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# Current Status of Colorectal Endoscopic Submucosal Dissection in Korea

Dong Kyung Chang

Division of Gastroenterology, Department of Medicine, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea

Colorectal endoscopic submucosal dissection (ESD) is not yet fully popularized in Korea, but is increasing steadily. The outcomes of colorectal ESD in Korea are comparable to those in Japan and other countries. ESD-related complication rates are decreasing as experiences accumulate. Particularly for rectal laterally spreading tumors, ESD is becoming more prevalent than transanal endoscopic microsurgery. Standard indication, qualified training system, and full medical insurance coverage should be established for the procedure to become popular in the long run.

**Key Words:** Colonic neoplasms; Endoscopy; Insurance, health, reimbursement

## INTRODUCTION

Gastric endoscopic submucosal dissection (ESD) is well established for the standard treatment of early gastric cancer, yet colorectal ESD is not because of the technical difficulty and the high risk of complication. However, the number of performing colorectal ESD is steadily increasing, and thus this may become popular soon. Colorectal ESD is particularly valuable to resect large laterally spreading tumors (LSTs) containing mucosal cancer or shallow submucosa-invading cancer. In 2011, Korean Health Insurance Review and Assessment Service began to cover gastric ESD when the procedure is performed for the standard indication. Colorectal ESD was also approved as an acceptable treatment option, but did not obtain reimbursement.

## CURRENT STATUS OF PERFORMING COLORECTAL ESD IN KOREA

Colorectal ESD was introduced in Korea around 2003, and

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Correspondence: Dong Kyung Chang

Division of Gastroenterology, Department of Medicine, Samsung Medical Center, Sungkyunkwan University School of Medicine, 81 Irwon-ro, Gangnam-gu, Seoul 135-710, Korea

Tel: +82-2-3410-3409, Fax: +82-2-3410-6983, E-mail: dkchang@skku.edu

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now major training hospitals and specialized colorectal hospitals perform this procedure to some level. Three results of colorectal ESD in Korea which were published in the Science Citation Index journals<sup>1,2</sup> demonstrated that the case numbers were 108 to 499 cases at each institution, *en bloc* resection rates were 78.7% to 95.0%, and perforation rates were 4.5% to 20.4%.

## CHANGING TRENDS OF THE PRIMARY TREATMENT MODALITY FOR THE RECTAL LST

Rectal mucosal tumors and shallow submucosa-invading cancers had been treated by transanal excision or transanal endoscopic microsurgery (TEM), however these days rectal ESD cases were becoming popular since rectum is the easiest and the safest site for the ESD. In the results comparing rectal ESD and TEM, both ESD and TEM were useful and oncologically safe for treating LST type rectal carcinoma in situ and shallow submucosa-invading cancers.<sup>3</sup> However, ESD has the additional advantage in that it is minimally invasive and does not require anesthesia, abundant use of antibiotics, and longer hospital stay. In terms of complication, ESD seemed safer because this procedure is less invasive while TEM involves resection of proper muscle. Therefore, ESD could be a primary option for a treatment of superficial early rectal cancers.

## KOREAN HEALTH INSURANCE POLICY FOR THE RECTAL ESD

Korean Health Insurance Review and Assessment Service began to reimburse for the gastric ESD from November, 2011 and admitted extended criteria for the colorectal ESD but did not reimburse for it. The extended criteria for the colorectal ESD which was approved by Korea health insurance include early colorectal cancer which has no metastasis to the regional lymph nodes, LSTs equal to or larger than 2 cm, submucosal tumors, and tumors with fibrosis.

They also regulated facilities standards and personal qualification standards. Specialist of the relevant department who has 3-year experience after obtaining the special license should perform ESD and the institution should have facilities for immediate open abdominal surgery in case of emergency situation. After ESD, registration of ESD cases and reporting pathology reports describing histologic diagnosis including degree of differentiation, depth of cancer invasion, presence of lymphovascular invasion, status of the resection margin, and the size of the resected specimen, are obligatory.

## CONCLUSIONS

Colorectal ESD is still in its early phase of introduction, but is increasing steadily in Korea. Standard indication, qualified training system, and full medical insurance coverage should be established for the procedure to become popular. Development of safer and easier new techniques should be encouraged, as well.

### Conflicts of Interest

The author has no financial conflicts of interest.

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