KDDW 2021
The 5th Korea Digestive Disease Week
New Challenges and Collaboration in Gastroenterology and Hepatology Research
The 5th Joint Session between KDDW – TDDW – JDDW
NOV. 18 - 20, 2021
VIRTUAL
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### Novel Diagnostic and Therapeutic Approaches to Upper GI Motility Disorders

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UPPER GI

Novel Diagnostic and Therapeutic Approaches to Upper GI Motility Disorders

November 18 (Thu) 08:30-10:00

Chairs
Chong Il Sohn (Sungkyunkwan Univ., Korea)
Hidekazu Suzuki (Tokai Univ. School of Medicine, Japan)
Ching-Liang Lu (National Yang Ming Chiao Tung Univ., Taiwan)

Discussants
Myong Ki Baeg (Catholic Kwandong Univ., Korea)
Mariko Hojo (Juntendo Univ. School of Medicine, Japan)
Chien-Lin Chen (Hualien Tzu Chi Hosp., Taiwan)

Speakers
Usefulness of high-resolution manometry for the management of oropharyngeal dysphagia
Jung Ho Park (Kangbuk Samsung Hosp., Korea)

Functional dyspepsia -Diagnosis and treatment-
Tadayuki Oshima (Hyogo College of Medicine, Japan)

Esophageal mucosal histopathology may help differentiate achalasia from refractory gastroesophageal reflux disease
Ping-Huei Tseng (National Taiwan Univ. Hosp., Taiwan)

Rising Star Program
New parameter for quantifying bolus transit with high-resolution impedance manometry
Eun Jeong Gong (Univ. of Ulsan, Korea)

Assessment of esophagogastric junction in post-POEM reflux esophagitis
Akinari Sawada (Osaka City Univ. Graduate School of Medicine, Japan)

Comparison of manometric diagnosis by Chicago classification version 3.0 and 4.0 on esophageal high resolution manometry
Yen-Po Wang (Taipei Veterans General Hosp., Taiwan)
Name: Jung Ho Park, M.D.
Country: Korea
Affiliation: Department of Gastroenterology Kangbuk Samsung Hospital, Sungkyunkwan University

EDUCATIONAL BACKGROUND

1989-1995 M.D. degree from Yonsei University College of Medicine, Seoul, Korea
1998-2000 Master degree from Yonsei University Graduate school, Seoul, Korea
2005-2010 Ph.D. degree from Yonsei University Graduate school, Seoul, Korea

CAREER

1995-1996 Internship in Samsung Medical Center, Seoul, Korea
1996-2000 Residency of Internal Medicine Samsung Medical Center, Seoul, Korea
2000-2003 Served in Korean Army as a Public Health Physician
2003-2005 Clinical fellowship, Division of Gastroenterology Samsung Medical Center, Seoul, Korea
2005-2006 Clinical Assistant professor, Department of Medicine Kangbuk Samsung Hospital, Sungkyunkwan University, Seoul, Korea
2006-2010 Assistant professor, Department of Medicine Kangbuk Samsung Hospital, Sungkyunkwan University, Seoul, Korea
2010-2015 Associate professor, Department of Medicine Kangbuk Samsung Hospital, Sungkyunkwan University, Seoul, Korea
2015-present Professor, Department of Medicine Kangbuk Samsung Hospital, Sungkyunkwan University, Seoul, Korea

SPECIAL CERTIFICATION

- Korean Board of Internal Medicine (#6682)
- Korean Board of Gastroenterology (#1-05-791)
- Korean Board of G-I Endoscopy (2004-3127)

HONORS AND AWARDS

1. Best poster award- The 55th Conference of Korean Society of Gastrointestinal Endoscopy, 2004- Study about the injury of teeth and jaw during gastroscopy
2. Best poster award- Third Japan-Korea joint symposium on Gastrointestinal Endoscopy, 2004
3. Young Investigator's Award- Asian Pacific Digestive Week 2005- Enterochromaffin cell counts correlate with visceral hypersensitivity in patients with diarrhea predominant irritable bowel syndrome (D-IBS)
4. Best presentation award- Seoul international digestive disease symposium, 2017
5. Best oral presentation award- Korea International Gastric Cancer Week 2019

PROFESSIONAL AFFILIATIONS

- The Korean Society of Neurogastroenterology and Motility – Finance director
- Journal of Neurogastroenterology and Motility - Subeditor
- The Korean Society of Gastrointestinal Endoscopy-Member
- The Korean Association of Internal Medicine-Member
PUBLICATIONS

1. Original Articles (first or corresponding author)


THE USEFULNESS OF HIGH-RESOLUTION MANOMETRY FOR THE MANAGEMENT OF OROPHARYNGEAL DYSPHAGIA

Jung Ho Park
Departments of Internal Medicine, Kangbuk Samsung Hospital, Sungkyunkwan University College of Medicine, Seoul, Korea

Oropharyngeal dysphagia can be largely divided into structural and neuromyogenic causes, and neuromuscular causes can be divided into neuromuscular, metabolic-related, and hormone-related causes. In dysphagia associated with UES dysfunction, neurological and muscular diseases may be the main causes, and the most common cause is cerebral infarction. It is common in the severe brainstem or bilateral stroke, but it can occur in 25-40% of patients with non-unilateral cerebral infarction. In patients with dysphagia after cerebral infarction, 45-68% of patients die from dysphagia-related nutritional problems or respiratory complications within 6 months, which is a clinically important problem. In patients with dysphagia after cerebral infarction, 45-68% of patients die from dysphagia-related nutritional problems or respiratory complications within 6 months, which is a clinically important problem. The most common complication is aspiration pneumonia, occurring in 1/3 of patients with cerebral infarction and 2/3 of patients with brainstem infarction. Therefore, it is very important to predict the occurrence of aspiration pneumonia in these patients. To date, the gold standard for the evaluation of dysphagia is the videofluoroscopic swallowing study (VFSS). This test can detect aspiration in 42-60% of asymptomatic patients, and this abnormality is presumed to be due to laryngopharyngeal sensory deficit. Recently, there has been an attempt to evaluate the swallowing function of these patients and to predict the occurrence of complications such as aspiration pneumonia by using high-resolution manometry (HRM). There was a study to find out the meaningful metrics (indicators) of HRM concerning swallowing in normal people. In addition, the correlation between the results of the pressure test and the impedance (shows whether food goes down well by a change in electrical resistance) is investigated. By performing the VFSS and the HRM at the same time, it was investigated whether the change of pressure at the specific area had any correlation with the movement of food in the VFSS. As a result, the pressures of the mesopharynx and hypopharynx were expressed as contractile integral (CI) as in the esophageal manometry, and the degree of relaxation of the UES during food intake was objectively defined as time. Recently, there was also a study that compared the effectiveness of the relaxation time of UES and integrated relaxation pressure (IRP) for 0.3 sec as a risk factor for aspiration. Further research on oropharyngeal dysphagia is still needed.
Name: Tadayuki Oshima
Current Position: Associate professor, Hyogo College of Medicine
Country: Japan
Major Field: Functional gastrointestinal disorders

EDUCATIONAL BACKGROUND

1994 M.D. Nagoya City University Medical School, Japan
2000 Ph.D. Nagoya City University Graduate School of Medical Sciences, Japan

PROFESSIONAL EXPERIENCE

1994- Resident, First Department of Internal Medicine, Nagoya City Univ. Hosp, Nagoya
1998- Postdoctoral fellow, Department of Molecular and Cellular Physiology, Louisiana State University Health Science Center-Shreveport, LA, USA
2000-2006 Clinical research fellow, Nagoya City University Graduate School of Medical Sciences, Nagoya, Japan
2006- Assistant, 2007-Lecturer, 2016-Associate professor, Division of Upper Gastroenterology (Gastroenterology), Department of Internal Medicine, Hyogo College of Medicine, Nishinomiya, Japan
2020-present Associate professor, Division of Gastroenterology and Hepatology, Department of Internal Medicine, Hyogo College of Medicine, Nishinomiya, Japan

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS

Fellow of American College of Gastroenterology (FACG)
Asian Neurogastroenterology and Motility Association (ANMA): Scientific committee member, Vice secretary general
2009 Young Investigator's Awards, The 1st Biennial Congress of the Asian Neurogastroenterology and Motility Association (ANMA2009)
2013-2019 Associate Editor: Journal of Gastroenterology
2017 Award for Outstanding Reviewers, the Japanese Society of Internal Medicine
2017 Best Reviewers 2017 of Journal of Neurogastroenterology and Motility
2019 11th Journal of Gastroenterology High Citation Award
2020 Excellent Paper Award, The 22nd Japanese Society of Neurogastroenterology

MAIN SCIENTIFIC PUBLICATIONS

Publications (Scopus h-index: 34, impact factor: 777.6) and presentations
153 peer reviewed original articles in international journals
34 review articles and editorials, 19 case reports, 5 book chapters
15 invited lectures, and 21 oral presentations (English)

GRANTS

13 grants from Ministry of Education, Science, Sports and Culture of Japan, Grant-in-Aid
8 research grants from Foundations
FUNCTIONAL DYSPESIA -DIAGNOSIS AND TREATMENT-

Tadayuki Oshima, MD. PhD. FACG
Department of Gastroenterology and Hepatology, Hyogo College of Medicine, Japan

Functional dyspepsia (FD) is highly prevalent conditions and their definition relies exclusively on upper abdominal symptoms and the exclusion of organic disorders. There are currently no effective biomarkers for the diagnosis of FD. When an alarm sign is noted, examinations including blood sampling, upper gastrointestinal endoscopy, abdominal ultrasonography, and abdominal CT, etc. should be actively performed to exclude organic diseases. However, if no alarm signs are noted, endoscopy is not necessary and FD treatment can be started. Although the questionnaire alone cannot be used to diagnose FD, the use of self-administered questionnaires is recommended. Gastrointestinal motility must be related to the development of dyspeptic symptoms. However, gastrointestinal function test is not recommended as a routine clinical test: Even with difficult of the diagnosis, placebo was highly effective as a treatment for FD, influenced by the brain-gut interaction. A meta-analysis showed that the pooled placebo response rate was 32.4%. The pooled placebo response rate was 44.3% for trials that assessed symptom improvement and 15.6% for trials that assessed complete relief. Trials assessing complete relief showed stable low placebo response rates in short-term trials. Acid suppressants and acotiamide and a Japanese herbal medicine, rikkunshito are useful as the first-line therapy of the treatment. Dopamine receptor antagonists, serotonin 5-HT4 receptor agonists, tricyclic antidepressives and anxiolytic such as tandospirone are effective for the treatment of FD as second-line therapies. The efficacy of combination therapies should be further assessed in trials with good quality. Although significant debate exists in the literature on the association between improvements in gastric emptying and upper gastrointestinal symptoms, several prokinetics have been shown to effectively reduce FD symptoms when an optimal methodology to measure gastric emptying was used. In studying FD, impaired emptying and upper gastrointestinal symptoms, several prokinetics have been shown to effectively reduce FD symptoms when an optimal methodology to measure gastric emptying was used. In studying FD, impaired emptying and upper gastrointestinal symptoms, several prokinetics have been shown to effectively reduce FD symptoms when an optimal methodology to measure gastric emptying was used. In studying FD, impaired emptying and upper gastrointestinal symptoms, several prokinetics have been shown to effectively reduce FD symptoms when an optimal methodology to measure gastric emptying was used. 

Cholinergic agonist: The acetylcholinesterase inhibitor acotiamide was first approved in Japan in 2013. While its effect on gastric emptying is inconsistent, it may lead to successful clinical trials in FD without cardiac toxicity due to its ability to promote gastric accommodation.

Serotonergic agonists: Mosapride is a 5-HT3 receptor agonist that is available for the treatment of FD in Asian countries. However, its efficacy in FD is controversial. The Japanese herbal medicine rikkunshito promotes gastric accommodation and attenuates gastric dysmotility through the serotonergic and nitrergic pathways, and has beneficial effects on FD symptoms. Despite being removed from the market in 2007 due to adverse cardiovascular effects, tegaserod was reintroduced for use in IBS-C in women under 65 in 2019 in the USA. Prucalopride is a highly selective 5-HT3 agonist that stimulates gastrointestinal and colonic motility and is used for the treatment of refractory constipation in several countries. Velusetrag is a 5-HT3 agonist that is in trials for the treatment of diabetic or idiopathic gastroparesis. Naronapride is another 5-HT4 agonist in clinical trials for the treatment of chronic idiopathic constipation, gastrointestinal reflux disease, and FD.

