



VIRTUAL EVENT

3rd

Edition of
Global Congress on

Advances in
**Gastroenterology
& Hepatology**

GASTRO-HEPATO 2022

July 11-12

2022

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PROGRAM-AT-A-GLANCE

GASTRO-HEPATO
2022

DAY 1

MONDAY, JULY 11, 2022

Scientific Program

BST- British Summer Time

08:00-08:30 Opening Ceremony

Distinguished Speaker Talks

Sessions: Gastroenterology Treatment | Advances in Gastroenterology | Gastrointestinal Disorders | Endoscopy and Hepatology | Inflammatory Bowel Disease | Bariatric Surgery | Hepatitis B | Liver and Intestine Transplant | Kidney and Pancreas Transplant | Pediatric Gastroenterology

08:30-08:55

Title: Review on the impact and risk factors for conversion during minimally invasive pancreatoduodenectomy and distal pancreatectomy

Zhenlu Li, *Sichuan University, China*

08:55-09:20

Title: Comparison of kruis, manning and rome IV criteria in irritable bowel syndrome

Farah Naaz Kazi, *Vydehi Institute of Medical Sciences and Research Centre, India*

09:20-09:45

Title: Ascending colon stenosis caused by repeated diverticulitis that clinically mimicked advanced Colon Cancer

Kazuhiro Hiyama, *Atago Hospital, Japan*

09:45-10:10

Title: GDF-5 variant BB-1 loading on composite scaffolds promotes spinal fusion through coupling of osteogenesis and angiogenesis: A preclinical study in rhesus monkeys

Liangping Li, *Zhejiang University School of Medicine, China*

10:10-10:35

Title: The role of gut virome in fecal microbiota transplantation

Tao Zuo, *Sun Yat-sen University, China*

10:35-11:00

Title: Utilization of point-of-care ultrasound to detect splenic microabscesses in pediatric melioidosis

Teeranai Sakulchit, *Prince of Songkla University, Thailand*

11:00-11:25

Title: An alternative method for treating dumping syndrome using hemoclips
Arda Yavuz, *Istanbul Medeniyet University, Turkey*

11:25-11:50

Title: Protective effect of Calcium Fructoborate against carbon tetrachloride-Induced toxicity in rats
Nurhayat Atasoy, *Van Yüzüncü Yil University, Turkey*

11:50-12:15

Title: Influence of Pre-operative patient education on post-operative opioid consumption: A systematic review and meta-analysis
Jawaher F Alsharef, *King Saud bin Abdulaziz University for Health Sciences, Saudi Arabia*

Lunch Break 12:15-13:15

13:15-13:40

Title: Challenging case of Whipple's disease: The contribution of radiology
João Garrido Santos, *Portuguese Institute of Oncology, Portugal*

13:40-14:05

Title: Shaping successful cancer immunotherapy outcomes in oesophageal adenocarcinoma; the role of the tumour microenvironment and combination cancer treatments
Joanne Lysaght, *St. James's Hospital and Trinity College, Ireland*

14:05-14:30

Title: Stent management of leaks after bariatric surgery: A systematic review and meta-analysis
Andreu Martínez Hernández, *University General Hospital of Castellon, Spain*

14:30-14:55

Title: Clinical considerations for DPD deficiency testing
Manon Launay, *University Hospital of Saint Etienne, France*

Refreshment Break 14:55-15:30

15:30-15:55

Title: Creatine transporter deficiency impairs stress adaptation and brain energetics homeostasis
Hong-Ru Chen, *University of Virginia School of Medicine, USA*

15:55-16:20

Title: Multiplex immunofluorescence and digital image analysis for the evaluation of paraffin tumor samples in research projects
Edwin Roger Parra, *University of Texas, USA*

16:20-16:45

Title: Astaxanthin prevents diet-induced NASH progression by shaping intrahepatic immunity

Ming Yang, *University of Missouri, USA*

16:45-17:10

Title: Multi-modality imaging of splenic masses: A rare case of inflammatory Pseudotumor-like Follicular Dendritic cell tumor and approach to differential diagnosis

Luyao Shen, *Stanford University College of Medicine, USA*

Panel Discussion

End of Day 1



BST- British Summer Time

Distinguished Speaker Talks

Sessions: Gastroenterology Treatment | Advances in Gastroenterology | Gastrointestinal Disorders | Endoscopy and Hepatology | Inflammatory Bowel Disease | Bariatric Surgery | Hepatitis B | Liver and Intestine Transplant | Kidney and Pancreas Transplant | Pediatric Gastroenterology

08:30-08:55

Title: Evaluation of the diagnostic performance and the utility of Helicobacter pylori stool antigen lateral immunochromatography assay

Shaymaa Abdelmalek Mohamed Abdelhafez, *Cairo University, Egypt*

08:55-09:20

Title: Possible role of nuclear factor erythroid 2-related factor 2 in the development of human colon precancerous lesions

Michele Barone, *University of Bari Aldo Moro, Italy*

09:20-09:45

Title: Viral hepatitis B and pregnancy: Current approaches to treatment and prevention

Maria Belopolskaya, *Saint-Petersburg, Russia*

09:45-10:10

Title: The comparative characteristics of chloroplast genome from Clerodendranthus spicatus, a medicinal plant for preventing and treating kidney diseases from Lamiaceae family

Qing Du, *Qinghai Minzu University, China*

10:10-10:35

Title: Endoscopic Retrograde Appendicitis therapy in the management of Chronic Fecalith appendicitis in a patient with Ulcerative Colitis. The first human case report

Muhammad Zulqarnain, *Zhejiang Chinese Medical University, China*

10:35-11:00

Title: Spinal cord stimulation & Intrathecal therapy with Ziconotide: A solution for painful diabetic neuropathy?

Georgios K. Matis, *University of Cologne, Germany*

Panel Discussion

End of Day 2





**BOOKMARK
YOUR DATES**

**4TH EDITION OF GLOBAL CONGRESS ON
ADVANCES IN
GASTROENTEROLOGY
& HEPATOLOGY**

MARCH 2023 | LONDON, UK

<https://gastroenterology.peersalleyconferences.com/>

SCIENTIFIC ABSTRACTS

DAY 1



Virtual Event

3rd Edition of
GLOBAL Congress on
Advances in
Gastroenterology
and Hepatology

JULY 11-12, 2022

GASTRO-HEPATO 2022

3rd Edition of GLOBAL Congress on **Advances in Gastroenterology and Hepatology**

Review on the impact and risk factors for conversion during minimally invasive pancreatoduodenectomy and distal pancreatectomy



Zhenlu Li

Sichuan University, China

Minimally invasive pancreatoduodenectomy (MI-PD) and minimally invasive distal pancreatectomy (MI-DP) are being increasingly adopted in high-volume centers. Minimally invasive pancreatic resection (MI-PR) is associated with decreased time to functional recovery, shorter hospital stays and decreased intraoperative blood loss, and it is a cost-effective procedure; MI-PR also has comparable oncological outcomes when compared to open pancreatic resection (OPR). Nevertheless, the safety and feasibility of MI-PR may be questioned given the high conversion rate, especially in patients with high-risk factors and early adopters. Laparoscopic and robotic approaches remain the two most widely used platforms, and robotic approaches are associated with reductions in conversion to laparotomy compared to laparoscopic approaches. Published rates of conversion to an open procedure during MI-PR vary from

0% to 40% for MI-PDs and from 0% to 36% for MI-DPs. Conversion might worsen surgical outcomes and nullify the potential benefits of the minimally invasive approach, thereby highlighting the importance of identifying potential preoperative and intraoperative risk factors for conversion as well as the importance of careful patient selection when considering patients suitable for MI-PR. Data on factors predicting conversion and the impact of conversion on patient outcomes after MI-PR have been reported in several comparative studies. Among these studies, the majority has illustrated that conversion is independently associated with worse outcomes; however, several studies have reported that conversion during MI-PR itself is not associated with worse outcomes. The review will summarize the impact of conversion on outcomes and identify risk factors predictive of conversion during MI-PD and MI-DP.

