New Study Comparing Multiband Mucosectomy and Endoscopic Submucosal Dissection

Endoscopic Resection of Early Esophageal Squamous Cell Intraepithelial Neoplasia

Bing Hu
Professor, Chief Physician
Director of Digestive Endoscopy Center
West China Hospital, Si Chuan University
Sichuan, China

Early esophageal squamous cell cancer (ESCC) is one of the most common reasons for cancer-related death all around the world and approximately half of the ESCC cases occur in China. Many areas in China have a high incidence rate of ESCC, and many of the areas are less-developed areas. So, most of those patients are found in middle-late stages and the long-term prognosis is poor.

The major method of treating the ESCC is scanning the patients and resecting the mucosal lesions endoscopically. Recently my colleagues and I have finished a research study on the treatment of ESCC with two different endoscopic methods, the endoscopic submucosal dissection (ESD) method vs. the multiband mucosectomy (MBM) method.

In total, we chose 92 patients, who were diagnosed with squamous cell HGIN or ESCC and divided them evenly into two groups: the ESD group and the MBM group. I performed all the endoscopic resection procedures for these patients.

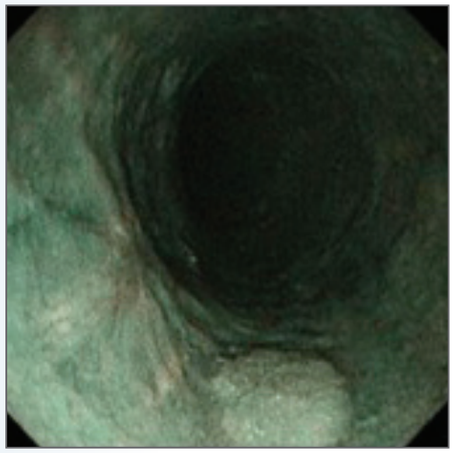
During the study, we compared the parameters of the two groups in the aspects of: procedure time; number of complete resection lesions; procedure-related complications; maximum specimen diameter and thickness; hospital stay and costs of disposables; and number of recurrence lesions. Patients from both groups had been followed up at one, three, six and 12 months, and then annually after the endoscopic resection procedures.

For the two groups (46 pts in ESD, and 46 pts in MBM), there was no significant difference on resected specimens, no significant differences were found on complications, the differences of recurrence rates between MBM and ESD groups are not significant. The MBM method applies a 20% overlap to reduce the risk of relapse. However, the mean operation time required for the MBM is less than half of the ESD operation time. Also, the MBM group had shorter hospital stays and lower cost of procedure disposables.

Endoscopic resection (ER) is considered to be the best choice for treating early esophageal squamous cell cancer and its precancerous lesions because of its microinvasive features. ESD was the main technique of ER since it can provide complete resection of huge and deep lesions, accurate pathology analysis and low recurrence rates. MBM is a brand new technique for resection of early esophageal cancers and was originally designed for endoscopic resection of Barrett's neoplasia in western countries, whereas it is rarely reported in treating early ESCC in oriental countries. From our research, we found that MBM is safer and more efficient and the follow-up outcome is similar with ESD. However, MBM shows great advantages in ease of use, shorter procedure time, hospital stay and lower costs. It therefore may be preferred for endoscopic resection of early esophageal squamous cell intraepithelial neoplasia. ■

MBM procedures for neoplastic lesions of esophagus:

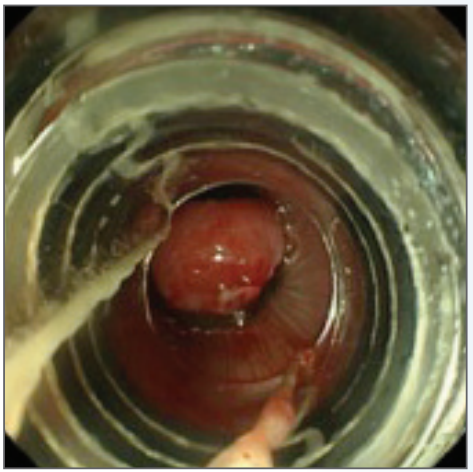
a. White light observation



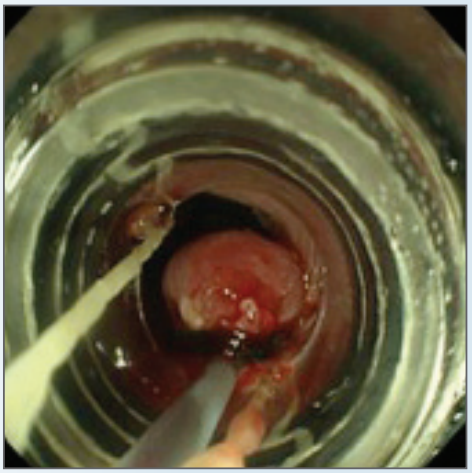
b. Narrow band imaging

c. 2% Lugol's staining

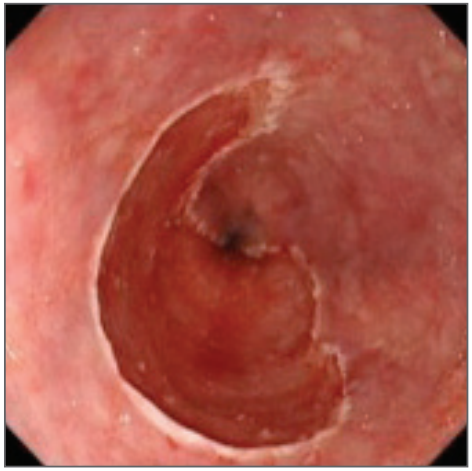
d. Delineation with coagulation marks



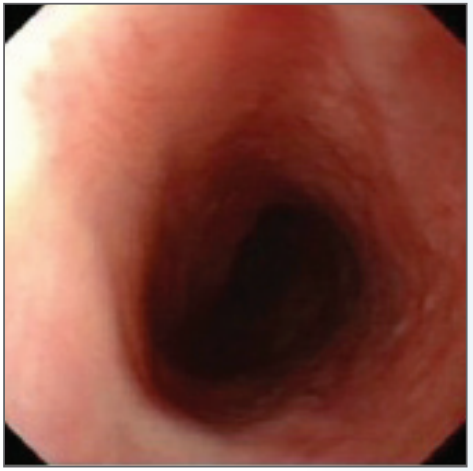
e. Creation of pseudopolyps by releasing rubber bands



f. Resecting pseudopolyps by a snare underneath the rubber band



g. Resection wound



h. At 3-month follow-up, white light observation of the resection scar

i. Lugol's staining of the resection scar at 3-month follow-up