Dopamine antagonists: The dopamine D2 antagonist domperidone is available worldwide, except in the USA, and has the advantage of not crossing the blood-brain barrier, thereby protecting users from central nervous system side effects. Domperidone has demonstrated efficacy in treating symptoms including postprandial fullness, nausea, vomiting, and stomach fullness. TAK-906 is a peripherally acting dopamine receptor D2/D3 antagonist that is being evaluated in a Phase II clinical trial for the treatment of idiopathic and diabetic gastroparesis. Several factors contribute to the development of common FGID symptoms, some of which may benefit from prokinetics. Meal related symptoms in FGIDs might be an indication for the use of prokinetics. However, good biomarkers that can predict the benefits of prokinetics are still required.

New Challenges and Collaboration in Gastroenterology and Hepatology Research

The 5th Korea Digestive Disease Week
November 18 - 20, 2021

KDDW 2021

Name: Tseng, Ping-Huei
Current Position: Clinical associate professor, College of Medicine, National Taiwan University
Attending physician, Department of Internal Medicine, National Taiwan University Hospital

Country: Taiwan
Major Field: Gastrointestinal motility, endoscopy

EDUCATIONAL BACKGROUND

Doctor of Medicine, Department of Medicine, College of Medicine, National Taiwan University, Taipei, Taiwan
Doctor of Philosophy, Graduate Institute of Clinical Medicine, College of Medicine, National Taiwan University, Taipei, Taiwan

PROFESSIONAL EXPERIENCE

Director, Taiwan Neurogastroenterology and Motility Society (2016.8~2019.3)
Executive Director, Taiwan Neurogastroenterology and Motility Society (2019.4~)
Member of Information & Communication (I&C) Committee (2017.4.1-2020.3.31, 2020.10.1~) and Scientific Committee (2020.10.1~) for Asian Neurogastroenterology and Motility Association

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS

The Gastroenterological Society of Taiwan (member and instructor)
The Digestive Endoscopy Society of Taiwan (member and instructor)
Society of Ultrasound in Medicine of the Republic of China

MAIN SCIENTIFIC PUBLICATIONS


ESOPHAGEAL MUCOSAL HISTOPATHOLOGY MAY HELP DIFFERENTIATE ACHALASIA FROM REFRACTORY GASTROESOPHAGEAL REFLUX DISEASE

Ping-Huei Tseng, M.D., Ph.D.
Department of Internal Medicine-GI/Hepatology, National Taiwan University Hospital, Taipei, Taiwan

Achalasia is a rare primary esophageal motility disorder, and patients suffer from progressive dysphagia to both solids and liquids, resulting in significant weight loss. Currently, high-resolution manometry is the gold standard for an accurate diagnosis of achalasia. However, the diagnosis of achalasia is often delayed due to its insidious onset, as well as the non-specific symptoms, such as regurgitation, chest pain, and heartburn, that mimic refractory gastroesophageal reflux disease (GERD). Without an early diagnosis and treatment, achalasia may progress to end-staged esophagus with a markedly tortuous and dilated esophageal lumen, necessitating a radical esophagectomy and surgical reconstruction. Therefore, we have conducted a study to investigate whether the histopathological characteristics of the esophageal mucosa in patients with achalasia obtained via routine endoscopic biopsies may help differentiate achalasia from GERD.

We enrolled patients with untreated achalasia and those with proven GERD and refractory reflux symptoms despite ≥8 weeks of proton-pump inhibitor treatment. All patients underwent validated symptom questionnaires, esophagogastroduodenoscopy and biopsy, and high-resolution impedance manometry (HRIM). Histopathology of esophageal mucosa was compared based on four predetermined histological criteria: basal cell hyperplasia or papillae elongation, eosinophilic infiltration, petechiae formation, and hypertrophy of the muscularis mucosae (MM). Clinical, endoscopic, and histopathologic characteristics were compared. We found that compared with the control group, patients with achalasia had similar reflux symptoms, but less erosive esophagitis (7.4% vs. 21.7%, p =0.04) and hiatal hernia (0% vs. 15.2%, p < 0.001), more esophageal food retention (57.4% vs. 0%, p <0.001) on endoscopy, and higher prevalence of hypertrophy of the MM (46.3% vs. 21.7%, p = 0.01) and petechiae formation (87.0% vs. 69.6%, p = 0.033) on histopathology. Coexistence of petechiae formation and hypertrophy of the MM was more prevalent in achalasia patients (40.7% vs. 15.2%, p = 0.005).

Our study showed a significantly higher prevalence of petechiae formation, hypertrophy of the MM, and coexistence of these two histopathologic features in achalasia. Histopathology of the esophageal mucosa obtained via biopsy during endoscopic evaluation may help to clarify the underlying pathophysiology of achalasia and provide an adjunctive diagnostic modality for early identification of achalasia and prevent disease progression into end-stage achalasia.
New Challenges and Collaboration in Gastroenterology and Hepatology Research

The 5th Korea Digestive Disease Week
November 18 - 20, 2021

Name: Eun Jeong Gong
Current Position: Assistant professor
Country: Korea
Major Field: Upper GI disorders

EDUCATIONAL BACKGROUND

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<tr>
<td>2012-2014</td>
<td>University of Ulsan College of Medicine (M.S.)</td>
<td></td>
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<tr>
<td>2003-2009</td>
<td>Pusan National University School of Medicine (M.D.)</td>
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PROFESSIONAL EXPERIENCE

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<tr>
<td>2018-</td>
<td>Assistant Professor, Department of Internal Medicine</td>
<td>Gangneung Asan Hospital, University of Ulsan College of Medicine, Gangneung, Korea</td>
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<td>2017</td>
<td>Instructor, Department of Internal Medicine</td>
<td>Gangneung Asan Hospital, University of Ulsan College of Medicine, Gangneung, Korea</td>
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<tr>
<td>2014</td>
<td>Clinical fellow</td>
<td>Department of Gastroenterology, Asan Medical Center, Seoul, Korea</td>
</tr>
<tr>
<td>2010</td>
<td>Residency, Department of Internal Medicine</td>
<td>Asan Medical Center, Seoul, Korea</td>
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<tr>
<td>2009</td>
<td>Internship</td>
<td>Asan Medical Center, Seoul, Korea</td>
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MAIN SCIENTIFIC PUBLICATIONS

Gong EJ, Choi KD, Jung HK, Youn YH, Min BH, Song KH, Huh KC. Quality of life, patient satisfaction, and disease burden in patients with gastroesophageal reflux disease with or without laryngopharyngeal reflux symptoms. Journal of gastroenterology and hepatology. 2017;32: 1336-1340
NEW PARAMETER FOR QUANTIFYING BOLUS TRANSIT WITH HIGH-RESOLUTION IMPEDANCE MANOMETRY

Eun Jeong Gong
Department of Internal Medicine, Gangneung Asan Hospital, University of Ulsan College of Medicine, Gangneung, Korea

Esophageal bolus transit can be assessed using esophagogram or high-resolution impedance manometry (HRIM). Previous studies combining impedance monitoring and video fluoroscopy or esophagogram have validated the reliability of impedance monitoring in assessing bolus transit in healthy subjects and patients with dysphagia. However, most impedance analysis allows dichotomous qualitative evaluation of bolus transit, classifying swallows into complete or incomplete bolus transit.

Upon the assumption that the conductance can provide a better quantitative measurement of bolus volume than impedance itself, we have developed a novel method to quantify the residual volume of bolus between each swallow through spatiotemporal analysis of HRIM, namely three-dimensional volume of inverted impedance (VII). This parameter is based on a topographic technique and three-dimensional impedance variation plot, providing quantitative measures on residual bolus in the esophagus.

The clinical utility of VII has been evaluated in our previous study, showing a strong correlation between VII and the key manometric parameters in healthy subjects. In addition, this novel metric was validated against simultaneous esophagogram in healthy subjects and patients with dysphagia, suggesting potential role of VII in quantitative assessment of esophageal bolus transit.

In addition to VII, several attempts have been made and have shown that quantitative analysis of residual bolus volume using HRIM can be a useful complementary method for the evaluation of patients with dysphagia. Further studies are necessary to investigate the additive role and clinical relevance of impedance analysis in determining esophageal bolus transit.
Name: Akinari Sawada
Current Position: Clinical Lecturer
Country: Japan
Major Field: Upper GI physiology

EDUCATIONAL BACKGROUND
2009 M.D., Osaka City University School of Medicine
2017 Ph.D., (Doctor of Medicine), Osaka City University Graduate School of Medicine

PROFESSIONAL EXPERIENCE
2009-2011 Junior Resident, Osaka City University Hospital
2011-2012 Clinical Research Fellow, Department of Gastroenterology, Osaka City University Hospital
2017-2018 Postdoctoral fellow, Department of Gastroenterology, Osaka City University Graduate School of Medicine
2018-2019 Clinical Research Fellow, GI physiology unit, Barts and The London School of Medicine and Dentistry, Queen Mary, University of London
2019-2020 Clinical Lecturer, GI physiology unit, Barts and The London School of Medicine and Dentistry, Queen Mary, University of London
2020- Clinical Lecturer, Department of Gastroenterology, Osaka City University Graduate School of Medicine

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS
Board Certified Gastroenterologist of the Japanese Society of Gastroenterology
Board Certified Fellow of the Japan Gastroenterological Endoscopy Society
Board Certified Member of the Japanese Society of Internal Medicine
Member of the Japanese Gastroenterological Association
Member of the American Gastroenterological Association

MAIN SCIENTIFIC PUBLICATIONS
ASSESSMENT OF ESOPHAGOGASTRIC JUNCTION IN POST-POEM REFLUX ESOPHAGITIS

Akinari Sawada, M.D., Ph.D.
Department of Internal Medicine-GI/Hepatology, Osaka City University Graduate School of Medicine, Osaka, Japan

Background: Currently three therapeutic modalities are available for achalasia such as per-oral endoscopic myotomy (POEM), pneumatic dilatation and laparoscopic Heller's myotomy. ASGE and European Guidelines on achalasia recommend these treatments equally as the first-line therapy because of their comparable efficacy, specifically for achalasia types I and II. POEM has been developed most recently among them and is becoming prevalent around the world due to its low invasiveness and high efficacy. On the other hand, it is known that POEM causes gastro-esophageal reflux disease (GERD) postoperatively more often than the other two techniques. It would be useful to choose right candidates for POEM if it is possible to predict such adverse events preoperatively. However, the pathophysiology underlying post-POEM reflux esophagitis is not fully understood. Therefore, the aim of this study was to identify factors which contribute to post-POEM reflux esophagitis.

Methods: We retrospectively analyzed patients who underwent POEM for major esophageal motility disorders such as achalasia, distal esophageal spasm (DES) and hypercontractile esophagus (HE) at Osaka City University Hospital from January 2018 to November 2020. Endoscopy assessed reflux esophagitis according to the Los Angeles classification at 2 months after POEM with discontinuation of proton pump inhibitor for a month. Grade B, C or D was considered clinically significant esophagitis (RE group). The association between post-POEM reflux esophagitis and factors including clinical characteristics and high-resolution manometry (HRM) was evaluated.

Results: After exclusion of 30 patients, 51 patients were ultimately analyzed. The median age was 55 years old and 55% of the patients was female. Majority of the patients had achalasia (46 achalasia (10 type I, 33 type II and 3 type III), 3 DES and 2 HE). After POEM, 32 patients (63%) developed reflux esophagitis consisting of 26 Grade B and 6 Grade C (RE group). Between non-RE group and RE group, age, sex, BMI and phenotype of motility disorders did not differ. Regarding HRM metrics about esophagogastric junction (EGJ), there was no difference in basal LES pressure, EGJ inspiratory pressure, EGJ expiratory pressure and EGJ-Ci between the two groups. On the other hand, crural contraction in RE groups (16.2 [8.6, 21.4]) was significantly lower than in non-RE group (26.8 [19.9, 46.7]) (p=0.001).

