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International Digestive Endoscopy Network to Strengthen Network for Lower Gastrointestinal Diseases Including Inflammatory Bowel Disease and Colorectal Cancer

Kwang An Kwon

Department of Gastroenterology, Gachon University Gil Medical Center, Incheon, Korea

The International Digestive Endoscopy Network 2012 organized by Korean Society of Gastrointestinal Endoscopy was held at Seoul, Korea on June 9 to 10, 2012, during which invited lectures of world renowned experts on the lower gastrointestinal (GI) tract were given with a wide range of the latest knowledge and novel imaging of inflammatory bowel disease (IBD) and colorectal endoscopic submucosal dissection (ESD). There were very informative five sessions in the lower GI part consisting of: Colonoscopy in IBD; what can we do in 2012?; A look into the bowel beyond colon in IBD; How to estimate the invasion depth of early GI cancer?; No more no man's land: small bowel exploration; and colorectal ESD: can it be a popular procedure?

Key Words: Lower gastrointestinal tract; Inflammatory bowel disease; Colonoscopy; Endoscopic submucosal dissection

INTRODUCTION

The International Digestive Endoscopy Network (IDEN) 2012 organized by Korean Society of Gastrointestinal Endoscopy was held at Seoul, Korea on June 9 to 10, 2012 and focused on practical issues which are challenging to practicing gastroenterologists, during the 2 days of successful conference. Among the lectures on lower gastrointestinal (GI) diseases, eight papers were submitted for IDEN 2012 special issue, four of which were regarding inflammatory bowel disease (IBD), two regarding colonoscopic procedure and complication management, and the remaining two dealt with things regarding colorectal endoscopic submucosal dissection (ESD).

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Correspondence: Kwang An Kwon
Department of Gastroenterology, Gachon University Gil Medical Center, 21 Namdong-daero 774 beon-gil, Namdong-gu, Incheon 405-760, Korea
Tel: +82-32-460-3778, **Fax:** +82-32-460-3408,
E-mail: toptom@gilhospital.com

TOPICS ON IBD

Colonoscopy in IBD: role and significance

Nobody doubts that colonoscopy is essential in either diagnosis or the evaluation of treatment of IBD. By direct visual inspection of the intestinal mucosa combined with histological analysis using biopsied tissues, a diagnosis of IBD can be made, though still hard in some cases. Proper use of endoscopy with biopsies also enables differential diagnosis of IBD mimicking conditions including infectious colitis, ischemic colitis, and radiation colitis. Moreover, endoscopy adds its usefulness in assessing the severity and location of inflammation, evaluating possibilities of other diseases in the midst of a flare, predicting or evaluating the response to medical treatment, and even colon cancer surveillance in patients with longstanding, widespread type of IBD commencing in earlier age.[1,2]

A look into the small bowel in Crohn's disease (CD)

Conventional colonoscopy is the prerequisite diagnostic tool in patients with suspected CD. However, since small bowel is involved in as many as 30% of patients with CD, small bowel imaging is a crucial element in diagnosing small bowel CD. Therefore, technology and basic science to develop the way of small intestine inspection has followed. As result, small bowel endoscopy such as small bowel capsule endoscopy or

device-assisted enteroscopy and cross-sectional imaging such as computed tomography enterography (CTE) or magnetic resonance enterography (MRE) were developed and have become key players in diagnosis and/or management of CD patients.

Role of computed tomography (CT)/MRE enterography in CD

Transcutaneous bowel ultrasound is a non-ionizing imaging modality useful in IBD. Contrast enhanced ultrasound (CE-US) measures tissue perfusion density which reflects the intensity of inflammation. CT enteroclysis is an imaging technique with the highest diagnostic accuracy for the detection of intestinal involvement of CD including extramural complications. Magnetic resonance imaging (MRI) provides an accurate assessment of disease activity in CD with a good correlation with endoscopy as well as additional information on stenotic and perforating complications. CE-US as a diagnostic tool in IBD may be a patient-friendly, easily applicable, and less costly alternative to endoscopy and MRE. Recently, emerging functional imaging techniques, such as diffusion-weighted imaging or dynamic contrast enhancement-MRI, look promising in assessment and monitoring of disease activity in CD.

Colon cancer surveillance in IBD: what's new beyond random biopsy?

Extensive and longstanding colitis in IBD is associated with an increased risk of colorectal cancer. Random biopsies have been recommended for surveillance but might miss a significant proportion of lesions. The yield of random biopsies is low, and random biopsies are expensive, labor-intensive and interfere with careful examination of the colon. Pan-colonic chromoendoscopy with targeted biopsies has proven its superiority over standard random biopsies in surveillance of dysplasia or cancer in patients with IBD.