Biography

Zhenlu Li has completed his MD at the age of 29 years from Sichuan University. He is the secretary of minimally invasive surgery association of Chinese Medical Association. He has published 5 papers as first or co-first author in reputed journals.

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Comparison of kruis, manning and Rome IV criteria in irritable bowel syndrome

Farah Naaz Kazi, Anurag Agarwal and Prashant Y Kanni

Vydehi Institute of Medical Sciences and Research Centre, India

Irritable Bowel Syndrome (IBS) is a functional disorder of the gastrointestinal tract characterized by chronic abdominal pain, cramping, constipation, and diarrhea. Manning criteria, Kruis criteria and Rome IV criteria have shown that certain symptoms derived from a 15-items questionnaire differentiated patients with Irritable Bowel Syndrome (IBS) from patients with organic diseases. The purpose of the study is to find out the reliability and discriminatory value of the Manning criteria, Kruis criteria and Rome IV criteria in the differentiation of Irritable Bowel Syndrome (IBS) from organic diseases and to find out if the three criteria could be combined. The study is a prospective cross-sectional analytical study of one hundred and thirty patients who presented with Diarrhea or Constipation to the Department of Medicine, Department of Surgery, Department of Medical Gastroenterology, Vydehi Institute of Medical

Sciences and Research Centre, Bangalore between September- February, 2019-2020. After taking informed consent, patients were subjected to preformed questionnaire in the language best understood by them. Patient underwent diagnostic investigations like Complete blood count (CBC), Erythrocyte Sedimentation Rate (ESR), C- reactive protein, Serum albumin and Colonoscopy. A total of 130 patients were interviewed for the study. Manning criteria had the highest sensitivity (88%) compared to Kruis criteria (81%) and Rome IV criteria (80%). Kruis criteria had the highest specificity (91%) compared to Manning criteria (87%) and Rome IV criteria (86%). On combining the three criteria, while the sensitivity is 94.4%, the specificity fell drastically to 58%. Hence everything considered it is best to ply with the individual criteria for the diagnosis of irritable bowel syndrome.

Biography

Farah Naaz Kazi, is an international medical graduate who has completed her medical school in Bangalore, India graduated out from Vydehi institute of medical sciences and research centre in February 2020. She worked at Aster Cmi hospital and Highland hospital in India for a year and worked in the Covid zones. She is currently working at the Ipswich hospital, United Kingdom as a junior doctor in general surgery and general medicine. She was a Subject Topper in Ophthalmology in Vydehi Institute of Medical Sciences & Research Centre in 2017. She has published 5 research papers which are PubMed indexed. She has also actively been the rota co-ordinator and conducted several presentations, teaching sessions and skills workshops.

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Ascending colon stenosis caused by repeated diverticulitis that clinically mimicked advanced Colon Cancer

Kazuhiro Hiyama, Izumi Kirino, Yasuo Fukui and Hideo Terashima

Atago Hospital, Japan

Introduction: We experienced a rare case of right-sided large bowel obstruction (LBO) of the colon caused by chronic diverticulitis, which was challenging to diagnose.

Presentation of case: A young male was admitted to our department with a fever, diarrhea, and right-sided lateral abdominal pain for several days. CT showed a thickened ascending colon wall with stenosis and adjacent retroperitoneal inflammation without marked diverticula. The next day, he developed severe abdominal pain, and perforation was suspected. We chose the “interval definitive surgery”; at that time, intestinal decompression and laparoscopic drainage. Colonoscopy showed an edematous membrane, but no cancerous lesions or diverticula. Hemi-colectomy was

performed after 10 days' nutritional therapy. No postoperative complication occurred. The histopathology showed that the pathogenesis was chronic diverticulitis.

Discussion: There have been few reported cases of right-sided LBO caused by diverticulitis, but it is important to be aware that benign disease, such as chronic diverticulitis, can cause LBO. Initial conservative therapy and nutritional therapy produced a correct diagnosis and good outcomes.

Conclusion: Performing “interval surgery” allowed us to make an accurate diagnosis and may help to prevent surgical complications in rare cases of right-sided LBO due to diverticulitis.

Biography

Kazuhiro Hiyama is the director of Surgery at Atago Hospital (Kochi, Japan). He gained the first degree in Pharmaceutical sciences at the University of Tokyo. He gained the second degree in Medicine at University of Tsukuba as a principal. He finished the surgical residency and fellowship at the Tsukuba University Hospital. After that he experienced international contributions especially in southeast Asian countries. He gained three M.D. licenses (Japan, USA, and Cambodia) and multiple board certifications. His specialty is colorectal surgeries, especially minimally invasive surgeries.



GDF-5 variant BB-1 loading on composite scaffolds promotes spinal fusion through coupling of osteogenesis and angiogenesis: A preclinical study in rhesus monkeys

Liangping Li^{1,2}, Xiaoying Chen¹, Jianying Lou¹,
 Maik Stiehler² and Corina Vater²

¹Zhejiang University School of Medicine, China

²University Hospital Carl Gustav Carus, Germany

Although bone morphogenetic protein-2 (BMP-2) is widely used for spinal fusion, some concerns cannot be ignored. The combination of growth factor with composite scaffolds represent a promising approach to promote bone regeneration and spinal fusion. Recent studies have demonstrated that the growth differentiation factor-5 (GDF-5) variant BB-1, combining the osteogenic activity of BMP-2 with the angiogenic features of GDF-5, enhanced bone regeneration during long-bone healing in lower-order animals. The study aimed to investigate the efficacy and safety of BB-1 loading on composite scaffolds on spinal fusion in nonhuman primates. Six healthy rhesus monkeys were used to establish a clinically relevant two-segment spinal fusion model. Blank scaffolds or BB-1-loaded scaffolds were implanted into each animal and distributed in a blinded way. Imageological

and histological examinations as well as bone histomorphometry were performed after euthanization at 6 months post-operation. BB-1 led to a higher spinal fusion rate (5/6) compared to the negative control (1/6). Mechanically, BB-1 stimulated bone formation and vessel formation. Furthermore, we found that BB-1 increased the density of H-type vessels in the newly formed bone tissues for the first time. Moreover, 500 µg BB-1 triggered no local inflammation response in each spine segment and no systematic toxicity in liver and kidney. These results suggest that BB-1 promotes spinal fusion in rhesus monkeys by coupling of angiogenesis and osteogenesis and that local usage of 500 µg BB-1 should be effective and safe, facilitating translation of BB-1 from bench to bedside.