Conclusions: The outer LES, crural contraction, might play an important role in preventing post-POEM reflux esophagitis.
Name: Wang Yen-Po
Current Position: Attending Physician, Endoscopy Center for Diagnosis and treatment, Taipei Veterans General Hospital
Country: Taiwan
Major Field: Functional GI disease, small bowel endoscopy

EDUCATIONAL BACKGROUND
M.D. National Yang Ming University

PROFESSIONAL EXPERIENCE
1. Attending Physician, Department of Internal Medicine, Taipei Veterans General Hospital
2. Attending Physician, Department of Internal Medicine, Endoscopy Center for Diagnosis and Treatment, Taipei Veterans General Hospital
3. Adjunct Lecturer, Division of Internal medicine, Department of Medicine, School of Medicine, National Yang-Ming Chiao-Tung University
4. Secretary general, Taiwan Neurogastroenterology & Motility Society (TNMS)

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS
1. License for Medical practice, Taiwan
2. Taiwanese Board of Internal Medicine
3. Taiwanese Board of Gastroenterology
4. Taiwanese Board of Digestive Endoscopy
5. Best Internship Award, Taipei Veterans General Hospital 2006
6. Honors for Distinguished Academic Record in Clinical Medicine, Taipei Veterans General Hospital, 2010
7. Best Poster (First Prize) in the annual meeting of Taiwan GI Association, 2012 Spring
8. Honorable Mention, Distinguished Thesis, Taipei Veterans General Hospital, 2015
9. Excellence Award, video Contest, Digestive endoscopic society of Taiwan(DEST), 2020

MAIN SCIENTIFIC PUBLICATIONS
COMPARISON OF MANOMETRIC DIAGNOSIS BY CHICAGO CLASSIFICATION VERSION 3.0 AND 4.0 ON ESOPHAGEAL HIGH RESOLUTION MANOMETRY

Yenpo Wang, M.D.
Department of Internal Medicine, Endoscopy Center for Diagnosis and Treatment, Taipei Veterans General Hospital, Taipei, Taiwan

Background: High resolution manometry (HRM) with topography plots had facilitated detailed observation of the contractile characteristics of the esophagus and the relaxation of its sphincters. HRM provided a comprehensive description of esophageal peristalsis after wet swallowing that improved both diagnosis and management of esophageal motility disease, especially achalasia. Chicago's classification had been updated in recent decades from version 1.0 (year 2008), 2.0 (year 2012) to 3.0 (2015) which categorized esophageal motility disease from disorders with esophagogastric junction obstruction, major disorders of peristalsis, minor disorders of peristalsis and normal. This classification helped clinicians easily identify patients with characterized esophageal motility disease. However, the clinical presentations and severity of patients may not correspond to their manometric findings. Other than achalasia, the management based on the classification was also unclear. Recently, a newly proposed Chicago's classification version 4.0 was launched in the end 2021 which included both supine and sitting swallowing tests, provocation tests and had new classification in esophageal peristalsis. The influences of this new version of classification on the diagnosis and management of esophageal motility disorders is still unknown.

Aims: We aimed to compare the high resolution manometry examination interpretations between using Chicago's criteria version 4.0 versus Chicago's criteria version 3.0 to find out the clinical impact of its changes.

Methods: We retrospectively reviewed the consecutive HRM records from Oct, 2019 to May, 2021 in Taipei Veterans General Hospital. From Oct, 2019, all the HRM were performed under the standardized protocol including supine resting pressure, 10 times of supine wet swallowing 5ml water, 3 times of supine multiple rapid swallowing 10ml water, sitting resting pressure, 10 times of sitting wet swallowing 5ml water, and 3 times of sitting multiple rapid swallowing 10ml water. In patients with EGI outflow obstruction and absent contractility in both supine and sitting position, bolus transit status was evaluated by impedance analysis first. Timed barium esophagography or 200ml water massive drinking test was performed if incomplete bolus transit was noted. All the HRM examinations were performed using the performed with 32 circumferential pressure channels with 16 impedance channels solid-state catheter (Laborie, Medical Measurement Systems, The Netherlands). Patients receiving peroral endoscopic myotomy, surgical intervention or balloon dilatation within two years before the HRM examination were excluded from this study. Age, gender, clinical symptoms, indications and previous intervention history were obtained. We manually reviewed the records and analyzed the records by using Chicago's classification version 3.0 and 4.0. The manometric parameters and diagnosis were recorded and analyzed.

Results: 105 patients were enrolled in this study. Total 102 patients completed both supine and sitting tests, while 3 patients didn't complete sitting examination due to intolerance. 56 patients (54.9%) were male while the mean age were 53.88 years old (Standard deviation 14.65 years old ). 65 patients(63.7%) received HRM due to refractory gastroesophageal reflux disease (GERD) symptoms while 37 patients(36.3%) due to dysphagia. 18 patients (17.6%) had new diagnosis using Chicago's criteria version 4.0. The chance of having new diagnosis was comparable between refractory GERD symptoms and dysphagia group. (15.3% v.s.21.6%, p=0.43). All 7 patients classified as esophageal gastric junction outflow obstruction (EGJOO) by version 3.0 had new classification by version 4.0, including 3 normal and 4 Ineffective esophageal motility (IEM). In 18 patients classified as IEM by Chicago's criteria version 3.0, 6 (33.3%) were classified as normal by version 4.0. In 11 patients classified as absent contractility by version 3.0, 3(27.3%) were newly classified as Type I achalasia by version 4.0. 23.8% patients who were classified was normal in version 3.0 had new diagnosis according to sitting test data, including 1 hypercontractile esophagus and 1 IEM. No patients initially diagnosed with achalasia had new diagnosis in version 4.0.

Conclusions: Chicago's criteria Version 4.0 caused substantial changes in the diagnosis of esophageal motility disease, especially EGJOO, IEM and absent contractility irrespective of examination indication. Further studies focusing on the evaluation and management of these esophageal motility abnormalities are warranted.
The 5th Joint Session between KDDW - TDDW - JDDW

LOWER GI

Optimal Management of IBD in the Biologics Era
November 18 (Thu) 10:15-11:45

Chairs
Joo Sung Kim (Seoul National Univ., Korea)
Tadakazu Hisamatsu (Kyorin Univ. School of Medicine, Japan)
Cheng-Tang Chu (Linkou Chang Gung Memorial Hosp., Taiwan)

Discussants
Dong Il Park (Sungkyunkwan Univ., Korea)
Masanao Nakamura (Nagoya Univ., Japan)
Shu-Chen Wei (National Taiwan Univ. Hosp., Taiwan)

Speakers

- **Early intervention in IBD: Why and how?**
  Byong Duk Ye (Univ. of Ulsan, Korea)

- **Deep neural network for colonoscopy of ulcerative colitis**
  Kento Takenaka (Tokyo Medical and Dental Univ. Hosp., Japan)

- **Transmural healing: The dream or the ideal to be achieved**
  Chen-Shuan Chung (Far Eastern Memorial Hosp., Taiwan)

Rising Star Program

- **Big data research: Progress makes practice in IBD**
  Jaeyoung Chun (Yonsei Univ., Korea)

- **The role of endoscopy in inflammatory bowel disease**
  Junji Umeno (Kyushu Univ. Hosp., Japan)

- **Clostridium innocuum in inflammatory bowel disease**
  Puo-hsien Le (Linkou Chang Gung Memorial Hosp., Taiwan)
Name: Byong Duk Ye, MD, PhD
Current Position: Professor, Department of Gastroenterology, and Inflammatory Bowel Disease Center, Asan Medical Center, University of Ulsan College of Medicine
Country: Korea
Major Field: Inflammatory Bowel Disease

EDUCATIONAL BACKGROUND
1991-1993 Pre-medical course, College of Natural Science, Seoul National University, Seoul, Korea
1993-1997 College of Medicine, Seoul National University, Seoul, Korea
2002-2005 Graduate School of Public Health (Master degree), Seoul National University, Seoul, Korea
2005-2007 Graduate School of Medicine (Ph.D. degree), Seoul National University, Seoul, Korea

PROFESSIONAL EXPERIENCE
2007-Present Professor, Gastroenterology and Inflammatory Bowel Disease Center, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Korea
2014-2016 Visiting Scholar, Inflammatory Bowel and Immunobiology Research Institute, Cedars-Sinai Medical Center, Los Angeles, USA

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS
2014-Present Member, Epidemiologic Committee, Asian Organization for Crohn’s and Colitis
2019-Present Director, International Academic Exchange Committee, Korean Association for the Study of Intestinal Diseases (KASID)

MAIN SCIENTIFIC PUBLICATIONS

EARLY INTERVENTION IN IBD: WHY AND HOW?

Byong Duk Ye, M.D., Ph.D.
Department of Gastroenterology and Inflammatory Bowel Disease Center, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Republic of Korea

With the global increase of its incidence and prevalence, inflammatory bowel disease (IBD) has become a significant health care burden worldwide. An improved understanding of pathophysiology and natural course of IBD has led to a significant development in the management of disease. IBD, especially Crohn’s disease (CD), is acknowledged as a progressive disease with an accumulating digestive damage, which is often irreversible. Therefore, early management of IBD before development of intestinal damage, including both diagnosis and treatment, are critical to prevent complications and improve patients’ quality of life. At diagnosis of IBD, risk stratification of disease severity and prognostication, based on demographic, clinical, and serologic markers, can help guide selection of the most appropriate initial therapy and monitoring strategies. In CD patients with poor prognostic factors, earlier introduction of more potent immune-modifying therapies and tighter disease monitoring could reduce and prevent progressive digestive damage, complications and disability. Data on the long-term impact of early therapy in ulcerative colitis (UC) are more limited than in CD, but, as UC is also a progressive disease with risks of proximal disease extension, colorectal cancer, loss of colonic function, and colectomy, it is reasonable to treat early to mitigate these risks. However, immunosuppressive therapies are associated with safety concerns in the short- and long-term, and entail significant health care costs. Therefore, a consideration of risks, benefits, and alternatives together with a shared decision making is a key to develop an individualized therapeutic plan for the informed patients.
Name: Kento Takenaka
Current Position: Assistant Professor
Country: Japan
Major Field: Inflammatory bowel disease

EDUCATIONAL BACKGROUND
2013-2016 Tokyo Medical and Dental University Graduate Schools, Gastroenterology and Hepatology
2002-2008 Tokyo Medical and Dental University, Medical

PROFESSIONAL EXPERIENCE
2013-Present Tokyo Medical and Dental University Hospital

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS
The Japanese Society of Gastroenterology
The Japan Gastroenterological Endoscopy Society.

MAIN SCIENTIFIC PUBLICATIONS
DEEP NEURAL NETWORK FOR COLONOSCOPY OF ULCERATIVE COLITIS

Kento Takenaka, Ph.D.
Department of Internal Medicine - GI/Hepatology, Tokyo Medical and Dental University, Tokyo, Japan

Endoscopic assessment of ulcerative colitis (UC) is important; however, individual clinician experiences can differ in this aspect, and there is notable intra- and interobserver variability. Histological evaluation is also important, but specimen biopsies are necessary. We aimed to develop a deep neural network system based on endoscopic images (DNUC) to achieve consistent, objective, and real-time UC evaluations.

We constructed the DNUC algorithm using 40,758 images of colonoscopies and 6885 biopsy results from an endoscopic database at a single center. We used the Ulcerative Colitis Endoscopic Index of Severity (UCEIS) score of 0 to indicate endoscopic remission and a Geboes score ≤3.0 to indicate histological remission. We then prospectively enrolled 875 patients for evaluating the accuracy of the DNUC. We also evaluated whether the DNUC could predict the prognosis of these patients.

In the determination of endoscopic remission, the DNUC showed high diagnostic accuracy (90.1%) and high consistency (kappa coefficient, 0.798) for endoscopic experts. The intraclass correlation coefficient between the DNUC and the endoscopists for UCEIS scoring was 0.917. Regarding the prediction of histological remission, the DNUC showed high diagnostic accuracy (92.9%), and the kappa coefficient between the DNUC and the biopsy result was 0.859. According to the Kaplan–Meier curve analysis, mucosal healing assessed using the DNUC was associated with a significantly lower risk for hospitalization and colectomy (P < 0.001 and P < 0.001, respectively). The hazard ratios of mucosal activity associated with hospitalization and colectomy assessed using the DNUC were 48.7 and 46.3. There were no significant differences in the accuracy of experts and the DNUC in predicting hospitalization (P = 0.334) and colectomy (P = 0.605).

