

Endoscopic Submucosal Dissection for Superficial Colorectal Tumors

ESD is an effective procedure for en bloc resection of superficial colorectal tumors, regardless of tumor size or location. To evaluate long-term outcomes for patients with these tumors after ESD, evaluation of those outcomes long-term were evaluated in 257 colorectal tumors in 255 consecutive patients at Hiroshima University Hospital between June 2003 and July 2010.

The following variables were investigated, including patient characteristics, the ASA score, tumor location, tumor size, growth type, histology, en bloc resection rate, achievement of curative resection, procedure time, and adverse events.

The five year overall survival (OS), disease-specific survival (DSS), local recurrence and metachronous tumor occurrence were also analyzed.

A total of 224 tumors in 222 patients who were confirmed dead or had followup data for more than 5 years were identified. After a median followup of 79 months, five-year OS and DSS rates were 94.6% and 100%, respectively. The local recurrence rate (1.5%) was significantly higher in patients undergoing piecemeal resection (9.1%), compared with en bloc resection (0.6%), in cases of histologic incomplete resection, compared with complete resection, and in cases of non-R0 resection, compared with R0 resection.

The rates of total number of tumors greater than 6 mm and carcinoma metachronous tumors after ESD without additional surgical resection were 18.9% (38/201), and 4% (8/201), respectively.

It was concluded that long-term outcomes after ESD for superficial colorectal tumors are favorable. Patients should be surveyed for “local recurrence” and metachronous tumors after ESD.

Shigata, K., Oka, S., Tanaka, S., et al. “Long-Term Outcomes After Endoscopic Submucosal Dissection for Superficial Colorectal Tumors.” *Gastrointestinal Endoscopy*, 2017; Vol. 85, pp. 546-553.

Endoscopic Features of Ulcerative Colitis-Associated Dysplasia”

Recent advances in endoscopic equipment and diagnostic techniques have made possible the detection of early dysplasia in the inflamed mucosa of ulcerative colitis

(UC), The SENIC Consensus Statement recommends the use of unified terminology for the morphology of dysplasia. To investigate the endoscopic features of high-grade dysplasia (HGD in a clinical setting, 62 patients were retrospectively identified with UC, who were diagnosed with colitis-associated cancer or HGD between 1997 and 2015.

A total of 39 lesions of HGD detected by targeted biopsy sampling in 31 patients were reviewed and the endoscopic morphology was classified according to the SENIC guidelines.

In total, 0, 6, (15%), 19 (48.7%), 12 (30.8%), and 2 (5.1), lesions with HGD were classified as pedunculated, sessile, superficial elevated, flat, and depressed, respectively. Nearly 80% of the lesions were located in the rectum or sigmoid colon. All flat and depressed lesions were red in color, typically sessile, superficially elevated lesions accompany a flat area. Ulceration was observed in two depressed lesions (5.1%), although the borders were indistinct in 21 lesions (53.8%). Without the use of magnifying colonoscopy, all lesions could be distinguished from the surrounding mucosa using magnifying endoscopy.

This is the first study to classify the morphologic features of HGD using the SENIC guidelines in a clinical setting. Endoscopists should recognize that HGD is frequently associated with a flat, superficial elevated area and red discoloration and should inspect particularly carefully in the rectum and sigmoid colon.

The findings at chromoendoscopy and magnifying colonoscopy may also be useful in distinguishing lesions from the surrounding mucosa.

Sugimoto, S., Naganuma, M., Iwao, Y., et al. “Endoscopic Morphologic Features of Ulcerative Colitis-Associated Dysplasia Classified According to the SENIC Consensus Statement.” *Gastrointestinal Endoscopy*, 2017; Vol. 85, pp. 639-646.

Sessile Serrated Adenoma Polyp in Hyperplastic-Appearing Diminutive Rectosigmoid Polyps

The ASGE recommends that distal colon hyperplastic lesions can be left in place without resection if adenomatous histology can be excluded with greater than 90% negative predictive value. Some lesions could be sessile, serrated adenomas/polyps (SSA/Ps),

which is also precancerous. To describe the prevalence of SSA/Ps in hyperplastic-appearing diminutive rectosigmoid polyps, a total of 513 consecutive diminutive rectosigmoid polyps that appear hyperplastic were prospectively placed to an expert endoscopist in individual bottles for pathologic evaluation. Each polyp was examined by three expert GI pathologists.

For the prevalence of SSA/Ps in the study, polyps ranged from 0.6% to 2.1%. The lowest negative predictive value found by the endoscopist for the combination of adenomas plus SSA/Ps was 96.7%.

It was concluded that the prevalence of SSA/Ps in diminutive rectosigmoid hyperplastic-appearing polyps is very low. These results support the safety and feasibility of a “do not resect” policy for diminutive hyperplastic-appearing rectosigmoid polyps.

Ponugoti, P., Lin, J., Odez, R., et al. “Prevalence of Sessile Serrated Adenoma/Polyp in Hyperplastic-Appearing Diminutive Rectosigmoid Polyps.” *Gastrointestinal Endoscopy*, 2017; Vol. 85, pp. 622-627.

Low-Grade Dysplasia in Barrett’s Esophagus

To analyze histopathologic criteria required for a diagnosis of low-grade dysplasia (LGD), using the new subcategories of LGD with inflammatory and dysplastic features, each diagnosis was categorized on the level of confidence and assessed intra-observer agreement among gastrointestinal pathologists from five tertiary centers in the United States and Europe.

