

Investigation of Factors Affecting Clinical Outcomes after Stent Placement in Malignant Obstruction of the Esophagus or the Gastric Cardia

Ji Bong Jeong and Dong-Won Ahn

Department of Internal Medicine, Seoul Metropolitan Government-Seoul National University Boramae Medical Center, Seoul National University College of Medicine, Seoul, Korea

See "Factors That Affect Stent-Related Complications in Patients with Malignant Obstruction of the Esophagus or Gastric Cardia" by Hiroyasu Iwasaki, et al. on page 47, Vol. 11. No. 1, 2017

Esophageal cancer is the eighth most common cancer worldwide, and, despite many advances in diagnosis and treatment, the prognosis for esophageal cancer is still poor, with a reported 5-year survival rate ranging from 15% to 20%.¹ Over 90% of patients with esophageal cancer are diagnosed at an advanced stage.² And more than 50% of the patients with carcinoma of the esophagus or the gastric cardia have inoperable disease at presentation and most of them require palliative treatment to relieve progressive dysphagia.³ Various palliative treatments have been attempted for this purpose including rigid plastic intubation, self-expanding metallic stent (SEMS) placement, brachytherapy, external beam radiotherapy, or esophageal bypass surgery. Among these treatments, endoscopic placement of SEMS has become the first-line palliative option for dysphagia and, at present, is commonly used for the palliation of malignant dysphagia.³

However, stent-related complications after SEMS placement and recurrent dysphagia resulting from tumor progression or stent migration should be concern in clinical practice. Various stent-related complications such as hemorrhage, perforation, esophago-bronchial fistula, aspiration pneumonia, persistent chest pain, and gastroesophageal reflux have been reported in many studies about SEMS placement in carcinoma of the esophagus or the gastric cardia.^{1,3-8} Considering that these complications may be life-threatening, it would be important to select the patients with high risk of these complications as well as to develop a new favorable type of stent in clinical practice.

To date, studies have reported conflicting results about the relationship between prior radiotherapy or chemotherapy and

complications after SEMS placement.^{1,3-5} While, several studies reported that prior radiotherapy and/or chemotherapy increased the risk of life-threatening complications after SEMS placement,^{1,4,5} another study showed no significant relationship between prior therapy and stent-related complications.³ Regarding the type of stent, studies also reported conflicting results.⁶⁻⁸ However, over the course of 25 years, SEMSs have evolved considerably, undergoing numerous modifications, and the therapeutic endoscopist has numerous choices of SEMSs for palliation of dysphagia from carcinoma of the esophagus or the gastric cardia.⁹ Moreover, some types of stent are not commonly available or utilized in some countries. Therefore, at present, further studies with commonly available types of stent are needed to predict the risk according to the types of stent accurately.

In this issue of *Gut and Liver*, Iwasaki *et al.*¹⁰ have attempted a comprehensive approach to investigate the factors affecting stent-related complications in patients with carcinoma of the esophagus or gastric cardia. In their study, data from 53 patients who underwent SEMS placement for malignant obstruction of the esophagus or gastric cardia from single institution were reviewed and multivariate analysis was performed to identify the risk factors of stent-related complications. According to the results of their study, the use of an Ultraflex stent (odds ratio [OR], 19.60) and prior radiation (OR, 25.70) significantly increased the risk of major complications. The authors suggest that higher radial force of the Ultraflex stent be associated with more tissue damage resulting in increased risk of major complications (hemorrhage and perforation) consequently. Regarding prior radiation, the authors mention that the late effects of radiation

Correspondence to: Ji Bong Jeong

Department of Internal Medicine, Seoul Metropolitan Government-Seoul National University Boramae Medical Center, Seoul National University College of Medicine, 20 Boramae-ro 5-gil, Dongjak-gu, Seoul 07061, Korea

Tel: +82-2-870-2222, Fax: +82-2-870-3863, E-mail: jibjeong@snu.ac.kr

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therapy have an important role in the occurrence of major complications.

The risk and characteristics of the stent-related complications can differ depending on the location of obstructive lesion.⁹ In case of obstruction in the proximal esophagus, SEMS placement has been complicated with severe neck and chest pain, at times requiring endoscopic removal of the stent, significant compression of trachea or left/right main stem bronchus with fatal or near-fatal acute hypoxemic respiratory failure, or trachea-esophageal fistula development.⁹ In case of SEMS placement bridging the gastroesophageal junction, by contrast, development of gastroesophageal reflux which results in severe ulcerative esophagitis with hemorrhage as well as aspiration pneumonia, and occurrence of stent migration into the stomach which results in recurrent dysphagia or even bowel obstruction have been serious clinical concerns.⁹ In the report of Iwasaki *et al.*,¹⁰ location of tumor was upper or middle esophagus in about 58% of patients, whereas, in 42% of patients, tumor was located in lower esophagus or gastroesophageal junction. Therefore, it would be needed to perform a subgroup analysis according to the tumor location. Besides, in clinical practice, it is important to achieve persistent improvement of dysphagia after SEMS placement as well as to reduce the SEMS-related complications. Indeed, the risk of recurrent dysphagia after SEMS placement should be also considered as important clinical outcome. In the report of Iwasaki *et al.*,¹⁰ recurrent dysphagia resulting from tumor overgrowth, tumor ingrowth, stent migration, or food bolus impaction occurred in 12 patients (22.6%). So, it would be interesting to define the recurrent dysphagia as primary outcome and to perform same analysis to find factors affecting the recurrent dysphagia. The lack of these analyses might be the limitation of study by Iwasaki *et al.*¹⁰ Nevertheless, their report should provide clinicians with helpful information for prediction of complications after SEMS placement in malignant obstruction of the esophagus or gastric cardia. And the results of their study might pave the way to perform prospective, multicenter studies about this issue.

CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

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