The accuracy of the DNUC was comparable to that of endoscopists in evaluating mucosal inflammation in patients with UC. The DNUC could predict histological remission only from endoscopic images without the requirement of a mucosal biopsy. And the DNUC could predict patient prognosis, and its predictive value was comparable to that of assessments conducted by experts. We, now, are adopting our algorithm to full video-colonoscopy and evaluate its validity in a prospective multicenter study.
Name: Chen-Shuan CHUNG  
Current Position: Director, Ultrasonography and Endoscopy Center  
Country: Taiwan  
Major Field: Therapeutic GI endoscopy (ESD, ERCP, EUS)

EDUCATIONAL BACKGROUND
1. Taipei Medical University, 1996-2003
2. Graduate Institute of Clinical Medicine, College of Medicine, National Taiwan University, 2009~2011

PROFESSIONAL EXPERIENCE
1. 2002-2003 Internship, National Taiwan University Hospital (NTUH)
2. 2004.07~2007.07 Resident, Department of Internal Medicine, NTUH
3. 2007.07~2009.07 Chief resident, Department of Internal Medicine, NTUH
4. 2007.07~2009.07 Fellow doctor, Division of Gastroenterology and Hepatology, Department of Internal Medicine, NTUH
5. 2009.06 Clinical Observer, Kyoto University Hospital, Kyoto, Japan
6. 2009.06 Clinical Observer, Osaka Medical Center for Cancer and Cardiovascular Diseases
7. 2009.07~ 2009.07 Attending physician, Division of Gastroenterology and Hepatology, Department of Internal Medicine, Far Eastern Memorial Hospital
8. 2017.04 Clinical Observer, Johns Hopkins Hospital, Baltimore, USA
9. 2019.04 Clinical Observer, Saitama Medical University International Medical Center, Japan

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS
1. Member of Formosan Medicine Association
2. Member of Society of Internal Medicine, Taiwan
3. Member of The Gastroenterological Society of Taiwan (GEST)
4. Member of committee of education, The Digestive Endoscopy Society of Taiwan (DEST)
5. Member of Taiwan Society of Inflammatory Bowel Disease (TSIBD)
6. Member of the Board of Supervisors, Taiwan Association for the Study of Small Intestinal Diseases (TASSID)

MAIN SCIENTIFIC PUBLICATIONS
TRANSMURAL HEALING: THE DREAM OR THE IDEAL TO BE ACHIEVED

Chen-Shuan Chung, M.D.
Department of Internal Medicine-Gastroenterology, Far Eastern Memorial Hospital, Taipei, Taiwan

Inflammatory bowel diseases (IBD) are chronic immune-mediated inflammatory disorders that comprise Crohn’s disease (CD) and ulcerative colitis (UC). The incidence of both CD and UC is rising globally and the disease burden has great impacts on patients and health care system. To prevent patients from IBD related disability by effective consolidate treatment is of paramount importance to improve overall outcome. CD is characterized by a progressive and destructive disease with transmural inflammation. Complications such as stricture or perforation may occur when transmural inflammation is not well controlled. Transmural healing (TH) is one of the treat-to-targets in IBD care for CD patients. It is associated with higher rate of steroid-free remission and lower rate of hospitalization and surgery when compared with clinical remission or mucosal healing only. By tight control of inflammation with timely effective treatment, such as biologics, TH could be achieved with better prognosis. Additionally, non-invasive diagnostic modalities for evaluation of TH, including magnetic resonance enterography and intestinal ultrasound (IOUS), are nowadays more widely used during IBD treatment. In this lecture, I will discuss about the optimized treatment strategy for IBD patients and the evaluation of TH, mainly focusing on the application of IOUS.
Name: Jaeyoung Chun  
Current Position: Assistant Professor, Gangnam Severance Hospital, Yonsei University College of Medicine  
Country: Korea  
Major Field: Inflammatory bowel disease, Lower gastrointestinal tract

EDUCATIONAL BACKGROUND

1. March, 1999 – February, 2005: Department of Medicine, Seoul National University College of Medicine: Medical Doctor
2. September, 2009 – February, 2012: Department of Public Health (Genetic Epidemiology), Graduate School of Public Health, Seoul National University: Master’s Degree
3. March, 2014 – Present: Department of Medicine, Post-graduate School of Seoul National University (the Doctor’s course)

PROFESSIONAL EXPERIENCE

1. March, 2012 - February, 2014: Gastroenterology fellowship at Seoul National University Hospital
2. March, 2014 - February, 2019: Assistant professor, Department of Internal Medicine, Seoul National University Hospital
3. March, 2019 - Present: Assistant professor, Department of Internal Medicine, Gangnam Severance Hospital

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS

1. Nov, 2019-Present: a member of the Scientific Committee of Korean Society of Gastrointestinal Endoscopy (KSGE)
2. Apr, 2019-Present: Vice secretary general of Korean Association for the Study of Intestinal Diseases (KASID) & Asian Organization for Crohn’s and Colitis (AOCC) 2020
3. Apr, 2019-Present: a member of the Intestinal Tumor Research Group of Korean Association for the Study of Intestinal Diseases (KASID)
4. Jan, 2019-Nov, 2019: an administrative assistant of Korea Digestive Disease Week (KDDW) 2019
5. Apr, 2017-Mar, 2019: a member of the Scientific Committee of Korean Association for the Study of Intestinal Diseases (KASID)
6. Apr, 2017-Mar, 2019: a member of the International Affairs Committee of Korean Association for the Study of Intestinal Diseases (KASID)
7. Apr, 2015-Mar, 2017: a member of the Editorial Committee of Korean Association for the Study of Intestinal Diseases (KASID)

MAIN SCIENTIFIC PUBLICATIONS (PRIMARY/CORRESPONDING AUTHOR ONLY)

BIG DATA RESEARCH: PROGRESS MAKES PRACTICE IN IBD

Jaeyoung Chun
Gangnam Severance Hospital, Yonsei University College of Medicine, Korea

Medicine is oriented toward precision medicine in the near future. Precision medicine seeks to find the most cost-effective and safe medical care for individuals based on current medical knowledge. It is in line with data-based medicine analyzing and interpreting integrated large-scale data comprehensively. The term P4 medicine, which was coined by Dr. Leroy Hood in 2000, is the clinical manifestation of systems biology and stands for predictive, preventive, personalized, and participatory medicine. The key word of the P4 medicine is big data.

Big data is a term focusing on technologies that can process and analyze a large-scale data. The main characteristics of big data are volume, variety, and speed. In general, volume refers to data expanded to a petabyte scale. Big data is classified according to its type (variety). Speed which refers to data processing capability is considered a critical characteristic of big data that should be handled through a sequential course of collection, processing, and analysis.

Big data in the IBD area is being widely used in various ways from research to practice in Korea. The National Health Insurance (NHI) service is a single, mandatory medical insurer providing a health insurance to approximately 50 million citizens in Korea. The Korean NHI database contains information on comorbidities, drug prescriptions, treatment, and demographic characteristics of individuals. The National Health Screening Program (NHSP) is conducted every 2 years for all qualified adults over 20 years of age, and the information collected by the NHSP accumulates as a separate cohort in which clinical data at baseline and trends in changes can be evaluated. Moreover, the Rare and Intractable Diseases (RIDs) system supports additional medical costs for all Korean patients with RIDs including Crohn’s disease, ulcerative colitis (UC) and intestinal Behçet’s disease. Therefore, we can identify the IBD patients with high diagnostic sensitivity and specificity using special diagnostic codes from the unique database of the RIDs system in Korea.

Using the nationwide claims data, we have defined various significant comorbidities of IBD such as diabetes, Parkinson’s disease, end-stage renal diseases, and idiopathic pulmonary fibrosis. In addition, clinical manifestations including atopy, chronic obstructive pulmonary disease, dyslipidemia and anemia were significantly associated with the development of IBD. Smoking behaviors were also closely related to the pathogenesis of IBD in Korean, although the direction of their impact on IBD differed according to the type of IBD. Interestingly, the smoking effect on the development of UC was dose-responsive and associated with the presence of periodontitis. These results of our research have progressed into the development of IBD factsheet representing the clinical characteristics of overall Korean IBD last year, which are being widely used in clinical practice.

From the future perspective, big data research will be more comprehensive and show more accurate predictive power for IBD individuals. The ultimate goal is to implement precision medicine for IBD patients.
Name: Junji Umeno
Current Position: Assistant Professor
Country: Japan
Major Field: Inflammatory bowel disease, small intestinal disease

EDUCATIONAL BACKGROUND

2002 MD, Kyushu University Faculty of Medicine
2010 PhD, Kyushu University Graduate School of Medicine

PROFESSIONAL EXPERIENCE

2002-2003 Resident, Kyushu University Hospital
2003-2004 Resident, Japanese Red Cross Fukuoka Hospital
2004-2005 Staff Physician, Dept of Gastroenterology, Japanese Red Cross Fukuoka Hospital
2005-2006 Staff Physician, Dept of Gastroenterology, Kyushu University Hospital
2010-2011 Post-doctoral Fellow, Kyushu University Graduate School of Medicine
2011-2012 Clinical Assistant Professor, Dept of Gastroenterology, Kyushu University Hospital
2012-2017 Assistant Professor, Dept of Gastroenterology, Kyushu University Hospital
2017-2018 Visiting scholar, Center for Gastrointestinal Biology and Disease, University of North Carolina at Chapel Hill
2018-Present Assistant Professor, Dept of Gastroenterology, Kyushu University Hospital

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS

2007 Board Certified Member of the Japanese Society of Internal Medicine, The Japanese Society of Internal Medicine
2010 Specialist, The Japanese Society of Gastroenterology
2010 Specialist, Japan Gastroenterological Endoscopy Society
2016 Fellow of the Japanese Society of Internal Medicine, The Japanese Society of Internal Medicine
2017 Specialist, The Japanese Gastroenterological Association

MAIN SCIENTIFIC PUBLICATIONS

THE ROLE OF ENDOSCOPY IN INFLAMMATORY BOWEL DISEASE

Junji Umeno
Department of Medicine and Clinical Science, Graduate School of Medical Sciences, Kyushu University, Fukuoka, Japan

Endoscopy plays an important role in the diagnosis, management, and treatment of inflammatory bowel disease (IBD). In particular, we will discuss diseases that cause small intestinal ulcers, such as intestinal tuberculosis, nonsteroidal anti-inflammatory drug (NSAID)-induced enteropathy, and ischemic small bowel disease, which are important to differentiate from IBD. In addition, I will introduce the small intestinal disease called chronic enteropathy associated with \textit{SLCO2A1} gene (CEAS), which has recently been established as a disease entity. CEAS is an autosomal recessive disorder caused by a loss of prostaglandin transporter function and presents with chronic active bleeding from gastrointestinal lesions. Although it is a rare disease, it is found especially in the Asian population. Based on the morphologic features, small intestinal lesions are considered to be shallow and sharply demarcated multiple ulcers with an asymmetric formation that occurs commonly in the ileum (except the terminal ileum). Genetic testing and evaluation of the gastrointestinal tract, including upper gastrointestinal endoscopy and radiography, are useful for diagnosis.
LE, PUO-HSIEN

Assistant professor, Attending Physician, Department of Gastroenterology and Hepatology, Chang Gung Memorial Hospital in Linkou

Taiwan

Inflammatory bowel disease, Cytomegalovirus, Fecal microbiota transplantation, Gastric Cancer

EDUCATIONAL BACKGROUND

2001-2009 Department of Medicine / Chinese Medicine, College of Medicine, Chang Gung University, Taoyuan, Taiwan

PROFESSIONAL EXPERIENCE

2014 National Cancer Center, Tokyo, Japan

2019 University of Chicago IBD Center

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS

Deputy Secretary-general, Taiwan Association for the Study of Small Intestinal Disease