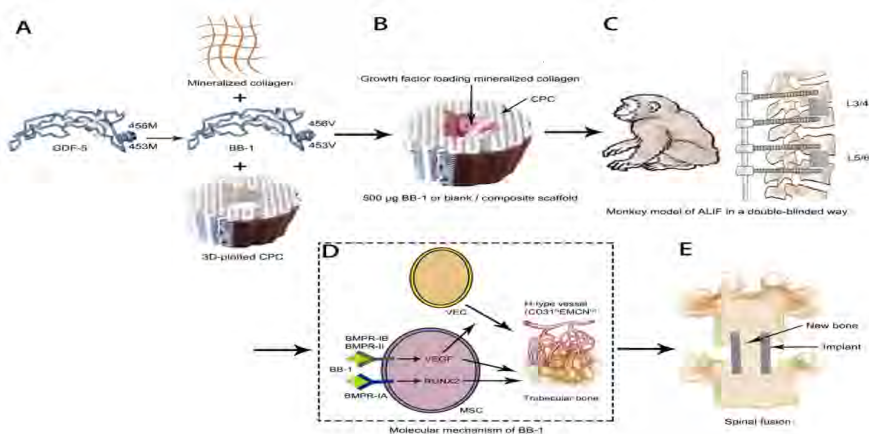


Figure 1: A schematic diagram to illustrate the fabrication of BB-1 loading on composite scaffolds and the possible mechanism by which BB-1 promotes spinal fusion in rhesus monkeys. (GDF-5: growth differentiation factor-5, BB-1: GDF-5M453V/M456V, CPC: calcium phosphate cement, ALIF: anterior lumbar interbody fusion, MSC: mesenchymal stem cell, VEC: vascular endothelial cell, BMP: bone morphogenetic protein, BMPR-IA: BMP receptor-IA, BMPR-IB: BMP receptor-IB, BMPR-II: BMP receptor-II, RUNX2: runt-related transcription factor 2, VEGF, vascular endothelial growth factor).

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monkey number	segment	growth factor	spinal fusion	BV/TV (%)	Tb.N (/mm)	Tb.Th (mm)	Tb.Sp (mm)
03063	L3/4	BB-1	Yes	79.3	2.492	0.366	0.435
	L5/6	Con	No	30.5	1.750	0.265	0.512
060048	L3/4	Con	No	55.4	2.505	0.376	0.395
	L5/6	BB-1	Yes	85.7	3.178	0.421	0.288
051207	L3/4	BB-1	No	60.2	2.030	0.323	0.497
	L5/6	Con	No	25.7	1.556	0.305	0.533
07619	L3/4	Con	Yes	70.6	2.876	0.407	0.315
	L5/6	BB-1	Yes	89.3	3.361	0.412	0.328
063636	L3/4	BB-1	Yes	71.9	2.257	0.337	0.368
	L5/6	Con	No	31.1	1.968	0.285	0.456
100150	L3/4	BB-1	Yes	83.6	2.865	0.369	0.273
	L5/6	Con	No	42.2	1.850	0.294	0.427

Table 1. Histomorphometric parameters of bone formation and spinal fusion in six rhesus monkeys. BV/TV: trabecular bone volume per tissue volume, Tb. N: trabecular number, Tb. Th: trabecular thickness, Tb. Sp: trabecular separation.

Biography

Liangping Li has undergone rigorous scientific research training with good scientific thinking and comprehensive experimental techniques in three stages: master's, doctoral and post-doctoral. He has devoted himself to oxidative stress-induced epigenetic changes on the regulatory mechanism of MSCs osteogenic differentiation for many years. He has been sent to University Hospital Carl Gustav Carus at Technische Universität Dresden in Germany for scientific research exchange and learning bone tissue engineering technology for one year by Chinese government. He has made some achievements in the osteogenic differentiation and bone regeneration of MSCs. In the past 5 years, he has published 16 papers in international journals, including Antioxidants & Redox Signaling, Oxidative Medicine and Cellular Longevity, Scientific Report and Smart Materials in Medicine and other high-level international journals.

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The role of gut virome in fecal microbiota transplantation

Tao Zuo

Sun Yat-sen University, China

The gastrointestinal (GI) tract of humans harbors the most abundant viruses (including eukaryotic and prokaryotic viruses) in the human body, collectively known as 'the gut virome'. Accumulating evidence points to the significance of the gut virome, as an essential component of the gut microbiome, in human health and disease. Human gut virome is highly heterogeneous across population geography, ethnicity, diet, and lifestyle with variable functional consequences on the human host yet many unknowns. It is important to understand the development trajectory of human gut virome as well as the

intricate trans-kingdom cross-talks between gut viruses, bacteria and the mammalian host underlying host health and various diseases. Increasing pre-clinical and clinical evidence on gut virome rectification-based therapies, fecal microbiota transplantation (FMT) and fecal virome transplantation (FVT), in disease therapeutics, will shed light on novel avenues for microbiome-driven disease therapies. Future efforts should be devoted to unraveling the mechanisms of actions for the gut viruses/phages in human pathophysiology and to development of precision phage-prompted therapies.

Biography

Tao Zuo is a professor at Sun Yat-Sen University (SYSU) and the Sixth affiliated Hospital of SYSU. His research interests are centered on gut microbiome in health and disease, with special interest in microbiome 'dark matters' (virome/phageome and mycobiome) to explore their roles, interactions and mechanisms of actions in disease pathogenesis as well as therapeutics. He was jointly trained at Ocean University of China and Harvard University. He won the "Research Scheme Fellowship" at The Chinese University of Hong Kong, and the "Early career investigator" award twice from AGA (2017, 2018). He has a number of high-profile publications at the journals Gut, Gastroenterology, Cell Host & Microbe, Nature Communications, Nature Reviews Gastroenterology & Hepatology, Lancet Gastroenterology & Hepatology, and Microbiome, in the field of gut microbiota and GI diseases. He leads the Microbiome research Lab at SYSU Research Institute of Gastroenterology (Guangdong Institute of Gastroenterology), where he is also appointed as Associate Director.

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Utilization of point-of-care ultrasound to detect splenic micro abscesses in pediatric melioidosis

**Teeranai Sakulchit¹, Louise Ngu², Yek Kee Chor²
 and Gene Y Ong³**

¹Prince of Songkla University, Thailand

²Sarawak General Hospital, Malaysia

³KK Women's and Children's Hospital, Singapore

Melioidosis is an infectious disease most commonly found in places with tropical climates. Definitive diagnosis can be confirmed by culture or pathological results of blood or infected organ. However, imaging study is helpful in providing early provisional diagnosis and guiding therapy. Point-of-care ultrasound can be currently performed bedside

by non-radiological staff such as emergency physicians or intensivists. We present the case of a pediatric patient who got diagnosed with melioidosis after detection of multiple splenic and hepatic abscesses by point-of-care ultrasound, leading to early diagnosis and appropriate empirical antibiotic selection, resulting in good treatment outcome.

