and a carbogaseous drink (piston effect) to clean the prosthesis postprandial (6).
We also used this method in patients with eso-tracheal, tumoral or postoperative fistula, using silicone personalized prostheses with very good results (Fig. 10) (8,14). Esophageal endoprosthesis in the case of eso-tracheal fistula is extremely difficult (15-17).

Complications

A problem we faced with large tumors and cartilage-like tumors was the internal denting of the prosthesis due to extrinsic compression. For this inconvenience, initially we intended the recalibration of the prosthesis by dilatation using the Foley tube, but the results were not so satisfying, in most cases we have recourse to instrumental dilatations of the dentured prosthesis. By going through the learning curve, we used the "prosthesis in the prosthesis" method with the best results. The internal prosthesis (mandrel) strengthening the external prosthesis wall during the traction, not letting the external stent to be squeezed and kept the lumen open (18).

In the case of failure, very rarely (one case in 3 years), we have recourse to feeding stomas, especially pharyngotoma, considering that this is the most resistant compared with gastro or jejunostomas (12).

Conclusions

• We had outstanding results in most situations, the most important being the conservation of oral nutrition.
• The laparo-gastroscopic installation of esophageal prosthesis as a reserve procedure for endoscopic fails and an additional solution for digestive stomas.
• Laparogastroscopy significantly increases the number of cases with endoprosthesis and ensures the comfort of oral versus stomach nutrition.
• We recomand this method of endoprosthesis not just for esophageal cancer but for many other pathologies such as cancer affecting cavitary organs, benign esophageal stenosis, cicatricial stenosis and history of gastroesophagectomy.
• Esophageal stenting using personalized silicon prosthesis can be a suitable treatment for eso-tracheal fistula.
• This method increases the survival time by keeping a relatively normal regimen.
• Ensures the physiological nutrition of the patient through a minimal attack on the body and maintenance of the protein-energy resources.
• Leads to an increase in the patient’s satisfaction rate.
• The possibility of harvesting materials for primary or secondary histopathological examination.
gives us the opportunity to visualize the proximal portion of the duodenum, stomach and esophagus.

- rare postoperative complications.
- In conjunction with superior digestive endoscopy (rendez-vous technique), it can lead to stenting in case of inoperable patients or patients with high difficulty score.
- Laparogastroscopic endoprothesis is a minimally invasive method of choice for patients with oesophageal neoplasm and not only, requiring palliative surgery.

References