Reviews

ENDOSCOPIC MUCOSAL RESECTION FOR COLONIC DIFFICULT SESSILE POLYPS AND EARLY SUPERFICIAL COLONIC TUMOURS, AN ALTERNATIVE EFFECTIVE METHOD TO COLONIC SURGERY. A MIDDLE EASTERN COUNTRY EXPERIENCE

W. T. Y. Hamoudi

Internal Medicine Department, Al Basir Hospital, Amman, Jordan

Endoscopic mucosal resection (EMR) is a technique used for the staging and treatment of superficial neoplasms of the gastrointestinal tract (GIT). The technique was first developed in Japan for the treatment of early gastric cancers and then disseminated throughout the world for various indications, including sessile colonic neoplasms. This method is used to provide accurate histological staging of superficial gastrointestinal neoplasms and provides a minimally invasive technique for their removal.

There are several variations of EMR that are currently in use, including injection-assisted, cap-assisted, and ligation-assisted techniques. All of them adhere to the basic principles of identification and demarcation of the lesion, submucosal injection to lift the lesion, and endoscopic snare resection. Due to its overall safety and efficacy in appropriately selected patient populations, EMR has become firmly integrated in the diagnostic and treatment algorithms of superficial GIT malignancies.

EMR may be considered for definitive therapy of superficial premalignant and well-differentiated to moderately-differentiated GIT malignant lesions in the absence of lymph node or distant metastases (T1m N0M0). It also plays an integral role in the staging algorithm of early GIT cancers by providing a larger resection specimen than standard forceps biopsy, allowing for accurate T-staging and establishing the presence of lymphovascular involvement.

EMR is commonly used for the resection of laterally spreading benign lesions or early adenocarcinoma of the colon. The ‘lift-and-cut’ technique is most commonly used. Appropriate indications include lesions that are: i) well-differentiated or moderately-differentiated tumours confined to the mucosa, ii) type O-IIa less than 2 cm, iii) type O-IIb less than 1 cm, or iv) type O-IIc less than 1 cm in size.

Additional indications include either the patients who refuse surgical intervention, or those in whom significant comorbidities are prohibitive. Successful removal of larger lesions is well-documented. However, it is associated with higher recurrence rates, highlighting the need for intensive post-EMR surveillance.

EMR should be performed by experienced operators in a center of expertise. Appropriate adjuncts to treatment should be readily available in the operating room. Additionally, interventional radiology and surgical back-up should be available in the event of uncontrolled hemorrhage or perforation.

Long-term outcomes following EMR of flat premalignant lesions and early colorectal cancer vary widely in the incidence of recurrence ranging from 0% to 40%. Variations in technical expertise and heterogeneity in lesions included for treatment are partially responsible for this wide disparity. Overall, however, most recurrences are amenable to repeat endoscopic treatment during surveillance colonoscopy. En bloc resection and lesion size of 2

Address for correspondence:

W. T. Y. Hamoudi, MD
Internal Medicine Department, Al Basir Hospital
P. O. Box 922720, Amman 11192, Jordan
e-mail: waseem6520012001@yahoo.com
cm or less are associated with lower local recurrence rates.

Due to risk of remnant tissue or local recurrence, close surveillance is generally recommended. Repeat colonoscopy may be performed within at least 4-6 weeks to ensure that the whole dysplastic tissue has been resected or ablated. Follow-up colonoscopy with surveillance biopsies is most often performed 3-6 months after EMR, and subsequent surveillance is adjusted based on the status of recurrence.

In Jordan, there is already certain experience with the endoscopic submucosal resection. Several experts and authors of the study after a training period in such procedure in Japan started EMR in 2004 for superficial gastric and colonic mucosal masses. This prospective clinical trial will be performed until 2013 at Al Bashir gastrointestinal endoscopic unit, Amman, Jordan. It covered a total of 292 cases, 135 with gastric and 157 with colonic lesions. Colonic lesions that underwent EMR presented as 23 carcinomas in situ, 40 polyps with severe dysplasia, 57 with moderate to severe dysplasia, 24 with mild dysplasia and 14 inflammatory (hyperplastic) polyps.

There were no immediate or late complications, no recurrence in any examined subjects at all.

The procedure was well-tolerated by the patients. Minimal mild abdominal pain occurred after the procedure in some patients, and minor bleeding occurred during the procedure in other ones only. No perforations or major bleeding events were recorded.

All the patients with carcinoma in situ and moderate to severe dysplasia did not show any recurrences after follow-up colonoscopies.

This procedure is considered safe and efficient in selected patients with superficial gastrointestinal neoplasms when performed by experienced operators in a center of expertise.