Biography

Teeranai Sakulchit is an Assistant Professor and was born on September 10th, 1983 in Phuket province, Thailand. He received Medical Degree from Prince of Songkla University, Thailand in 2007. He completed residency training in Emergency Medicine from Songklanagarind Hospital, Prince of Songkla University in 2011. He completed his research fellowship training in Pediatric Emergency Medicine from British Columbia Children's Hospital, University of British Columbia, Canada in 2017; and clinical fellowship training in Paediatric Emergency Medicine from KK Women's and Children's Hospital, Singapore in 2020. He is currently the clinical instructor and attending pediatric emergency physician at the Department of Emergency Medicine, Faculty of Medicine, Prince of Songkla University, Thailand

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An alternative method for treating dumping syndrome using hemoclips

Arda Yavuz, K. Akan, C. Ulasoglu, Y. Çolak and I. Tuncer
Istanbul Medeniyet University, Turkey

Surgeries for obesity can lead to complications. Dumping syndrome is one such complication caused by the quick passage of hyperosmolar chyme from the stomach to the duodenum. Mild cases can be cured with dietary modification and medical treatment. However, refractory cases may need invasive treatment options, such as transoral outlet reduction or surgery. We

successfully treated a 48-year-old female with dumping syndrome, using a combination of argon plasma coagulation and hemoclips to narrow the pyloric lumen. We suggest that this new technique could be a cheap and easily accessible alternative to surgery, especially in countries where the specialised devices needed to treat such cases are unavailable.

Biography

Arda Yavuz was born in Samsun, Turkey, in 1990. Currently, he works as a gastroenterology fellow at İstanbul Medeniyet University. In 2021, he got UEG National Scholar Award for Turkey. His main interest is in advanced endoscopy and IBD.

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Protective effect of Calcium Fructoborate against carbon tetrachloride–Induced toxicity in rats

**Nurhayat Atasoy, Hatice Aysal and
 Ahmet Ufuk Kömüroğlu**
Van Yüzüncü Yıl University, Turkey

Background and Aims: Carbon tetrachloride (CCl₄) is a xenobiotic that can cause cellular damage with free radical production. Calcium fructoborate (CFB) is a boron-based nutritional supplement with antioxidant properties. Calcium fructoborate used in our study is marketed by Future Ceutical Corporation as Fruitex-B, which has a chemical structure similar to the natural form of boron found in edible plants.

Method: In this study, it was aimed to determine the antioxidant activity, DNA damage and histopathological effects of CFB on the liver and kidney tissues of rats in the toxicity induced by CCl₄. During 14 days of treatment, 42 wistar albino rats were divided 7 in each group, control group, olive oil (0.25 ml twice a week), CFB (1 mg /day), CFB-CCl₄ (1 mg/day-twice a week 0 5 ml), ZY-CFB (0.25 ml/twice a week-1 mg / 2 times day twice) and CCl₄ (0.5 ml twice a week). Serum AST, ALT, HDL, LDH, urea, creatinine, triglyceride, total protein, and albumin levels; liver and kidney tissues antioxidant defense system enzymes CAT, GR, GPx, SOD activity, GSH, MDA and 8-OHdG levels were evaluated by determining. In addition, liver and kidney tissues were examined with only hispatological tests.


Results: As a result of the findings, it shows that

CCl₄ disrupts antioxidant defense mechanisms by disrupting some enzyme systems in the kidney and liver, CFB (FruiteX-B), a boron-based nutritional supplement, strengthens antioxidant defense mechanisms against this deteriorating system, can be effective in strengthening other biochemical metabolic profiles and against oxidation and it has a protective effect on DNA damage. Thus, it was concluded that CFB has antioxidant property against CCl₄-induced liver and kidney toxicity.

Conclusion: As a result of the findings, CFB, a boron-based nutritional supplement, shows that CCl₄ disrupts antioxidant defense mechanisms by disrupting some enzyme systems in the kidney and liver, CFB strengthens antioxidant defense mechanisms against this deteriorated system, and may be effective in strengthening other biochemical metabolic profiles and showed that it has a protective effect on DNA damage against oxidation. As a result, it was concluded that boron compounds formed by the complexation of boric acid with free sugars, glycolipids and glycoproteins buffer reactive oxygen species by developing organic peroxyborates, and thus, CFB, a sugar borate, has antioxidant properties against toxicity caused by CCl₄-induced reactive oxygen species in the liver and kidney.

Biography

Nurhayat Atasoy is a faculty member in the Department of Chemistry Bachelor of Science in the Van Yüzüncü Yıl University. Her most recent research is in Protective effect of Calcium Fructoborate against carbon tetrachloride–Induced toxicity in rats.



Influence of Pre-operative patient education on post-operative opioid consumption: A systematic review and meta-analysis

Jawaher F Alsharef^{1,2}, Abdullah A Ghaddaf^{1,2},
 Abeer Alhindi^{1,2}, Dena Bahathiq^{1,2}, Shahad Khaldi^{1,2},
 Haneen Alowaydhi^{1,2} and Mohammed S Alshehri^{1,2,3}

¹King Saud bin Abdulaziz University for Health Sciences, Saudi Arabia

²King Abdullah International Medical Research Center, Saudi Arabia

³King Abdulaziz Medical City, Saudi Arabia

Background: Opioid prescription is an indispensable part of multimodal pain management protocols following surgical interventions. Implementing educational interventions would help in reducing post-operative opioid use. The aim of this systematic review was to determine the role of peri-operative opioid-specific patient education in reducing opioid consumption for individuals undergoing surgical procedures.

Methods: We performed a systematic literature search in Medline, Embase, and CENTRAL. We included randomized controlled trials (RCTs) that compared the peri-operative opioid-specific patient education to the standard of care for adult individuals undergoing surgical interventions. We sought to evaluate the following outcomes: opioid consumption, the number of refill requests, patients with opioid leftovers, and patients taking opioids after hospital discharge. The standardized mean difference (SMD) was

used to represent continuous outcomes while risk ratio (RR) was used to represent dichotomous outcomes.

Results: A total of 11 RCTs that enrolled 2,090 participants deemed eligible. The opioid-specific patient education showed a significant reduction in post-operative opioid consumption (SMD = -0.19, 95% CI -0.32 to -0.05). No significant difference was found between the opioid-specific patient education and the standard of care in terms of the number of refill requests (RR=0.82, 95% CI 0.50 to 1.34), patients with opioid leftovers (RR=0.92, 95% CI 0.78 to 1.08, and patients taking opioids after hospital discharge.

Conclusion: This meta-analysis demonstrated that opioid-specific patient education significantly reduced the opioid consumption, but did not reduce the number of opioid refill requests, opioid leftovers, and opioid use after hospital discharge.

Biography

Jawaher F. Alsharef is currently a senior medical student at King Saud bin Abdulaziz University for Health Sciences, Jeddah, Saudi Arabia. She is a first generation in her family as a medical student with a first-degree honor GPA. She has participated and published over than 6 medical research. She has won four local prizes in different research conferences.