Member, Taiwan Society of Inflammatory Bowel Disease

MAIN SCIENTIFIC PUBLICATIONS


CLOSTRIDIUM INNOCUUM IN INFLAMMATORY BOWEL DISEASE

Puo-hsien Le
Linkou Chang Gung Memorial Hospital, Taoyuan, Taiwan

Patients with inflammatory bowel disease (IBD) are more likely to be colonized with Clostridium difficile and develop severe infection than the general population. It leads to poor outcomes, including IBD flare, colectomy, and even death. After successful treatment, IBD patients are 33% more likely to experience recurrence, compared with the general population. Clostridium innocuum is a gram-positive, vancomycin-resistant, spore-forming member of the commensal microbiota and the second most common species to cause extra-intestinal Clostridial infection, second to Clostridium perfringens. It can cause antibiotic-associated diarrhea and extraintestinal infection. Besides, a recent study found Clostridium innocuum stimulates wound-healing response, microbial surveillance and adipogenesis via M2 macrophages, and leads to creeping fat in Crohn’s disease. It’s important to clarify the role of Clostridium innocuum in IBD.
The 5th Joint Session between KDDW - TDDW - JDDW

PANCREATOBILIARY

The Strategies for Resectable/borderline-resectable Pancreatic Cancer
November 18 (Thu) 12:25-13:55

Chairs

Myung-Hwan Kim (Univ. of Ulsan, Korea)
Michiaki Unno (Tohoku Univ. Graduate School of Medicine, Surgery, Japan)
Yu-Wen Tien (National Taiwan Univ. Hosp., Taiwan)

Discussants

Joon Seong Park (Yonsei Univ., Surgery, Korea)
Masayuki Sho (Nara Medical Univ., Japan)
Chiung-Yu Chen (National Cheng Kung Univ. Hosp., Taiwan)

Speakers

Upfront surgery for resectable/borderline-resectable pancreatic cancer
Yoo-Seok Yoon (Seoul National Univ., Surgery, Korea)

Neoadjuvant therapy for resectable/borderline-resectable pancreatic ductal adenocarcinoma
Sohei Satoi (Kansai Medical Univ., Surgery, Japan)

Should we perform neoadjuvant therapy in resectable pancreatic cancer?
Yan-Shen Shan (National Cheng Kung Univ. Hosp., Taiwan)

Rising Star Program

Neoadjuvant chemotherapy for resectable/borderline-resectable pancreatic cancer
Jae Min Lee (Korea Univ., Korea)

The strategies for resectable / borderline-resectable pancreatic cancer
Shigenori Ei (Tokai Univ. School of Medicine, Japan)

Reshaping resectable/borderline-resectable pancreatic cancer in the era of precision medicine
Chien-hui Wu (National Taiwan Univ. Hosp., Taiwan)
Name: Yoo-Seok Yoon
Current Position: Associate Professor, Department of Surgery, Seoul National University Bundang Hospital
Country: Korea
Major Field: Hepato-pancreatic biliary surgery, Minimally invasive surgery, Pancreatic cancer, Cystic tumor of the pancreas including IPMN, Tumor of the biliary tract

EDUCATIONAL BACKGROUND

1990-1997 M.D., Seoul National University College of Medicine,
1997-2002 Intern & Resident (Surgery), Seoul National University Hospital
2002-2004 Fellowship, in Hepato-pancreato-biliary Surgery, Seoul National University Hospital
2004-2005 Fellowship, in Hepato-pancreato-biliary Surgery, Seoul National University Bundnag Hospital
2001-2007 Postgraduate School, Seoul National University College of Medicine, Korea
2007 Ph.D., Seoul National University College of Medicine
2011-2012 Research fellow, in Hepato-pancreato-biliary Surgery, The Johns Hopkins Hospital, USA

PROFESSIONAL EXPERIENCE

2005-2012 Assistant Professor, Department of Surgery, Seoul National University Bundang Hospital
2012-2017 Associate Professor, Department of Surgery, Seoul National University Bundang Hospital
2017-2018 Professor, Department of Surgery, Seoul National University Bundang Hospital, Korea
2019-Present Associate Professor, Department of Surgery, Seoul National University College of Medicine, Korea

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS

2010-2015 National editor of the International Association of Surgeons, Gastroenterologists and Oncologists
2016 Secretary General, 26th World Congress of the International Association of Surgeons, Gastroenterologists and Oncologists (IASGO 2016)
2016-2017 Secretary General, Korean Society of Endoscopic and Laparoscopic Surgeons
2017-2021 Chair of the Education Committee, Korean Society of Hepato-Biliary-Pancreatic Surgery
2021-Present Chair of the International Committee, Korean Society of Endoscopic and Laparoscopic Surgeons
2021-Present Chair of the Legal Committee, the Korean Society of Clinical Oncology (2020 - )
2021-Present Chair of the Scientific Committee, Korean Society of Hepato-Biliary-Pancreatic Surgery

MAIN SCIENTIFIC PUBLICATIONS

- 6 Peer-reviewed Book Chapters
- More than 200 scientific articles in peer-reviewed international journals
Pancreatic cancer with special focus on topical issues and surgical techniques (Eds: Sun-Whe Kim, Horoki Yamaue; Springer; 2017) Chapter: Late metabolic complications after pancreatectomy
UPFRONT SURGERY FOR RESECTABLE/BORDERLINE-RESECTABLE PANCREATIC CANCER

Yoo-Seok Yoon, M.D., Ph.D.
Department of Surgery, Seoul National University Bundang Hospital, Seongnam-si, Republic of Korea

Survival outcomes of surgery for pancreatic ductal adenocarcinoma (PDAC) was poor due to high early recurrence rate even after curative resection. In this context, neoadjuvant therapy (NCT) instead of upfront surgery (UP) has been increasingly performed to increase R0 resection rate and to allow early systemic therapy of potential occult metastatic disease. Current guidelines recommend NCT as a standard of care in patients with borderline-resectable (BR)-PDAC, and further in patients with high-risk resectable (R)-PDAC (highly elevated CA 19-9, large-size tumors, and large regional lymph nodes). However, the debate regarding the choice between NCT and UP in the treatment of R/BR-PDAC still exists for several reasons. First, the studies that advocate NCT does not provide high-level evidence. Most studies were non-randomized trials with the risk of selection bias. Even a few randomized trials are limited by small sample sizes and patient heterogeneity in terms of definition of BR-PDAC and proportion of R/BR-PDAC. Second, most of the studies did not well address potential risks of NCT that patients may lose a chance for curative resection due to the progression of disease during NCT or serious adverse reactions to systemic chemotherapy. Most studies only reported survival of patients who underwent resection after NCT rather than results by intention to treat (ITT) including survival of patients who did not undergo resection after NCT. Third, better perioperative care and more effective adjuvant chemotherapy regimen improved clinical and survival outcomes of UP followed by adjuvant therapy. Recent adjuvant trials for surgically resected PDAC using mFOLFIRINOX or nab-paclitaxel plus gemcitabine reported unprecedented survival outcomes even in patients with R1 resection and LN metastasis. Fourth, anatomical definition of R/BR-PDAC which was used as a major inclusion criterion in most of studies does not represent heterogenous biologic behavior. Advantage of NCT in patients with R/BR-PDAC is evident when we can identify accurate and reliable biomarkers indicating biologically aggressive disease and better characterize the tumor characteristics that can respond differently to chemotherapeutic agents. Therefore, at this time when there is not enough evidence for advantages of NCT over UP and personalized cancer treatment based on biologic behavior and treatment response is not established, NCT as a standard of care for all patients with R/BR-PDAC should be discouraged. UP should still be considered first in patients with R/BR-PDAC with low risk which is evaluated by a multidisciplinary approach.

Reference
Name: Sohei SATOI, M.D., F.A.C.S.
Current Position: Professor, Division of Pancreatobiliary Surgery, Department of Surgery, Kansai Medical University
Country: Japan

EDUCATIONAL BACKGROUND
1991 M.D. Kansai Medical University
1999 Ph.D. Department of Surgery, Kansai Medical University

PROFESSIONAL EXPERIENCE
1991-1994 Resident in Surgery, Kansai Medical University
1994-1996 Medical Staff in Surgery, Yao Tokusyukai Hospital
1996-1999 Postgraduate Student and Investigator, First Department of Surgery, Kansai Medical University
1999-2000 Clinical Fellow in the Liver Unit, the Queen Elizabeth Hospital, United Kingdom
2000 Clinical Fellow in Service de Chirurgie Generale, Hopital de la Croix Rousse, Lyon, France
2000 Clinical Fellow in Allgemeinchirurgie, Klinikum Leverkusen gGmbH, Leverkusen, Germany
2000 Clinical Fellow in Allgemeinchirurgie, Universitaet Krankenhaus Eppendorf, Hamburg, Germany
2001-2009 Lecturer in Hepato-pancreateo-biliary division, Department of Surgery, Kansai Medical University
2009-2013 Assistant Professor, Department of Surgery, Kansai Medical University
2013- Visiting Associate Professor, Department of Surgery, Kansai Medical University Visiting Associate Professor, Department of Surgery, Tokyo Medical University
2015- Visiting Professor, Department of Surgery, Tokyo Medical University
2018- Professor, Division of Pancreatobiliary Surgery, Department of Surgery, Kansai Medical University
2019- Visiting Professor, Department of Surgical Oncology, University of Colorado, US
2021- Visiting Professor, Department of Surgery, University of Vilnius, Lithuania

MEDICAL UNIVERSITY
2019- Visiting Professor, Department of Surgical Oncology, University of Colorado, US
2021- Visiting Professor, Department of Surgery, University of Vilnius, Lithuania

LICENSURE AND CERTIFICATION
1991 Passed the Examination of National Board Registration (No. 340316)
1995 Surgeon authorized by Japan Surgical Society (No. 10466)
1997 Surgeon authorized by Japanese Society of Gastroenterological Surgery (No. 2781)
2002 Board Certified Surgeon by Japanese Surgical Society (No. 1801782)
2004 Board Certified Surgeon by Japanese Society of Gastroenterological Surgery (No. 3001798)
2008 Board Certified Surgeon by Japan Society for Hepatobiliary Pancreas Surgery (08-20280)
MEMBERSHIPS, OFFICES AND COMMITTEE ASSIGNMENTS IN PROFESSIONAL SOCIETIES

Member, Japan Surgical Society, Japan Surgical Association, Japan Society of Clinical Oncology, Japanese Society for Abdominal Emergency Medicine, Japanese Association for Acute Medicine, Japan Society for Endoscopic Surgery, Japanese Society of Gastroenterology, Japan Biliary Association, International Society of Hepato-pancreato-biliary Association (No. 12093), International Association of Pancreatologia (No. 2097)

2011 Committee member, Japanese Society of Hepato-Biliary-Pancreatic Surgery
2013 Committee member, Japan Pancreas Society
2015 Committee member, Japanese Society for Clinical Pathway
2016 Committee member, Japanese Society of Gastroenterological Surgery
2016 Member of the European Guidelines on cystic tutors of the pancreas: Surgical strategy chapter
2016 Journal of HepatoBiliary Pancreatic Science; Editorial Board
2018 Journal of Pancreatology; Editorial Board
2020 Director, Japan Pancreas Society

HONORS AND AWARDS

2007 Kansai Medical University, Research Grant Award
2010 Ministry of Health, Labour and Welfare Grant-in-Aid for Scientific Research
2011 Fuji Setsuro Memorial Foundation, Research Grant Award
2013 International Guest Scholarship 2013 of the American College of Surgeons
2015 the Japanese Foundation for Multidisciplinary Treatment of Cancer, Research Grant Award
2015 Research Grant of Japanese Society for Clinical Pathway Society
2016 Protocol competition winner at 11st annual meeting of preoperative therapy for pancreatic ductal adenocarcinoma society
2016 Poster prize in JDDW 2016
2018 Best paper award of Japanese society of Clinical Pathway
2018 Outstanding reviewer status achieved 2018 (Surgery)
2019 Clinical Research Award of Japan Pancreas Society
2019 Fuji Setsuro Memorial Foundation, Research Grant Award 2019
2019 Best Reviewer Award 2019 (Annals of Gastroenterological Surgery)
2020 Ministry of Education, Culture, Sports, Science and Technology, Grant-in-Aid for Scientific Research
NEOADJUVANT THERAPY FOR RESECTABLE/BORDERLINE-RESECTABLE PANCREATIC DUCTAL ADENOCARCINOMA

Sohei Satoi, M.D., Ph.D.
Department of Surgery, Kansai Medical University, Hirakata, Japan

Surgical resection has provided the only chance for a cure in patients with PDAC, but the 5-year survival rate is still low (approximately 20%) even in patients with margin-negative resection. The implementation of adjuvant chemotherapy or neoadjuvant therapy has increased the long-term survival of patients with resectable and borderline resectable pancreatic ductal adenocarcinoma (PDAC).

