

The 20th JGES-ASGE Joint Symposium

Cutting-edge of clinical practice in enteroscopy

5月26日(金) 14:40 ~ 16:10 第11会場(グランドプリンスホテル新高輪 3階 天平)

Moderators	Department of Medicine, Division of Gastroenterology, Jichi Medical University Division of Gastroenterology and Hepatology, ASGE, Mayo Clinic	Hironori Yamamoto Bret Thomas Petersen
IS02-1.	VCE Update (Video Capsule Endoscopy update) Division of Gastroenterology and Hepatology, Mayo Clinic Arizona	ShabanaF. Pasha
IS02-2.	Cutting-edge of clinical practice in DBE Division of Gastroenterology, Department of Medicine, Jichi Medical University	Tomonori Yano
IS02-3.	Cutting-edge of clinical practice in SBE Department of Endoscopy, Tokyo Medical and Dental University Hospital, Yokyo, Japan	Kazuo Ohtsuka
IS02-4.	Cutting-edge of clinical practice in Spiral Enteroscopy Center for Diagnostic and Therapeutic Endoscopy, Keio University School of Medicine, Tokyo, Japan	Naoki Hosoe
IS02-5.	Routes to the Papilla during ERCP in Altered Anatomy The Johns Hopkins University School of Medicine, U.S.A.	Mouen Khashab

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Hironori Yamamoto
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IS02-1 VCE Update (Video Capsule Endoscopy update)

Division of Gastroenterology and Hepatology, Mayo Clinic Arizona
○ ShabanaF. Pasha

Since its introduction in the early 2000s, the technology of capsule endoscopy (CE) continues to rapidly evolve. From noninvasive evaluation of small bowel (SB) disorders using luminal and circumferential capsules, we have colon capsules for screening and diagnostic evaluation, as well as a Crohn capsule to visualize both the SB and colon using a single capsule. Steerable capsules are being developed to allow a detailed examination of the upper GI tract and SB, and possibly detection of more lesions. There is an expanding role of Artificial Intelligence (AI) for automatic detection and characterization of vascular, inflammatory, and neoplastic lesions. Suspected SB bleeding (overt and unexplained iron deficiency anemia) remains the most common indication for CE, while other indications include suspected and established Crohn disease, surveillance of polyposis syndromes, evaluation of suspected tumors and refractory Celiac Disease. Colon capsule is useful for screening and surveillance after a prior incomplete colonoscopy, and diagnostic evaluation in suspected lower GI bleeding if patients are unable to undergo colonoscopy. Steerable magnetic controlled CE may have a role in screening for gastric cancer and urgent evaluation of suspected upper GI bleeding. The main contraindication of CE is suspected obstruction or stricture, while relative contraindications include dysphagia, small bowel diverticulosis, and pregnancy. The risk of retention can be reduced by patency capsule or SB imaging. In patients with dysphagia and GI dysmotility, CE can be deployed using a deployment device. Capsule retention might necessitate endoscopic retrieval or surgical management.

IS02-3 Cutting-edge of clinical practice in SBE

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○ Kazuo Ohtsuka¹⁾, Kento Takenaka²⁾, Ryuichi Okamoto²⁾

Single-balloon endoscopy (SBE) is a device assisted endoscopy that has a balloon at the distal end of overtube and not scope. It is used for diagnosing and assessment of the small bowel lesions. It is also used for endoscopic treatment, such as hemostasis, polypectomy and EMR, and removal of foreign body. Many patients with Crohn's disease (CD) have small bowel lesions. The stricture caused by CD is well detected by SBE. It is treated by endoscopic balloon dilation. Recently, a new type of SBE has been released. It is improved for operability of insertion and treatment, and applied new image enhanced observation methods. This scope adopted a passive bending function that spreads the force on the scope over the bend, so enough force is transmitted to advance the scope to depth. The small intestine winds in the abdominal cavity. Therefore, the passive bending facilitates passage through the severe curve and improves the ability of insertion. The diameter of the forceps channel has increased to 3.2mm. It helps rapid suction and in and out of forceps. As for imaging, it uses the simultaneous method as the imaging method. The sequential imaging had higher image quality. However, due to improvements in image quality, the simultaneous imaging can now produce images that are comparable to the sequential method. In addition to NBI (narrow band imaging), TXI (texture and color enhancement imaging) mode and RDI (red dichromatic imaging) mode can be used to enable detailed observation. With the advent of this new scope, SBE will help for accurate diagnosis, evaluation, and treatment for deep small bowel lesions with minimally invasiveness.