Challenging case of Whipple's disease: The contribution of radiology

João Garrido Santos¹, Patrícia Costa²,
António Galzerano³, Celso Matos³ and João Lourenço³

¹Portuguese Institute of Oncology, Portugal

²Hospital Pedro Hispano, Portugal

³Fundação Champalimaud, Portugal

Whipple's disease is a rare chronic infectious disease, caused by *Tropheryma whipplei*. The disease can be challenging to diagnose due to the variable clinical manifestations and the nonspecific laboratory and imaging findings. We report the case of a 75-year-old man, complaining of weight loss and arthralgias with an insidious onset. A thoracic, abdominal and pelvic CT was performed, demonstrating features suggestive

of Whipple's disease. Although not specific, the imaging findings of fatty attenuation mesenteric and retroperitoneal enlarged lymph nodes are a common finding in Whipple's disease (Fig 1). Esophagogastroduodenoscopy with duodenal biopsy (Fig. 2) confirmed the diagnosis through PCR analysis. Response to treatment is generally good, like in the case that we present, and it should be monitored by clinical examination.

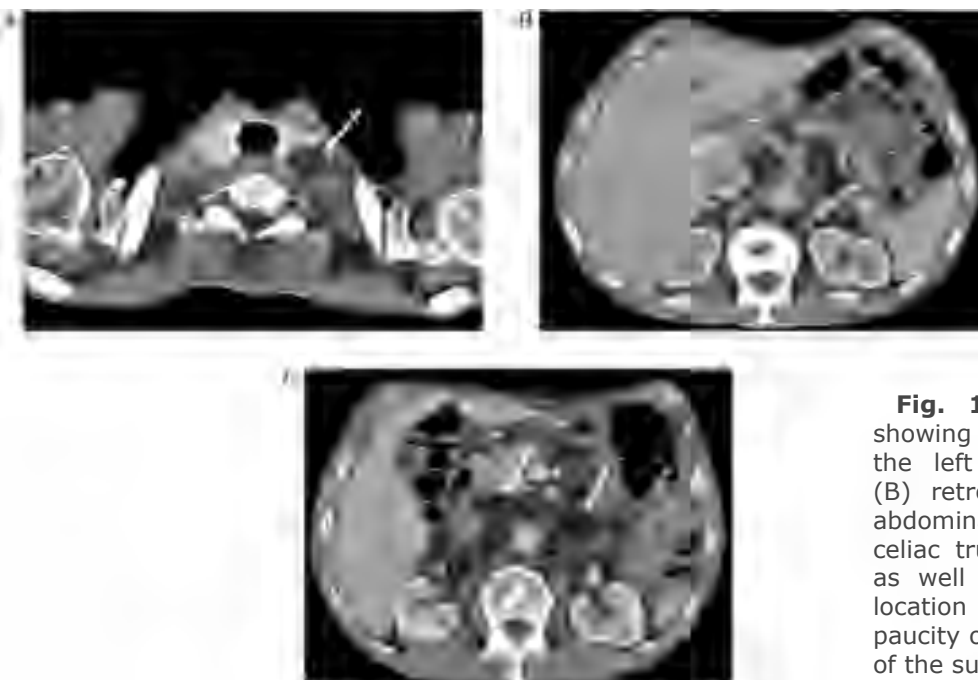


Fig. 1: Axial contrast-enhanced CT showing fat density masses in (A) the left supraclavicular fossa (arrow), (B) retrocrural space (arrow) and (C) abdominal location in the region of the celiac trunk and root of the mesentery as well as retroperitoneal in periaortic location (arrows). It is also evident the paucity of body fat by the small thickness of the subcutaneous space.

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Fig. 2: Macroscopic appearance of the duodenum at diagnostic esophagogastroduodenoscopy with clumsy and dilated villi, whitened villus tips interpreted as probable lymphatics dilatation and hyperaemia, raising suspicion of WD.

Biography

João Garrido Santos was born in Porto, Portugal on 17th December of 1990. He completed his Master degree in Medicine by Faculdade Medicina da Universidade do Porto Portugal. His Medical Training: Internship in Centro Hospitalar do Port in 2015. He is a Residency in Radiology in an Oncology Center, IPO Porto. From 2017-present he is 5th year resident.

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Shaping successful cancer immunotherapy outcomes in oesophageal adenocarcinoma; the role of the tumour microenvironment and combination cancer treatments

Joanne Lysaght

St. James's Hospital and Trinity College, Ireland

Patient selection and refinement of immune checkpoint inhibitor use in cancer patients will lead to better responses and the ability to treat more patients. To do this we must first understand what is influencing that patient's ability to mount an effective anti-tumour immune response and how that response can be enhanced. Immune checkpoint inhibitors have been approved for use in Oesophageal adenocarcinoma (OAC) in advanced disease, but trials are now focusing on the neoadjuvant and adjuvant space.

In this study we assessed the effect of well-known characteristics of the oesophageal tumour microenvironment, including hypoxia, nutrient deprivation and acidosis on the expression of inhibitory immune checkpoints (IC) by both OAC tumour cells and T cells. We assessed the impact of clinically relevant chemotherapy regimens (CROSS and FLOT) and radiotherapy (fractionated and bolus dosing) on OAC cell immunogenicity and tumourigenicity as well as the impact of these treatments on T cell phenotype and function. To do this we used treatment resistant and sensitive

OAC cell lines, peripheral blood T cells and tumour tissue from OAC patients and profiled these cells by flow cytometry. Understanding the effect of the tumour microenvironment on IC expression is essential for the rational design of clinical trials testing novel immunotherapeutic strategies for OAC patients.

We have found significant alterations the expression of ICs by both tumour cells and T cells under the stress conditions of the tumour microenvironment and post chemo radiation treatment, which could represent novel survival pathways for tumour cells within the harsh tumour microenvironment. Combination treatments with immune stimulatory chemo radiation also significantly impacted T cells in terms of IC expression and function.

This data suggests that ICIs in combination with chemotherapy and/or radiotherapy regimens may be a promising approach to enhance anti-tumour responses in OAC patients, boosting response rates and overcoming the immunosuppressive tumour microenvironment.

Biography

Joanne Lysaght completed her PhD in the Department of Biochemistry and Immunology in Trinity College Dublin, in the area of tumour immunology. She is currently an Associate Professor in Trinity College Dublin's School of Medicine, where she continues her research in cancer immunology and immunotherapy. The majority of research in Dr. Lysaght's Cancer Immunology and Immunotherapy Group is focused on upper gastrointestinal cancer, particularly oesophageal cancer but also includes gastric and pancreatic cancer. Currently, a major research focus of her group is investigating the impact of the tumour microenvironment, chemotherapy and radiotherapy on anti-tumour immunity and response to immune checkpoint inhibitors, in order to improve responses rates to immunotherapy and identify novel therapeutic options.