Recent randomized control trials (RCT) clearly revealed that adjuvant chemotherapy using S-1 in Japan (Uesaka et al. Lancet 2016;388:248-57.) and modified FOLFIRINOX in the Western countries (Conroy et al.N Engl J Med 2018;379:2395-406.) improved overall survival (OS) after surgical resection in patients with PDAC. However, approximately 50% of patients develop disease recurrence within 2 years in patients who underwent surgical resection followed by adjuvant chemotherapy.

Implementation of neoadjuvant therapy may be associated with higher proportion of R0 resection and negative lymph node metastasis, resulting in improved OS, but there has been less definite evidence in terms of favorite prognosis of neoadjuvant therapy so far.


Recent evidence of neoadjuvant therapy is promising, and other RCTs using FOLFIRINOX or gemcitabine plus nab-paclitaxel as neoadjuvant therapy are going on.

Multimodal treatment including margin-negative resection, but not surgical resection only, will be one of the standard treatment options in patients with R/B/R PDAC.
Name: Yan-Shen Shan  
Current Position: Dean, College of Medicine, National Cheng Kung University  
Country: Taiwan  
Major Field: HPB-GI Surgery, Surgical Oncology, Regeneration Medicine

EDUCATIONAL BACKGROUND

- 2006-2007 Visiting Scholar of University of Pennsylvania, USA
- 1998-2004 Ph.D., Clinical Medicine, National Cheng Kung University
- 1988-1993 M.D., School of Medicine, National Cheng Kung University
- 1981-1985 B.D., Department of Rehabilitation Medicine, National Taiwan University

PROFESSIONAL EXPERIENCE

- 2019- Resident in Surgery, Kansai Medical University
- 2017-2019 Chief, Institute of Clinical Medicine, College of Medicine, NCKU
- 2016-2019 Director of Clinical Medicine Research Center, NCKUH
- 2016- Distinguished professor, Institute of Clinical Medicine, NCKU
- 2012-2016 Professor, Department of Surgery & Institute of Clinical Medicine, NCKU
- 2010-2012 Associate professor, Institute of Clinical Medicine, NCKU
- 2008-2012 Clinical associate professor, Department of Surgery, NCKU
- 2002-2008 Clinical assistant professor, Department of Surgery, NCKU
- 1998- Visiting surgeon, Department of Surgery, NCKUH

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS

- Asian-Oceanic Pancreatic Association (AOPA) (member of a council)
- Formosan Association of Surgery
- Taiwan Surgical Society of Gastroenterology (member of a council)
- Taiwan Pancreas Society (member of a council)
- Taiwan Society of Endoscopic Surgery (member of a council)
- Taiwan Neuroendocrine Tumor Society (TNET, member of a council)
- The American Society of Clinical Oncology
New Challenges and Collaboration in Gastroenterology and Hepatology Research

The 5th Korea Digestive Disease Week
November 18 - 20, 2021

MAIN SCIENTIFIC PUBLICATIONS


11. Po-Hsien Huang, Pei-Jung Lu, Li-Yun Ding, Po-Chen Chu, Chih-Chieh Tsao, Wei-Yu Hsu, Bo-Heng Chen, Pei-Rong Gu, Chung-Ta Li, OSU-NCKU pancreatic cancer study group, Sally E. Henderson, Samuel, K. Kulp, Yan-Shen Shan*. TGFβ promotes mesenchymal phenotype of pancreatic cancer cells, in part, through epigenetic activation of VAV1. Oncogene 2017 Apr 20; 36(16): 2202-2214.


SHOULD WE PERFORM NEOADJUVANT THERAPY IN RESECTABLE PANCREATIC CANCER?

Yan-Shen Shan MD, PhD
Department of Surgery, Institute of Clinical Medicine, College of Medicine, NCKU

Pancreatic cancer is the most formidable cancer disease with only one digital 5-year survival rate. In the past two decades, with the advancement of chemotherapy, surgery, and the introduction of multidisciplinary care, the survival of pancreatic cancer is much improved. After the successful 1st line chemotherapy, MPACT and PRODIGE4, and the adjuvant therapy after surgery, neoadjuvant therapy combined has been well adopted in recent years. Furthermore, brave resection of vein and artery in pancreatic surgery was proposed since 2006 after delicate preoperative evaluation by helical abdominal CT. Therefore, combined neoadjuvant therapy with surgery for borderline resectable and locally advanced unresectable pancreatic cancer is the main work in medical center.

Because the survival of the resectable pancreatic is still not well enough and occult metastasis is frequent seen when the tumor size larger than 2 cm, applied neoadjuvant therapy in resectable pancreatic cancer is also proposed. However, the treatment concept is still debatable, and there is less positive clinical trial from Clinical Trial Org and Pubmed. Since 2015, in NCKUH, we start to perform neoadjuvant therapy in resectable cancer, and chemotherapy was done after pathology proved. After six courses of chemotherapy, surgical resection was done. Postoperative chemotherapy with the same regimens for 4 to 6 courses was performed. Until 2021 March, 40 patients with resectable pancreatic cancer received neoadjuvant therapy. 77% received SLOG regimen. In these cases, the tumor size decreased in 90% patients, the R0 rate increase to 70%, the PFS is 22.8m and the OS is not reach (NR). From our preliminary results, we favor neoadjuvant therapy in resectable pancreatic cancer with suitable regimen.
Name: Jae Min Lee
Current Position: Associate professor, Korea University College of Medicine
Country: Korea
Major Field: Gastroenterology, Internal medicine

EDUCATIONAL BACKGROUND

1999-2005 M.D. Degree, Korea University College of Medicine
2010-2012 M.Sc. Degree, Korea University Graduate School
2013-2016 Ph.D Course, Korea University Graduate School

PROFESSIONAL EXPERIENCE

2013-2015 Clinical Instructor, Korea University College of Medicine
2015-2018 Clinical assistant professor, Korea University College of Medicine
2018-2019 Assistant professor, Korea University College of Medicine
2019-present Associate professor, Korea University College of Medicine

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS

International Member, American Society of Gastrointestinal Endoscopy
Life Member, Korean Medical Association
Life Member, Korean Association of Internal Medicine
Life Member, Korean Society of Gastrointestinal Endoscopy
Life Member, Korean Society of Gastroenterology
Life Member, Korean Society of Gastrointestinal Cancer
Life Member, Korean Pancreatobiliary Association
Life Member, Korean Association for the Study of the Liver

MAIN SCIENTIFIC PUBLICATIONS

Increased heat shock protein 70 expression attenuates pancreatic fibrosis induced by dibutyltin dichloride. Scand J Gastroenterol. 2018
NEOADJUVANT CHEMOTHERAPY FOR RESECTABLE/BORDERLINE-RESECTABLE PANCREATIC CANCER

Jae Min Lee
Korea University College of Medicine

Resectable and Borderline resectable pancreatic cancer is differentiated from locally advanced disease based on the relationship between the tumor and major vascular structures such as the superior mesenteric artery and the superior mesenteric vein. An upfront surgical approach could result that margin-negative resection rates fall as vessels become involved, and the surgery becomes more complicated. It is the challenge how to make the tumor resectable and achieve a negative surgical margin in treating patients with borderline resectable pancreatic cancer. Neoadjuvant chemotherapy would be the solution to achieve these important goals.

According to 2021 NCCN guidelines, while upfront surgery is still the one of recommendations for resectable disease, neoadjuvant therapy is currently the accepted approach for borderline resectable disease [1]. The role of neoadjuvant therapy is to decrease the tumor size to facilitate margin negativity and to treat micro-metastatic disease to prevent systemic recurrence. It can be achieved by more active neoadjuvant chemotherapy regimens and improved radiation therapy techniques. There are many studies to prove the efficiency of chemotherapy not only in the adjuvant but also palliative setting of pancreatic cancer. Now, we expect that it will apply in borderline resectable pancreatic cancer as well.

The preferred regimens in the neoadjuvant/adjuvant setting are FOLFIRINOX or gemcitabine combined with nab-paclitaxel. In ESPAC-5F trial, patients with borderline resectable pancreatic cancer were randomly assigned to one of four arms. The 1-year survival rate was 77% for patients receiving neoadjuvant therapy and 40% for those receiving immediate surgery [2]. In other meta-analysis, Neoadjuvant FOLFIRINOX yielded a resection rate of 68%, of which 84% were R0 resections [3]. The progression-free survival is 18 months (median value) and overall survival is 22 months (median value). In Alliance A021101 trial which neoadjuvant modified FOLFIRINOX followed by capecitabine-based chemoradiation, 68% of patients ultimately underwent pancreatectomy, 93% of whom achieved microscopically negative margins [4]. Regarding gemcitabine combined with nab-paclitaxel, there are fewer reports than with FOLFIRINOX.

PREOPANC-1 trial which evaluated the effect as neoadjuvant chemoradiotherapy, did not meet its primary endpoint, which was an improvement in overall survival with neoadjuvant chemoradiotherapy [5]. However, some benefits were seen with preoperative chemoradiotherapy were statistically significant in R0 resections rates, disease-free survival and distant metastases-free survival. The role of radiotherapy is still controversial in the setting of borderline resectable pancreatic cancer.

Multidisciplinary tumor board discussion has important role to establish a therapeutic plan for patient with borderline resectable pancreatic cancer. The current role of neoadjuvant therapy in pancreatic cancer is shifting from tumor shrinkage to controlling potential micro-metastases. And it is also important to select patients who may benefit from radical resection. Several ongoing trials will soon contribute further to our knowledge of the role of neoadjuvant therapy in pancreatic cancer.

Reference
Name: Shigenori Ei
Current Position: Junior associate professor, Department of Gastroenterological Surgery, Tokai University School of Medicine
Country: Japan
Major Field: Hepatobiliary pancreatic surgery

EDUCATIONAL BACKGROUND

2015 Ph.D. Keio University Graduate School of Medicine, Tokyo, Japan
2007 M.D. Keio University School of Medicine, Tokyo, Japan

PROFESSIONAL EXPERIENCE

2021- Junior associate professor, Department of Gastroenterological Surgery, Tokai University School of Medicine, Kanagawa, Japan
2019-2021 Posdoc researcher, Department of Surgery, University of Heidelberg, Heidelberg, Germany
2017-2019 Assistant Professor, Department of Surgery, Kitasato University Hospital, Kanagawa, Japan
2015-2017 Assistant Professor, Department of Surgery, Eiju General Hospital, Tokyo, Japan
2014-2015 Chief fellow, Department of Surgery, Keio University Hospital, Tokyo, Japan
2013-2014 Clinical Fellow, Department of HBP Surgery and Pathology, National Cancer Center, Tokyo, Japan
2011-2013 Clinical Fellow, Department of Surgery, Keio University Hospital, Tokyo, Japan
2009-2011 Resident, Department of Surgery, Keio University Hospital, Tokyo, Japan
2007-2009 Intern, Tokyo Saiseikai Central Hospital, Tokyo, Japan

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS

2021 Board certified trainer of the Japanese Society of Gastroenterological Surgery (No. 8585)
2020 Board certified expert surgeon (Hepatobiliary-pancreatic field) (No. 20-0004)
2018 Endoscopic surgical skill qualification system: qualified surgeon (No. 18-GS-155)
2018 Board meeting member of Japanese Society of Hepato-Biliary-Pancreatic Surgery
2017 Japanese Board Certified Surgeon in Gastroenterology (No. 3007694)
2017 Certifying physician of surgery treatment for cancer of digestive system (No. 8043)
2016 Board Certified Transplant Surgeon of the Japan Society of Transplantation Medicine (No. 20160012)
2015 Board Certified Hepatologist of the Japan Society of Hepatology (No. 7001)
2014 General Clinical Oncologist (by JBCT) (No. 13100480)
2013 Japanese Board Certified Surgeon (No. 1003669)
2010 JATEC (Japan Advanced Trauma Evaluation and Care) Provider
2009 ACLS (Advanced Cardiovascular Life Support) Provider

MAIN SCIENTIFIC PUBLICATIONS


**NEOADJUVANT CHEMOTHERAPY FOR RESECTABLE/BORDERLINE-RESECTABLE PANCREATIC CANCER**

Shigenori Ei, M.D., Ph.D.
Department of Surgery, Tokai University, Kanagawa, Japan