In the first phase of the study, three pathologists held a consensus conference in which they discussed the diagnostic criteria for LGD. In the second phase, 79 slides from patients with BE (23 samples of non-dysplastic BE, 22 samples of LGD and 34 samples of high-grade dysplasia), were identified, randomly associated to 7 pathologists (4 from the United States and 3 from Europe), and interpreted in a blinded fashion.

The k Values were calculated for inter-observer agreement. Multinomial logistic regression analysis was performed to assess the weighting of histologic features with the diagnosis.

The overall k Value for diagnosis was 0.043. When categorized based on degree of dysplasia, the k Value was 0.22 for non-dysplastic BE, 0.11 for LGD, and 0.43 for high-grade dysplasia. When all pathologists

made a diagnosis of high confidence, the inter-observer agreement was substantial among the US pathologists ($K = 0.63$), and European pathologists ($K = 0.80$). The k Value for all diagnoses made by European pathologists was higher than those made by US pathologists.

It was concluded that in an analysis of criteria used in histopathologic diagnosis of LGD, improvement was not observed in level of agreement among experienced pathologists, even after accounting for information. The level of inter-observer agreement increased with level of pathologist confidence. There was also a difference in reading of histopathology samples of BE tissue between US and European pathologists.

Bennalaganti, P., Kanakadandi, V., Goldblum, J., et al. “Discordance Among Pathologists in the United States and Europe in Diagnosis of Low-Grade Dysplasia for Patients with Barrett’s Esophagus.” *Gastroenterology* 2017; Vol. 152, pp. 564-570.

Occult HCV in Reported Sustained Virologic Response To DAA for Recurrent Infection After Liver Transplantation

Occult infection with HCV is defined as the presence of HCV genome in either liver tissue or peripheral blood monocytes, despite constant negative results from tests for HCV RNA in serum to investigate whether patients who maintain an SVR 12 weeks after therapy (SVR 12) with direct-acting antiviral (DAA) agents for recurrent HCV infection after liver transplantation had occult HCV infections.

A prospective study was performed of 134 patients with recurrent HCV infection after liver transplantation who were treated with DAAs, with or without ribavirin from 2014 through 2016 (129 patients achieved an SVR 12).

In greater than 10% of these patients ($N = 14$), serum levels of aminotransferases did not normalize during or after DAA therapy, or they normalized transiently, but then increased sharply after DAA therapy.

Of these 14 patients, 9 were assessed for occult infection by reverse transcription quantitative polymerase chain reaction.

This analysis revealed that 55% of these patients ($N = 5$), had an occult infection with a detection of negative strand viral genome, indicating viral replication. These

findings indicate the presence of occult HCV infection in some patients with abnormal levels of serum aminotransferases, despite SVR 12 to DAAs for HCV infection after liver transplantation.

Elmasry, S., Wadha, S., Bang, B., et al. "Detection of Occult Hepatitis C Virus Infection in Patients Who Achieve a Sustained Virologic Response to Direct-Acting Antiviral Agents for Recurrent Infection After Liver Transplantation." *Gastroenterology* 2017; Vol. 152, pp. 550-553.

Outcome of Pregnancies When Interrupted by Endoscopic Evaluation

To examine outcomes of pregnancy for women who underwent endoscopy during their pregnancy, a nationwide, population-based cohort study was carried out linking data from the Swedish Medical Birth Registry (from 1992 through 2011), with those from the Swedish Patient Registry.

A total of 3352 pregnancies were identified, exposed to endoscopy (2025 upper endoscopies, 1109 lower endoscopies and 58 ERCPs).

Using Poisson regression, we calculated adjusted relative risks (ARRs) for adverse outcomes of pregnancy, according to endoscopic status using 1,589,173

unexposed pregnancies as reference to consider the effects of disease activity, pregnancy outcomes (preterm birth, stillbirth, small for gestational age, congenital malformations), in women who underwent endoscopy just before or after pregnancy.

Secondary outcome measures included induction of labor, low birth weight (less than 2500 grams), C-section, Apgar score less than 7 at 5 minutes, and neonatal death within 28 days. To consider interfamilial factors, we compared pregnancies within the same mother.

Exposure to any endoscopy during pregnancy was associated with increased risk of preterm birth (ARR 1.5), or small for gestational age (ARR 1.30), but not of congenital malformation (ARR 1.00), or stillbirth (ARR 1.45). None of the 15 stillbirths to women with endoscopy occurred less than 2 weeks after endoscopy. ARR were independent of trimester.

Compared to women with endoscopy less than 1 year before or after pregnancy, endoscopy during pregnancy was associated with preterm birth (ARR 1.16), but not with small for gestational age (ARR 1.19), stillbirth (ARR 1.11), or congenital malformation (ARR 0.90).

Restricting the study population to women having endoscopy during pregnancy or before/after and only analyzing data from women without a diagnosis of inflammatory bowel disease, celiac disease, or liver disease, endoscopy during pregnancy was not linked to preterm birth (ARR 1.03).

Comparing births within the same mother, for which only one birth had been exposed to endoscopy, we found no association between endoscopy and gestational age or birth weight.

It was concluded that in a nationwide, population-based cohort study, endoscopy was found to be associated with increased risk of preterm birth or small for gestational age, but not of congenital malformation or stillbirth. These risks are considered small and likely due to intrafamilial factors or disease activity.

Ludvigsson, J., Ledwohl, B., Ekblom, A., et al. "Outcome of Pregnancy for Women Undergoing Endoscopy While They Were Pregnant: A Nationwide Cohort Study." *Gastroenterology* 2017; Vol. 152, pp. 554-563.

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