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Stent management of leaks after bariatric surgery: A systematic review and meta-analysis

**Andreu Martínez Hernández¹, Homero Beltrán Herrera¹
 and Vicente Martínez García²**

¹University General Hospital of Castellon, Spain

²Jaume I University, Spain

Background: Despite the low rates of complications of bariatric surgery, gastrointestinal leaks are major adverse events that increase post-operative morbidity and mortality. Endoscopic treatment using self-expanding stents has been used in the therapeutic management of these complications with preliminary good results. The aim of our study was to examine the safety and efficacy of the use of stents for the treatment of leakage after bariatric surgery. **Methods:** We performed a systematic review and meta-analysis of self-expanding stents placement for the management of gastrointestinal leaks after obesity surgery. Overall proportion of successful leak closure, stent migration and reoperation were analysed as primary outcomes. Secondary outcomes were patients' clinical characteristics, duration and type of stent, other stent complications, and mortality.

Results: A meta-analysis of studies reporting stents (between 2005 and

2020) was performed, including 488 patients. The overall proportion of successful leak closure was 85.89 % (95% CI, 82.52- 89.25%), median interval between stent placement and its removal of 44 days. Stent migration was noted in 18.65 % (95% CI, 14.32-22.98%) and the overall proportion of re-operation was in 13.54 % (95% CI, 9.94-17.14%). The agreement between reviewers for the collected data gave a Cohen's κ value of 1.0. No deaths were caused directly by complications with the stent placement. **Conclusion:** Self-expanding stents can be used for the management of gastrointestinal leaks after bariatric surgery with a high rate of effectiveness and a low mortality rates. Nevertheless, reintervention and stent migration represents a real problem with rates as high as 13.54% and 18.65 %, respectively. Therefore, more studies (probably, endoscopic combined methods) are still needed to establish a definitive basis for leak management after bariatric surgery and reduce migration rates.

Biography

Andreu Martínez Hernández et al have his expertise in evaluation and passion in improving the health and wellbeing. He open and contextual systematic review based on responsive constructivists creates new pathways for improving healthcare. He reported the largest review of patients treated with stents for leak closure after bariatric surgery, focused on the most commonly used endoscopic therapy for leak closure after bariatric surgery, SEMS. Then he presented an important resource for the management of GI leaks after bariatric surgery with a high rate of effectiveness and a low mortality rates. This approach is responsive to all stakeholders and has a different way of focusing bariatric surgery complications.

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Clinical considerations for DPD deficiency testing

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¹University Hospital of Saint Etienne, France

²Cancer Research Center of Marseille (CRCM), France

Fluoropyrimidine drugs (5-FluoroUracil or 5-FU and its oral prodrug capecitabine) are still a mainstay in the treatment of numerous solid tumors. The deficiency of dihydropyrimidine dehydrogenase (DPD) makes patients prone to 10%-40% of severe toxicities and 0.2%-0.8% of fatal toxicities with fluoropyrimidine drug administration. Since 2019, DPD deficiency testing is mandatory in France before starting cancer treatment using the determination of plasma uracil (U). The European Medicine Agency has taken a position by issuing a similar recommendation. But there are major interferences for U quantification that should to be taken into account by clinicians.

First, blood sample for DPD testing should be withdrawn before the introduction of fluoropyrimidine based-chemotherapy, because both U and 5-FU exhibit a competitive interaction through DPD pathway, resulting in approximatively +400% increase in U concentrations when sample is withdrawn

during 5-FU infusion or close to the intake of capecitabine.

As uracil concentrations rapidly increased when stored at room temperature, blood samples should be immediately sent to the laboratory. Storage at RT longer than 1 to 1.5h, however, lead to spuriously increased uracil concentrations.

Measuring U concentration before dialysis session in End Stage Renal Disease patients was also associated with an unacceptable rate of false positives.

Last but not least, since spontaneous tumor lysis syndrome (TLS) is characterized by tumor necrosis and the release of intracellular electrolytes, nucleic acids and their degradation products into the circulation, DPD phenotyping using U concentration in advanced cancer patients may be associated with a significative increase.

Risk of such false positivity on DPD status may lead to inaccurately adapted dosing strategy.

Biography

Manon Launay is a senior clinical pharmacologist, PhD, Pharm D, in hospital laboratory with more than 5 years' experience. She is working on therapeutic drug monitoring, with a special focus in antibiotics since 2019. She is also involved in several clinical studies, including 2 ongoing studies as principal investigator (one of them as a thesis director), with experience of publishing and reviewing journal articles.

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Creatine transporter deficiency impairs stress adaptation and brain energetics homeostasis

Hong-Ru Chen¹, Yu-Yo Sun¹, Chia-Yi Kuan¹, Ton DeGrauw², Xiaohui Zhang-Brotzge², Yuancheng Li², Irena S. Kuan², Yury M. Morozov³, Pasko Rakic³, Siming Wang⁴, Hui Mao⁴, Helen Heju Zhang⁵, Elizabeth M. Fugate⁶ and Diana M. Lindquist⁶

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²Emory University, USA

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⁴Georgia State University, USA

⁵Gene Edit Bio Lab, USA

⁶Cincinnati Children's Hospital Medical Center, USA

The Creatine transporter (CrT) maintains brain Creatine (Cr) levels, but the effects of its deficiency on energetics adaptation under stress remain unclear. There are also no effective treatments for CrT deficiency, the second most common cause of X-linked intellectual disabilities. Herein, we examined the consequences of CrT deficiency in brain energetics and stress-adaptation responses plus the effects of intranasal Cr supplementation. We found that CrT-deficient (CrT^{-/y}) mice harbored dendritic spine and synaptic dysgenesis. Nurtured newborn CrT^{-/y} mice maintained baseline brain ATP levels, with a trend toward signaling imbalance between the p-AMPK/autophagy and mTOR pathways. Starvation elevated the signaling imbalance

and reduced brain ATP levels in P3 CrT^{-/y} mice. Similarly, CrT^{-/y} neurons and P10 CrT^{-/y} mice showed an imbalance between autophagy and mTOR signaling pathways and greater susceptibility to cerebral hypoxia-ischemia and ischemic insults. Notably, intranasal administration of Cr after cerebral ischemia increased the brain Cr/Nacetylaspartate ratio, partially averted the signaling imbalance, and reduced infarct size more potently than intraperitoneal Cr injection. These findings suggest important functions for CrT and Cr in preserving the homeostasis of brain energetics in stress conditions. Moreover, intranasal Cr supplementation may be an effective treatment for congenital CrT deficiency and acute brain injury.

Biography

Hong-Ru Chen is the assistant professor of Department of Neuroscience, University of Virginia School of Medicine, USA. She obtained her PhD degree from the Department of Life Sciences and Institute of Genome Sciences, National Yang-Ming University, Taiwan and did her postdoctoral training in Department of Paediatrics, Emory University School of Medicine, USA. At present, her research primarily focuses on investigating how neurons and monocyte-derived pathological microglia interact to mediate neural physiology and behavior in various neurological conditions and how Creatine transporter deficiency affects the brain energetics in murine models.

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Multiplex immunofluorescence and digital image analysis for the evaluation of paraffin tumor samples in research projects

Edwin Roger Parra
University of Texas, USA

A robust understanding of the tumor immune environment has important implications for cancer diagnosis, prognosis, research, and immunotherapy. Traditionally, immunohistochemistry has been regarded as the standard method for detecting proteins in situ. Still, this technique allows for the evaluation of only one specific cell marker per tissue sample at a time. However, multiplexed image technologies enable the multiparametric analysis of a tissue section through particular antibodies in a panel. It also allows researchers to study the cell subpopulations within a single immunological cell group. It will enable investigators to better understand tumor cells, immune cells, and their interactions.