Pancreatic cancer is a tumor with a poor prognosis, and research on perioperative treatment has been conducted. However, treatment strategies for R and BR pancreatic cancer differ among countries, and no consensus has been reached yet. For example, chemoradiation is the mainstream preoperative adjuvant therapy in Europe and the United States, while chemotherapy alone is the mainstream in Japan. This session is an opportunity to exchange information on what strategies are being developed for R/BR pancreatic cancer in Korea, Taiwan, and Japan, and to introduce the treatment strategic circumstances in Japan. Our hospital is one of the high-volume centers for pancreatic cancer treatment in Japan. It has been developing pancreatic cancer treatment in line with the Japanese evidence for each decade, and can be said to represent the so-called regular hospitals in Japan. From 2007 to 2021, there were 1199 patients with pancreatic cancer, of which 610 were UR, 362 were R, 103 were BR-PV, and 124 were BR-A pancreatic cancer. Our treatment strategy for R/BR pancreatic cancer used to be surgery first, but in 2016, we started to introduce NAC for BR-A, and in 2021, we have shifted to NAC for about 3 months for almost all pancreatic cancers. (GS therapy for R pancreatic cancer and GnP therapy for BR-PV/BR-A pancreatic cancer). The median overall survival (mOS) of patients with BR-PV pancreatic cancer was 20.3±2.2 months in the surgery first group (n=77) vs. 18.0±1.7 months in the NAC group (n=22) (P=0.95). The mOS for BR-A pancreatic cancer was 14.0±2.7 months in the surgery first group (n=66) vs. 19.0±1.6 months in the NAC group (n=56) (P=0.17), showing a trend toward a better prognosis in the NAC group, although the difference was not significant. This presentation will introduce the treatment strategy for R/BR pancreatic cancer focusing on perioperative chemotherapy at our hospital and the details of its results, as well as the prospect of a new strategy for the future treatment of pancreatic cancer based on the basic research conducted by the speaker.
Name: Chien-hui Wu

Current Position:
1. Attending Surgeon, Department of Surgery, National Taiwan University Hospital
2. Surgical oncologist, Pancreatic Cancer Precision Medicine Center of Excellence, National Taiwan University Hospital

Country: Taiwan

Major Field: Pancreatic surgery, Pancreatic cancer treatment, Cancer genomics, Clinical epidemiology

EDUCATIONAL BACKGROUND
2002-2009 M.D., National Taiwan University School of Medicine
2016- PhD Candidate, Epidemiology and Preventive Medicine, National Taiwan University

PROFESSIONAL EXPERIENCE
2009-2010 Military Medical Doctor of the Chinese Army, Taiwan
2010-2011 Resident, Internal Medicine, Taipei City hospital, Taiwan
2011-2016 Resident and Chief Resident, General Surgery, National Taiwan University Hospital
2016-2017 Clinical Fellow, Pancreatic Surgery, National Taiwan University Hospital
2017 Visiting investigator, Pancreatic Surgery, Kyushu University Hospital, Japan
2017-2019 Attending Surgeon, Department of Surgery, National Taiwan University Hospital Yun-Lin Branch
2017- Attending Surgeon, Department of Surgery, National Taiwan University Hospital
2016- Pancreatic Cancer Treatment Committee, National Taiwan University Hospital
2021- Pancreatic Cancer Precision Medicine Center of Excellence, National Taiwan University Hospital

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS
Formosan Medical Association, Taiwan Surgical Association, Taiwan Pancreas Society, Taiwan Oncology Society, Taiwan Surgical Society of Gastroenterology, Taiwan Association for Endoscopic Surgery, American Pancreatic Association, International Hepato-Pancreato Biliary Association, European Association for Endoscopic Surgery

MAIN SCIENTIFIC PUBLICATIONS
3. Wu JM; Kuo TC.; Chen HA.; Wu CH, Lai SR, Yang CY, Hsu SY, Ho TW, Liao WC.; Tien YW. Randomized trial of oral versus enteral feeding for patients with postoperative pancreatic fistula after pancreatectoduodenectomy. BRITISH JOURNAL OF SURGERY. 2019 Feb;106(3):190-198. doi: 10.1002/bjs.11087
New Challenges and Collaboration in Gastroenterology and Hepatology Research

The 5th Korea Digestive Disease Week
November 18 - 20, 2021

RESHAPING RESECTABLE/BORDERLINE-RESECTABLE PANCREATIC CANCER IN THE ERA OF PRECISION MEDICINE

Chien-hui Wu
National Taiwan Univ. Hosp., Taiwan

After the concept of borderline resectable pancreatic cancer was established by the National Comprehensive Cancer Network in 2006, several definitions of borderline resectable pancreatic cancer were given by different organizations, such as the MD Anderson Cancer Center (MDACC), Alliance trial, Americas Hepato-Pancreato-Biliary Association (AHPBA), Society for Surgery of the Alimentary (SSAT) and Society of Surgical Oncology (SSO). In clinical practice, the initial treatment decision may be highly dependent on the quality of preoperative imaging and the surgeon’s surgical experience, as the definition of resectability is based on anatomical criteria. Since the improvements in surgical techniques, chemotherapy, and radiotherapy, more research has focused not only on anatomical aspects but also on technical or biological aspects. Recently, borderline resectability of pancreatic cancer was redefined through international consensus criteria based on anatomical, biological (elevated serum carbohydrate antigen 19-9), and conditional (Eastern Cooperative Oncology Group performance) dimensions.

In the era of precision medicine, the definition of borderline resectable pancreatic cancer goes beyond the anatomic relationship between the tumor and vessels. Neoadjuvant chemotherapy and surgery are associated with improved outcomes. Due to the molecular diversity of borderline resectable pancreatic cancer and its impact on prognosis and treatment response, a paradigm shift to a genome-driven approach is required. This is particularly important in preoperative, potentially curative cases, where a more individualized approach is used to guide individualized treatment.
Strategies for Elimination of Chronic HBV Infection: Current Status and Future Perspectives
November 18 (Thu) 14:10-15:40

Chairs
Young-Suk Lim (Univ. of Ulsan, Korea)
Yasuhide Tanaka (Kumamoto Univ., Japan)
Jia-Horng Kao (National Taiwan Univ. Hosp., Taiwan)

Discussants
Hyung Joon Yim (Korea Univ., Korea)
Kiyoaki Ito (Aichi Medical Univ., Japan)
Cheng-Yuan Peng (China Medical Univ. Hosp., Taiwan)

Speakers
Optimize nucleot(s)ide analogues' to prevent hepatocellular carcinoma in patients with chronic hepatitis B: A lesson from real-world evidence
Jonggi Choi (Univ. of Ulsan, Korea)

Current status in hepatitis B management in Japan and future perspectives
Tetsuya Hosaka (Toranomon Hosp., Japan)

Towards Elimination of HBV Infection in Taiwan
Chun-Jen Liu (National Taiwan Univ. Hosp., Taiwan)

Rising Star Program
Identifying hepatocellular carcinoma risk of untreated chronic hepatitis B for timely antiviral intervention
Gi-Ae Kim (Kyung Hee Univ., Korea)

Role of host immune responses in achieving HBsAg loss
Sachiyo Yoshio (The Research Center for Hepatitis and Immunology, National Center for Global Health and Medicine, Japan)

Combined ALT/HBsAg kinetics for re-treatment decision in HBeAg-negative CHB patients with off-Nuc hepatitis flare
Wen-Juei Jeng (Linkou Chang Gung Memorial Hosp., Taiwan)
Name: Jonggi Choi
Current Position: Assistant Professor, Department of Gastroenterology, Asan Medical Center, University of Ulsan College of Medicine
Country: Korea
Major Field: Hepatology

EDUCATIONAL BACKGROUND

2017-2019 Doctor’s degree in Internal Medicine, University of Ulsan College of Medicine
2009-2011 Master’s degree in Internal Medicine, University of Ulsan College of Medicine
2000-2006 Doctor’s degree in Internal Medicine, Catholic University of Daegu School of Medicine

PROFESSIONAL EXPERIENCE

2020-Present Assistant Professor, Department of Gastroenterology, Asan Medical Center, University of Ulsan College of Medicine
2019-2020 Clinical Assistant Professor, Department of Gastroenterology, Asan Medical Center, University of Ulsan College of Medicine
2014-2015 Research Fellow, Department of Gastroenterology, Mayo Clinic, Rochester, MN, USA

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS

Korean Association for the Study of the Liver
Korean Liver Cancer Association
Korean Society of Gastroenterology
Korean Society of Gastrointestinal Endoscopy

MAIN SCIENTIFIC PUBLICATIONS

Choi J, Yoo S, Lim Y-S. Comparison of Long-Term Clinical Outcomes Between Spontaneous and Therapy-Induced HBsAg Seroclearance. *Hepatology* (Accepted)
OPTIMIZE NUCLEOT(S)IDE ANALOGUES’ TO PREVENT HEPATOCELLULAR CARCINOMA IN PATIENTS WITH CHRONIC HEPATITIS B: A LESSON FROM REAL-WORLD EVIDENCE

Jonggi Choi
Department of Gastroenterology, Liver Center, Asan Medical Center, University of Ulsan College of Medicine, Seoul 05505, South Korea.

Recently, dramatic advancements have been made in hepatitis B virus (HBV) treatment; the development of an HBV vaccine and antiviral agents against HBV have tremendously improved clinical outcomes, including viral hepatitis and its fatal complications. Nevertheless, given the enormous clinical and socio-economical burdens of hepatocellular carcinoma (HCC) caused by HBV, chronic hepatitis B (CHB) should be properly managed with appropriate and timely use of antiviral treatments for secondary prevention. Unfortunately, no current drug can eliminate HBV nor can it completely eliminate the risk of HCC. However, many recent RWEs have provided important insights into secondary prevention of HCC, making clinicians reconsider the indications for antiviral treatment beyond the current treatment guidelines set forth for patients with CHB. Clinicians should be aware of the limitations of real-world evidence before applying it in research, but the method may be used across a wide spectrum of CHB research through judicious selection of data sources, refinement of study designs, and appropriate analytic approaches. This will bring researchers a step closer to optimizing the secondary prevention of HCC in patients with CHB.

Reference
Name  Tetsuya Hosaka  
Current Position  Associate director  
Country  Japan  
Major Field  Viral hepatitis, Liver cancer  

EDUCATIONAL BACKGROUND

1998  Graduated from Osaka University, Medical School  
FELLOWSHIP:  
1998-1999  Osaka University Hospital (Internal Medicine)  

PROFESSIONAL EXPERIENCE

I have been working in Toranomon Hospital from 2001 and continuing my research carrier about hepatology. 
HONORS and AWARDS:  
Academic Encouragement Award of the Japanese Society of Gastroenterology 2008  
Academic Encouragement Award of the Japan Society of Hepatology 2010  
AASLD Presidential Poster of Distinction of the Liver Meeting 2012 and 2013  
Best of the Liver Meeting 2018, AASLD  

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS

American Association for the study of liver diseases (International member)  
Japan Society of Hepatology (councilor)  
Japanese Society of Gastroenterology (councilor)  
Japan Gastroenterological Endoscopy Society  

MAIN SCIENTIFIC PUBLICATIONS

CURRENT STATUS IN HEPATITIS B MANAGEMENT IN JAPAN AND FUTURE PERSPECTIVES

Tetsuya Hosaka
Toranomon Hospital, Tokyo, Japan

More than 2 billion people worldwide have been exposed to hepatitis B virus (HBV) and about 350 million people are chronically infected, with the majority of whom are in Asia (75%). The prevalence of HBV in Japan is 0.8%, which is lower than other Asian countries such as Korea and Taiwan. As chronic HBV infection leads to cirrhosis and hepatocellular carcinoma (HCC), published studies have shown that up to 25% of chronically infected patients eventually die of liver cirrhosis or HCC.

Within the past 20 years, new antiviral therapies, including nucleos(t)ide analogues (NA), have been approved and were successful in suppressing circulating serum viral loads. Tenofovir alafenamide (TAF) is a relatively new antiviral NA that has proved effectiveness in suppressing HBV DNA replications with minimal drug resistance, and less renal and bone toxicity than tenofovir disoproxil fumarate (TDF). TAF was approved for CHB patients in December 2016 in Japan and has been used for lots of Japanese CHB patients.