IS02-2 Cutting-edge of clinical practice in DBE

Division of Gastroenterology, Department of Medicine, Jichi Medical University
○ Tomonori Yano

Double-balloon enteroscopy has therapeutic capabilities. However, it is sometimes challenging to perform endoscopic treatment in the deep small bowel in difficult situations.

The water exchange method is effective in maintaining low intraluminal pressure. It may improve maneuverability while reducing the patient's discomfort and risk of aspiration pneumonia and gas embolism.

In patients with Peutz-Jeghers syndrome, although their polyps have a very low risk of malignancy, large polyps should be treated to reduce the risk of intussusception. Ischemic polypectomy using hemo-clips or detachable-snare facilitates treatment of more polyps in a shorter time while ensuring safety.

In patients with multiple strictures due to Crohn's disease, if surgical treatment is indicated, a long segment of small intestine will be resected. Although endoscopic balloon dilation is an alternative therapy, it is technically difficult to perform sequential balloon dilation for multiple strictures. We are performing this approach using a CAST (calibrated small-caliber-tip transparent) hood, making it easier to pass through the strictures.

During endoscopic hemostasis, it is often difficult to secure the visual field because the lumen is easily filled with blood, and injected water is rapidly mixed with blood. The gel immersion method is useful to secure the visual field because the injected gel does not mix with blood. The hemostatic procedure can be performed in the space occupied by the transparent gel.

These new techniques are helpful to perform safe and effective treatment using balloon-assisted enteroscopy.

IS02-4 Cutting-edge of clinical practice in Spiral Enteroscopy

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Spiral enteroscopy was first reported by Akerman et al. in 2008. Its insertion principle and technology were purchased by Olympus, modified as a motorized version; motorized spiral enteroscope (MSE). The MSE has an overtube with disposable spiral fins attached to the scope, and the overtube is rotated electrically to pull the intestine toward the scope. Although it has just been introduced in Japan, several reports from western countries have shown its high insertion performance. We introduced MSE in August 2021 and have been using it clinically. Oral insertion is performed under general anesthesia, and trans-anal insertion is performed with analgesics and sedatives. All trans-anal insertions reached the ileal cecal valve, but in the early stage of introduction, there was a few cases in which the spiral fins did not reach the small intestine due to the sticking phenomenon during passage of the ileocecal valve. Although MSE has the advantage of short examination time, it is necessary to devise method to pass the ileocecal valve. In the presentation, the actual MSE insertion techniques will be presented.

IS02-5 Routes to the Papilla during ERCP in Altered Anatomy

The Johns Hopkins University School of Medicine, U.S.A.

○ Mouen Khashab

Obesity remains a central public health issue, with rising prevalence in the USA and worldwide. Roux-en-Y gastric bypass (RYGB) is a common and highly successful surgical treatment for obesity and its associated medical co-morbidities. Patients undergoing RYGB have higher rates of gallstone disease and may require endoscopic retrograde cholangiopancreatography (ERCP) to manage bile duct stones or other pancreatobiliary issues. However, endoscopic access to the biliary tree after RYGB is challenging. Conventional ERCP methods include balloon-assisted enteroscopy (BAE-ERCP) or laparoscopy-assisted ERCP (LA-ERCP). BAE-ERCP is limited by suboptimal technical success rates that range from 50% - 70%. LA-ERCP is highly efficacious, but may require conversion to open laparotomy in 5% - 13% of cases. There is no consensus as to the preferred approach to ERCP after RYGB.

Recently, endoscopic ultrasound (EUS)-directed transgastric ERCP (EDGE) has emerged as an option for ERCP after RYGB. This technique involves the creation of a temporary transgastric fistula by placing a lumen-apposing metal stent (LAMS) that connects either the gastric pouch or the proximal jejunum to the excluded stomach. The LAMS creates a stable connection to the excluded stomach, facilitating antegrade ERCP across the new tract. The advantages of EDGE include its high success rate, the avoidance of surgery, and procedure completion entirely within the endoscopy suite, potentially reducing hospital length of stay (LOS). The current literature suggests a high technical success of > 95%, with a mean procedure time of 90 minutes. Periprocedural adverse events occurred in 10-15% of cases and severe events are rare. Persistent fistula occurs in 10-20% of cases and responds well to endoscopic therapy. We usually employ endoscopic suturing or over-the-scope clips to close these fistulas.