Once a tumor microenvironment study protocol is defined, histological slides are

digitized to produce high-resolution images. Then image analysis is applied to interrogate the marker's expression simultaneously. Most image analysis software currently available uses a similar machine learning approach in which tissue can be segmented and cells can be individualized. Cellular spatial distribution can also be applied.

Image analysis tools have driven the dramatic evolution experienced by the field of digital pathology over the last several decades and provided the data necessary for translational research and the discovery of new therapeutic targets. The next step in the further growth of digital pathology is the optimization and standardization of the different tasks in cancer research, including image analysis algorithm creation, to increase the amount of data generated and their accuracy quickly.

Biography

Edwin Roger Parra is an Assistant Professor and Director of the Multiplex Immunofluorescence and Image Analysis Laboratory in the Department of Translational Molecular Pathology at The University of Texas MD Anderson Cancer Center. He is a pathologist with a strong background in surgical pathology and research. His main interest is immune profiling and elucidating the mechanisms involved in the pathogenesis and progression of cancer, particularly lung cancers, by applying various staining techniques and imaging platforms that include multiplex immunofluorescence and RNAscope, and high-plex imaging platforms such as CO-Detection by indEXing and multiplexed ion beam imaging. He is particularly interested in the characterization of the immune response in immunotherapy in longitudinal cancer studies and has discovered and characterized new biomarkers to use in future treatment approaches. He has more than 15 years of research experience as teaching technicians, graduate students, and doctoral and postdoctoral fellows.

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Astaxanthin prevents diet-induced NASH progression by shaping intrahepatic immunity

Ming Yang¹, Eric T. Kimchi^{1,2}, Kevin F. Staveley-O'Carroll^{1,2} and Guangfu Li^{1,2}

¹University of Missouri, USA

²Harry S. Truman Memorial VA Hospital, USA

Dietary change leads to a precipitous increase in non-alcoholic fatty liver disease (NAFLD) from simple steatosis to the advanced form of non-alcoholic steatohepatitis (NASH), affecting approximately 25% of the global population. Although significant efforts greatly advance progress in clarifying the pathogenesis of NAFLD and identifying therapeutic targets, no therapeutic agent has been approved. Astaxanthin (ASTN), a natural antioxidant product, exerts an anti-inflammation and anti-fibrotic effect in mice induced with carbon tetrachloride and bile duct ligation; thus, we proposed to further investigate the potential effect of ASTN on a diet-induced mouse NASH and liver fibrosis, as well as the underlying cellular and molecular mechanisms. By treating the pre-development of NASH in mice induced with a high-fat diet (HFD), we have demonstrated that oral administration ASTN

preventively ameliorated NASH development and liver fibrosis by modulating the hepatic immune response, liver inflammation, and oxidative stress. Specifically, ASTN treatment led to the reduction in liver infiltration of monocyte-derived macrophages, hepatic stellate cell (HSC) activation, oxidative stress response, and hepatocyte death, accompanied by the decreased hepatic gene expression of proinflammatory cytokines such as TNF- α , TGF- β 1, and IL-1 β . In vitro studies also demonstrated that ASTN significantly inhibited the expression of proinflammatory cytokines and chemokine CCL2 in macrophages in response to lipopolysaccharide (LPS) stimulation. In summary, in vivo and in vitro studies suggest that ASTN functions as a promising therapeutic agent to suppress NASH and liver fibrosis via modulating intrahepatic immunity.

Biography

Ming Yang is a M.S., Ph.D., and Postdoctoral Fellow in the Department of Surgery at University of Missouri. His research interests is center on exploring the underlying cellular and molecular targets for liver metabolic disorders such as non-alcoholic fatty liver disease (NAFLD) and their associated liver cancer initiation and progression.

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Multi-modality imaging of splenic masses: A rare case of inflammatory Pseudotumor- like Follicular Dendritic cell tumor and approach to differential diagnosis

**Luyao Shen¹, Philip Bulterys¹, Lindsey Negrete¹ and
 Andrew Nguyen²**

¹Stanford University, USA

²Lake Erie College of Osteopathic Medicine, USA

We will introduce the lecture with a rare case of an inflammatory pseudotumor-like follicular dendritic cell tumor of the spleen in a 44-year-old woman who presented with nonspecific abdominal pain (image below). We will discuss multi-modality imaging evaluation of this splenic mass, which included CT, MRI, and PET/CT. The differential diagnosis of a splenic mass on imaging includes benign masses such as hemangioma, hamartoma, lymphangioma,

abscess, sclerosing angiomatoid nodular transformation (SANT) and simple cyst. Often it is difficult to differentiate benign masses from malignant tumors such as angiosarcoma and metastasis. When there are multiple splenic masses, the differential diagnosis includes sarcoidosis, lymphoma, and metastases. The purpose of the lecture is to showcase different pathology of splenic masses on imaging and discuss approach to develop a differential diagnosis.

Biography

Luyao Shen is a graduated from University of Cincinnati College of Medicine (Doctor of Medicine), she was trained at University of California Los Angeles Medical Center in diagnostic radiology (residency) and in abdominal imaging and cross-sectional interventions (fellowship). She started her academic career at the Stanford University College of Medicine in 2018 after finishing fellowship. She is currently a clinical assistant professor in body imaging (department of Radiology) and the co-medical director of point of care ultrasound. One of her expertise is ultrasound and ultrasound-guided procedures. Genitourinary and gynecologic imaging are her areas of clinical interest and research. Besides being an excellent clinician, She is also an active educator, a member of multiple national radiology societies, and serves on multiple national committees.

ORAL PRESENTATIONS

DAY 2



Virtual Event

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Evaluation of the diagnostic performance and the utility of *Helicobacter pylori* stool antigen lateral immunochromatography assay

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¹Cairo University, Egypt

²Sadat City University, Egypt

Background: *Helicobacter pylori* causes the most common human gastric infection. *H. pylori* Stool Antigen Lateral Flow Immunochromatography assay (HpSA-LFIA) is considered one of the most cost-effective and rapid non-invasive assays (active tests). Evaluating HpSA-LFIA is of crucial for ensuring accuracy and utility assurance. This study aimed to evaluate the polyclonal antibody-based HpSA-LFIA in comparison to a monoclonal antibody-based ELISA kit.

Methodology: Stool samples were collected from 200 gastric patients for HpSA-LFIA and semiquantitative HpSA-ELISA tests. A statistical analysis of the diagnostic performance was performed using MedCalc software. Chi-square tests were performed to determine the effects of gender and age.

Results and conclusion: The results showed that HpSA-LFIA achieved remarkable sensitivity (93.75%) and NPV (98.00%). However, it had poor specificity, PPV, and accuracy of 59.76%, 31.25%, and 65.31%, respectively. LR+ and LR-were 2.33% & 0.1%, respectively. Gender didn't affect the diagnostic performance of HpSA-LFIA. Age groups had irrelevant sensitivity; however, specificity was significantly higher in patients aged >45 years. We can conclude that HpSA-LFIA was not accurate enough to be the sole test for diagnosis and suggest developing other confirmatory tests in case of positive conditions.