Recently, the development of new HBV markers has attracted attention. The representative markers are hepatitis B core-related antigen (HBcrAg) and HBV-RNA. These reflect cccDNA levels and transcriptional activity of HBV in the liver, and are able to be measured from serum. HBcrAg was firstly developed in Japan about 20 years ago, and some of its clinical utilities had been reported from some countries. Although the limitation of the current HBcrAg assay is its low sensitivity, ultrasensitive assay for HBcrAg (iTACT-HBcrAg) has been developed recently. The iTACT-HBcrAg has about 8 times more sensitivity than the current assay. It is expected that the iTACT-HBcrAg assay will have more utilities.

This presentation will show the effectiveness of TAF and the clinical utilities of HBcrAg including iTACT-HBcrAg assay in the management of CHB patients.
Name Chun-Jen Liu
Current Position Professor
Country Taiwan
Major Field Hepatology; viral hepatitis; HCC; NAFLD

EDUCATIONAL BACKGROUND

Chun-Jen LIU is a Professor at the Department of Internal Medicine, National Taiwan University College of Medicine, and Director of the Hepatitis Research Center, National Taiwan University Hospital, both in Taipei. He achieved his MD and PhD at the National Taiwan University.

PROFESSIONAL EXPERIENCE

Professor LIU’s interests are in chronic hepatitis B and C, and nonalcoholic fatty liver disease, where his studies focus on the role of viral and host factors in the pathogenesis and natural/treatment outcomes of chronic hepatitis B and C, particularly hepatitis B acute exacerbation, features of HBV viral mutants and the mechanism of hepatitis B surface antigen (HBsAg) seroclearance, and pathogenesis and treatment of HCC. He has been actively involved in clinical trials for treatment of chronic hepatitis C, chronic hepatitis B, HBV/HCV co-infection and hepatocellular carcinoma.

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS

He is now the leader of the Taiwan Liver Diseases Clinical Trial Consortium. He had been served as associate editor for Liver International. He is now the associate editor of the Journal of the Formosan Medical Association. He has authored 300 papers in international, peer-reviewed journals including Gastroenterology, Hepatology, Gut and Journal of Hepatology.

MAIN SCIENTIFIC PUBLICATIONS

TOWARDS ELIMINATION OF HBV INFECTION IN TAIWAN

Chun-Jen Liu, M.D., Ph.D.
National Taiwan University Hospital, Taipei, Taiwan

Hepatitis B virus (HBV) infection and its related liver diseases are important health problems worldwide, particularly in Asia-Pacific region. For the past 4–5 decades, Taiwan’s government and scientists have cooperated together to control this virus infection and its related liver diseases. These efforts and achievements made a successful story toward elimination of HBV. Taiwan’s government initiated the Viral Hepatitis Control Program (VHCP) since 1970’s, and then launched the national vaccination program in 1984. This universal vaccination program effectively decreases the rate of hepatitis B carriage and the development of HCC in the young generations. Since 2003, approved anti-HBV treatments were reimbursed nationwide. This reimbursement program resulted in higher uptake of anti-HBV treatments which contributed to a decrease in liver-related disease progression and subsequently reduced attributable mortality in Taiwan. This experience can be shared by countries in other parts of the world regarding the elimination of chronic viral hepatitis B.
Name: Gi-Ae Kim
Current Position: Clinical Assistant Professor
Country: Korea
Major Field: Liver

EDUCATIONAL BACKGROUND
2002-2008 Hanyang University College of Medicine, Seoul, Korea
2012 Master's degree of Medicine, University of Ulsan College of Medicine
2018 Doctor's degree of Medicine, University of Ulsan College of Medicine

PROFESSIONAL EXPERIENCE
2013-2014 Clinical Fellow, Gastroenterology & Hepatology, Asan Medical Center, Seoul, Korea
2015-2018 Clinical Professor, Health Screening and Promotion Center, Asan Medical Center, Seoul, Korea
2019- Clinical Assistant Professor, Department of Internal Medicine, Kyung Hee University School of Medicine, Seoul, Korea

OTHER EXPERIENCE AND PROFESSIONAL MEMBERSHIPS
The Korean Association for the Study of the Liver
The Korean Association of Internal Medicine
The Korean Society of Gastroenterology
The Korean Society of Gastrointestinal Endoscopy

MAIN SCIENTIFIC PUBLICATIONS
IDENTIFYING HEPATOCELLULAR CARCINOMA RISK OF UNTREATED CHRONIC HEPATITIS B FOR TIMELY ANTIVIRAL INTERVENTION

Gi-Ae Kim
Department of Internal Medicine, Kyung Hee University School of Medicine, 23 Kyungheedae-ro, Dongdaemun-gu, Seoul 02447, Korea

Current practice guidelines recommend considering HBeAg-positivity and serum levels of hepatitis B virus (HBV) DNA and alanine aminotransferase (ALT) to determine treatment initiation in chronic hepatitis B (CHB) patients. Yet, our recent study including 1910 HBeAg-positive patients with CHB with high HBV DNA levels (≥20,000 IU/mL) without cirrhosis showed that untreated IT-phase patients with CHB had higher risks of HCC and death/transplantation than treated immune active (IA)-phase patients. The study suggested that unnecessary deaths could be prevented through earlier antiviral intervention in select IT-phase patients.

When we designed a Markov model to compare expected costs and quality-adjusted life-years (QALYs) of starting antiviral treatment at IT-phase (treat-IT) vs delaying the therapy until active hepatitis phase (untreat-IT) in CHB patients over a 20-year horizon, we found that starting antiviral therapy in IT phase is cost-effective compared with delaying the treatment until the active hepatitis phase in CHB patients, especially with increasing HCC risk, decreasing drug costs, and consideration of productivity loss.

As for the association between HBV DNA levels and HCC risk including a wider range of HBV DNA, we conducted a historical cohort study in Korea involving 6949 non-cirrhotic, treatment-naïve CHB patients with ALT <2× upper limit of normal for >1 year. The study found that HCC risk was the highest with moderate serum HBV DNA levels of 6–7 log10 IU/mL in CHB patients independent of ALT levels. The results suggested that extending treatment indication to CHB patients with moderate levels of HBV DNA may be considered to further prevent HCC, regardless of ALT levels.

The findings suggest that extending the treatment indication can contribute to the elimination of chronic HBV infection by making timely antiviral intervention possible for those who are at high risk but not currently indicated for treatment. A new HCC risk prediction model for identifying HCC risk more precisely would also help.
Name: Sachiyo Yoshio

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EDUCATIONAL BACKGROUND

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MAIN SCIENTIFIC PUBLICATIONS


ROLE OF HOST IMMUNE RESPONSES IN ACHIEVING HBSAG LOSS

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Background/Aims: Hepatitis B surface antigen (HBSAg) loss is an ideal goal for chronic hepatitis B patients. Antiretroviral therapy (ART) of HBV/HIV-1-coinfected patients can lead to hepatic flare (HF) caused by immune reconstitution-induced inflammatory syndrome (IRIS). Here, we investigated the impact of IRIS-HF on HBSAg loss and investigated the mechanisms to develop IRIS-HF.

Methods: This was a retrospective study of 58 HBV/HIV-1-coinfected subjects who had been HBSAg-positive for ≥6 months before ART initiation and were followed for ≥1 year (median 9.9 years) after ART initiation. We examined humoral factors in sera from healthy volunteers, HIV mono-infected patients, and HBV/HIV-1-coinfected patients with IRIS-HF or acute hepatitis B infection.

Results: All observation period of ART, HBSAg loss was observed in 20 of 58 HBV/HIV-1-coinfected patients (34.5%). Of the 58 patients, 15 (25.9%) developed IRIS-HF within 12 months of ART initiation. HBSAg loss was more frequent among patients who developed IRIS-HF (11/15, 73.3%) than those who did not (9/43, 20.9%). Multivariate analysis showed that IRIS-HF was an independent predictor of subsequent HBSAg loss. Younger age and higher baseline HBV DNA titer were associated with IRIS-HF. Elevation of CXCL9, CXC10, CXCL11, CXCL13, and IL-21, which is associated with HBSAg loss at acute hepatitis B infection, was not observed at IRIS-HF even in patients with HBSAg loss, suggesting that liver injury at IRIS-HF is induced by the recovery of HBV-specific cytotoxic CD8 T cell, not by innate immune response, although antigen-nonspecific immunity could also contribute to IRIS-HF.

Conclusion: IRIS-HF was associated with HBSAg loss in HBV/HIV-1-coinfected patients.

Keywords: Hbsag Loss, Hepatic Flare, Iris
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Dr. Jeng graduated from College of Medicine, National Yang Ming University, Taiwan in 2005. She received her internal medicine residency training and Gastroenterology fellowship training in Chang Gung Memorial Hospital, Linkou Medical Center during 2005-2010. Dr. Jeng currently serves as a physician scientist in Chang Gung Memorial Hospital and an associate professor in Chang Gung University. She’s also a PhD candidate in Graduate School of Institute of Clinical Medicine, National Yang-Ming University, Taiwan.

PROFESSIONAL EXPERIENCE
Dr. Jeng’s research interests mainly focus on viral hepatitis (esp. HBV) and clinical hepatology. She has been working with her mentor Prof. Yun-Fan Liaw and published a series of off-Nuc therapy cohort study in Hepatology and Clinical Gastroenterology and Hepatology. She serves as one of the steering committee of the global RETRACT-B cohort study, working on finite therapy related issues. Dr. Jeng also joined several Phase I/II clinical trials in HBV and NASH and serves as reviewers of numerous high-ranked journals in hepatology field.

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MAIN SCIENTIFIC PUBLICATIONS
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COMBINED ALT/HBSAG KINETICS FOR RE-TREATMENT DECISION IN HBEAG-NEGATIVE CHB PATIENTS WITH OFF-NUC HEPATITIS FLARE

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Finite nucleos(t)ide analogue (Nuc) therapy in hepatitis B e antigen (HBeAg)-negative patients has been increasingly accepted as a feasible strategy due to much increased HBsAg loss rate during follow-up. However, clinical relapse occurs in ~40% off-Nuc patients during follow-up. Off-Nuc hepatitis flare, defined as serum alanine aminotransferase (ALT) elevation over 5 times upper limit of normal (ULN) is an important safety concern while on the other hand reflecting the robust immune response against HBV. From previous studies, HBsAg loss rate is higher in patients un-retreated than those received prompt retreatment. It is crucial to know how to utilize the changes of HBsAg quantification level along the hepatitis flare to aid the decision making of re-treatment in off-Nuc patients with hepatitis flare. In our recent study of 336 entecavir/tenofovir retreated and 105 un-retreated HBeAg-negative patients, HBsAg was quantified before and during flare, at peak/retreatment start, month 6 and 12. Increasing HBsAg during ALT flare was defined as “virus-dominating flare” whereas decreasing HBsAg as “host-dominating flare”. Retreated 288 patients with virus-dominating flare showed greater 1-year HBsAg decline (-1.0 versus -0.01 log10IU/mL, P<0.0001), more frequent rapid decline (69.8 versus 8.3%; P<0001), higher 3-year incidence of HBsAg<100 IU/mL (32 versus 12%, P=0.026) than 48 re-treated patients with host-dominating flare of whom 16 (33.3%) showed 3.8-fold on-retreatment HBsAg rebound (versus 2/288; P<0.0001). In contrast to that in the un-retreated controls, 1-year HBsAg decline was greater (-1.0 versus -0.47 log10IU/mL; P<0.0001) and faster (69.8 versus 42.5%; P<0.0001) in patients with virus-dominating flare. Interestingly, decreased 1-year HBsAg decline (-0.01 versus -0.16 log10IU/mL) and reduced 3-year HBsAg loss rate (0 versus 21%; P=0.009) were observed in re-treated patients than those left un-retreated with host-dominating flare. Conclusions: Entecavir/tenofovir retreatment effectively decreases HBsAg level in patients with virus-dominating flare but ineffective/worse in patients with host-dominating flare. These results support using combined HBsAg/ALT kinetic for decision to retreat patients with virus-dominating flare and hold retreatment for patients with host-dominating flare.
KDDW 2021
The 5th Joint Session between KDDW – TDDW – JDDW

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