VALUABLE TIPS FOR FRUSTRATING SITUATIONS IN COLONOSCOPY

How do I overcome difficulties in colonoscopy insertion?

To approximately 10% of colonoscopies, intubation of the cecal intubation might be considered difficult. There are considerable factors that affect the difficulty of the colonoscopy such as technical skill of the endoscopist, angulated sigmoid, redundant colon, old age, female gender, diverticular disease, and inadequate bowel preparation. Difficult colonoscopies can be characterized as an angulated sigmoid colon or redundant colon, and this classification guides the technical approach to completing the examination.[3] In an effort to overcome these situations and to enable colonoscope insertion with less pain, various methods have been introduced such as different types of scope methods (gastroscope, double balloon endoscope, pediatric, or variable stiffness colonoscope), CO_2 insufflation instead of air, water infusion, and cap-assisted colonoscopy method.

How do I manage post-polypectomy bleeding?

Even although the benefit of polypectomy is important in terms of reducing the risk of colon cancer development, polypectomy has some risk of complications. Bleeding is the most common complication and is usually divided into immediate and delayed one.[4] The risk of post-polypectomy bleeding ranges from 0.3% to 6% but can be as high as 24% in cases of larger polyps. Age of ≥65 years, underlying cardiovascular or chronic renal disease, use of anticoagulants, polyp size greater than 1 cm, polyp morphology, poor bowel preparation, cutting mode of electrosurgical current, and careless cutting of a polyp before current application are noted as independent risk factors of immediate bleeding.[5] Old age, hypertension, large sessile polyps, polyps at right colon, and polypectomy with pure coagulation are regarded as the risk factors of delayed bleeding. Most bleeding can be controlled with various endoscopic techniques including application of pressure, injection with epinephrine, cautery, endoclips, loops, and band ligators. The technique for hemostasis depends upon the severity of bleeding, the type of polyp, and individual preference. A combination of hemostasis techniques is frequently performed.[6]

COLORECTAL ESD: CAN IT BE A POPULAR PROCEDURE?

Indications, knives, and electric current: what's the best in colorectal ESD?

ESD enables *en bloc* resection of a lesion regardless of its size. Accurate histopathological diagnosis can be achieved by using ESD. ESD has been applied to the colon and rectum. Although ESD has not yet been recognized as a conventional therapeutic procedure for early colorectal carcinoma due to its technical difficulty, it has been made easier and safer by recent advances both in equipment and techniques, as well as the experience of many cases. Indications for colorectal ESD recommended by the colorectal ESD Standardization Implementation Working Group are as follows: 1) lesions difficult to remove en bloc with a snare endoscopic mucosal resection (EMR) due to their size, such as non-granular laterally spreading tumor (LST) (particularly pseudo-depressed type); 2) lesions showing a type V_I pit pattern and protruded-type large

lesions suspected to be carcinoma; 3) lesions with fibrosis due to biopsy or peristalsis; 4) sporadic localized lesions in chronic inflammation such as ulcerative colitis; and 5) local residual carcinoma after EMR.[7] The author introduces lots of useful and safe knives used in colorectal ESD including Flex knife, Hook knife, Dual knife, IT Knife 2, Flush Knife, B-Knife, and SB Knife Jr in his paper.[8]

Current status of colorectal ESD in Korea

Though colorectal ESD has been generally acknowledged as an acceptable treatment option, reimbursement for ESD is not allowed in Korea yet. ESD is not a standard therapeutic strategy for colorectal tumors of 20 mm or less in diameter because they can be easily managed by polypectomy or EMR. However, most colorectal tumors of more than 20 mm in diameter like so-called LST can be removed by piecemeal EMR,[9] necessitating more comprehensive of removal. This might be the right indication for colorectal ESD. Though colorectal ESD is still in its early phase of introduction, ESD is increasing steadily in Korea.

CONCLUSIONS

Endoscopic mucosal assessment and radiographic imaging are the two commonly used modalities for evaluating disease activity in IBD, among which CTE and MRE are particularly suited to evaluation of the small bowel, especially in CD. New MRI imaging offers promise for monitoring the disease activity of CD. Pan-colonic chromoendoscopy with targeted biopsies has proven its superiority over standard random biopsies in surveillance in patients with longstanding IBD. The most common patient-related cause of difficulty in colonoscopy can be classified either an angulated sigmoid colon or a redundant colon. This classification leads to the most appropriate approach to performing the full colonoscopy. Though colorectal ESD is still in its early phase of introduction, it is increasing steadily with technical development and advancement of devices in Korea. Without a doubt, IDEN will continue to strengthen network of gastroenterogists all over the world and be an important role in improvements, educations and exchanges of new knowledge in all GI diseases.

Conflicts of Interest

The author has no financial conflicts of interest.

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