SHORT COMMUNICATION

Palliative endoscopic therapy of esophageal cancer: Self–expanding stents

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Abstract

Esophageal cancer is the tenth most common malignancy. Recently, there has been an increase in the incidence of carcinoma of distal esophagus. Unfortunately, early esophageal cancer is commonly asymptomatic and inaccesible to examinstion during regular physical examination. Thus, high percentage of patients present with advanced disease at the time of diagnosis. Main symptom are nutritional deficiencies, dysphagia, pressure in the epigastrium and commonly, blood loss. ***(Tab. 1, Fig. 1, Ref. 4.)***
Key words: palliative endoscopic therapy, esophageal cancer, self-expanding stents.

The main goal of palliative therapy is to lessen the burden of disease and improve quality of life of the patient.

Esophageal cancer is the tenth most common malignancy. Recently, there has been an increase of the incidence of carcinoma of distal esophagus. Unfortunately, early esophageal cancer is commonly asymptomatic and inaccessible to examination during regular physical examination. Thus, high percentage of patients present with advanced disease at the time of diagnosis. Main symptoms are nutritional deficiencies, dysphagia, pressure in the epigastrium and commonly, blood loss.

Surgical resection is preferred treatment strategy for resectable esophageal cancer. Surgery is effective form of treatment and effectiveness can be further improved by combination of radiation and chemotherapy. Patients with inoperable disease can be treated with chemotherapy, radiation and endoscopic palliative therapy. Comparing these three individual therapies, treatment with stents has the best clinical effect with lowest burden for the patient (1).

Endoscopic palliative therapy can be divided in to two groups. First group includes recanalization modalities of therapy. Second group involves percutaneous endoscopic gastrostomy or jejunostomy.

Recanalisation form of therapy includes: dilatation, jejunal and gastric tubes, laser ablation, argon plasma coagulation, local injection of medium with destructive properties (alcohol, saline solution, cisplatin with epinephrine). However, the most effective therapy is stent insertion.

There are two main types of stents: rigid plastic and self-expanding stents. Rigid stents are less expensive, disadvantages include higher rate of complications, inability of stent insertion into angled stenosis and shorter survival of patients. Plastic stents are thus being abandoned (3). Self-expanding stents are further divided into uncovered and covered stents. Advantage of uncovered stent is good fixation, lower risk of stent migration. However, tumor overgrowth with subsequent stent occlusion remains

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Tab. 1. Study comparison (NCI versus Bertelsmann).

Type of complication	Slezák Majek NCI	Bartesman-Amsterd early complication	Bartesman-Amsterd late complication
Stent migration	6.25%	4.3%	2.6%
Stent occlusion	3.1%	6.1%	9.6%
Aspiration pneumonia	9.3%	4.9%	2.6%
Bleeding	6.25%	4.3%	7.0%
Perforation	0%	1.8%	0.9%
Retrosternal pain	15.62%	15.9%	12.2%

major disadvantage. Covered stent is protected against tumor overgrowth, can be used for bridging mucosal defects and the risk of dislocation is minimal (Tab. 1) (2).

Most common indication for stent insertion is malignant stenosis, esophago-respiratory fistula and anastomotic recurrence. Type of the stent depends on the site of the obstruction of the tumor. Patients with distal esophageal carcinomas treated with stent insertion often experience reflux which required medical therapy. Use of stents with antireflux valve significantly decreases reflux with minimal need for medical therapy (4). Most difficult site for stent insertion is the proximal esophagus in the area of upper esophageal sphincter or just bellow it. Stent insertion at this site has to be precise and patients often complain of chest pain and difficulty in swallowing. These symptoms are usually absent if tumor is more than 2 cm below the upper esophageal sphincter. Endoscopy needs to be performed before stent insertion and depending on findings, an X-ray examination with contrast may be needed to better evaluate distal esophagus bellow stenosis. As a general rule, stenosis suitable for stent insertion has to be tightly passable for endoscope or obturated but suitable for dilation so that an instrument may be passed through. In the case of digestive-respiratory fistulas this rule may not be always applicable and stent has to be frequently custom made depending on the character of the stenosis.

Complication rate was comparable with results obtained from different centers. Two patients experienced bleeding requiring blood transfusion; bleeding was managed conservatively. Two patients experienced stent migration; one patient required surgical intervention. Five patients experienced restrosternal pain requiring medication; there was one stent occlusion with subsequent laser therapy. Aspiration pneumonia was treated with antibiotics in three patients. We did not observe any perforations. One patient died 6 hours after stent insertion; autopsy did not reveal the cause of death. None of complications occur immediately after procedure or within 7 days after stent insertion. Pain immediately after the procedure which subsides within 48hours as not included. All patients after stent insertion experienced improvement of dysphagia by 1–2 grades. Patients with digestive-respiratory fistula after stent insertion had improvement of dysphagia and were able to eat and drink by mouth. We used self-expanding Z and X stents.

In summary, insertion of self-expanding stent when criteria are met and risk accepted, is an effective type of treatment of dysphagia and digestive-respiratory fistula.

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