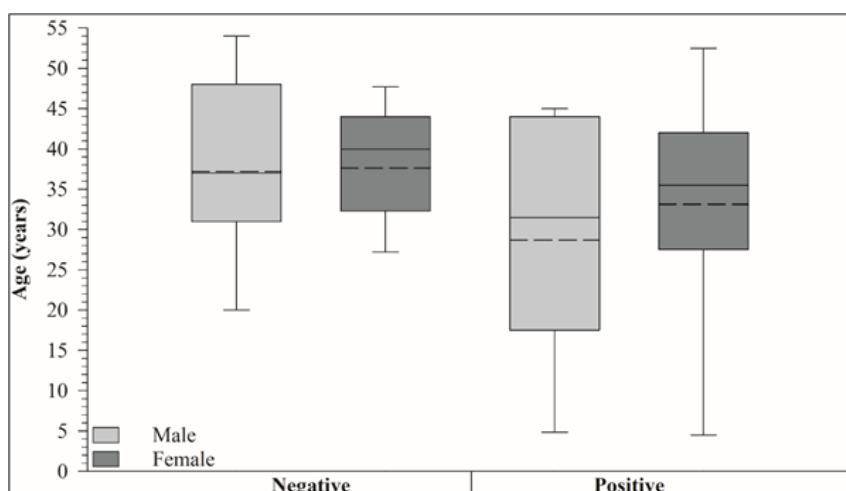


Figure 3: Boxplots of age distributions of males and females tested positive or negative by lateral flow immunoassay tests. Dashed lines indicate mean while solid lines indicate median. Four individuals were removed as they were borderline (3 males; 1 female).

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	All			Male			Female		
	0 - 19 years	20 - 45 years	> 45 years	0 - 19 years	20 - 45 years	> 45 years	0 - 19 years	20 - 45 years	> 45 years
N (%¹)	13 (6.63)	136 (69.39)	47 (23.98)	6 (3.06)	49 (25.00)	22 (11.22)	7 (3.57)	87 (44.39)	25 (12.76)
Sensitivity, % (95% CI)	83.33 (35.88– 99.58)	95.00 (75.13– 99.87)	100.0 (54.07– 100.0)	75.00 (19.41– 99.37)	100.0 (71.51– 100.0)	100.0 (29.24– 100.0)	100.0 (15.81– 100.0)	95.00 (51.75– 99.72)	95.00 (29.24– 100)
Specificity, % (95% CI)	28.57 (3.67– 70.96)	57.76 (48.24– 66.87)	70.73 (54.46– 83.87)	0.00 (0.00– 84.19)	47.37 (30.98– 64.18)	57.89 (33.50– 79.75)	40.00 (5.270– 85.34)	62.82 (51.13– 73.50)	81.82 (59.72– 94.81)
PPV, % (95% CI)	50.00 (35.67– 64.33)	27.94 (23.46– 32.92)	33.33 (23.7– 44.59)	60.00 (46.00– 72.54)	35.48 (28.92– 42.65)	27.27 (18.12– 38.85)	40.00 (24.58– 57.69)	21.62 (16.01– 28.53)	42.86 (23.61– 64.54)
NPV, % (95% CI)	66.67 (19.07– 94.44)	98.53 (90.79– 99.78)	100.0	0.00	100.0	100.0	100.0	98.00 (88.45– 99.68)	100.0
Accuracy, % (95% CI)	53.85 (25.13– 80.78)	63.24 (54.55– 71.33)	74.47 (59.65– 86.06)	50.00 (11.81– 88.19)	59.18 (44.21– 73.00)	63.64 (40.66– 82.80)	57.14 (18.41– 90.10)	65.52 (54.56– 75.39)	84.00 (63.92– 95.46)
Disease prevalence, % (95% CI)	46.15 (19.22– 74.87)	14.71 (9.22– 21.79)	12.77 (4.83– 25.74)	66.67 (22.28– 95.67)	22.45 (11.77– 36.62)	13.64 (2.91– 34.91)	28.57 (3.67– 70.96)	10.34 (4.84– 18.73)	12.00 (2.55– 31.22)
LR+ (95% CI)	1.17 (0.65– 2.10)	2.25 (1.78– 2.85)	3.42 (2.12– 5.50)	0.75 (0.43– 1.32)	1.90 (1.41– 2.57)	2.38 (1.4–4.02)	1.67 (0.81– 3.41)	2.39 (1.65– 3.46)	5.50 (2.27– 13.35)
LR- (95% CI)	0.58 (0.07– 4.95)	0.09 (0.01– 0.59)	0.00	--	0.00	0.00	0.00	0.18 (0.03– 1.13)	0.00
Total positive of the reference method, n (%²)	6 (46.15)	20 (14.71)	6 (12.77)	4 (66.67)	11 (22.45)	3 (13.64)	2 (28.57)	9 (10.34)	3 (12.00)
Total positive, n (%²)	10 (76.92)	68 (50.00)	18 (38.30)	5 (83.33)	31 (63.27)	11 (50.00)	5 (71.43)	37 (42.53)	7 (28.00)
False negative, n (%²)	1 (7.69)	1 (0.74)	0 (0.00)	1 (16.67)	0 (0.00)	0 (0.00)	0 (0.00)	1 (1.15)	0 (0.00)
False positive, n (%²)	5 (38.46)	49 (36.03)	12 (25.53)	2 (33.33)	20 (40.82)	8 (36.36)	3 (42.86)	29 (33.33)	4 (16.00)

¹ Calculated as % of 196 individuals. ² Calculated as % of column total (N). 95% CI, 95% confidence intervals; PPV, positive predictive value; NPV, negative predictive value; LR+, likelihood ratio for positive test result. LR-, likelihood ratio for negative test result. Borderline results were excluded.

Table 3: The diagnostic performance of LFIA in comparison to ELISA showing the statistical parameters in three age groups among all patients and separate gender.

Biography

Shaymaa Abdelmalek Mohamed Abdelhafez is an Assistant lecturer of Microbiology and Immunology in Microbiology Department at Cairo University. She completed her Bachelor degree of Veterinary Sciences in, 2007 and completed her Master degree of Veterinary Medical Sciences, Microbiology (Bacteriology, Immunology and Mycology), in 2011. She got Best Master Thesis Award 2011/2012 from Cairo University.

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Possible role of nuclear factor erythroid 2-related factor 2 in the development of human colon precancerous lesions

Michele Barone and Lorenzo Polimeno

University of Bari Aldo Moro, Italy

Background: Increased levels of oxidative stress and cell inflammation contribute to colorectal cancer (CRCs) onset and development. Nuclear factor-erythroid 2-related factor 2 (Nrf2) and its controlled growth factor erv1-like (Gfer) gene regulate redox-sensitive and anti-inflammatory mechanisms, respectively, i.e. two important aspects that can contribute to promote cancer development.

Aim: We evaluated Nrf2 and Gfer RNA expression and Nrf2 protein expression in colon mucosa in order to establish their possible involvement in the early stage of colon carcinogenesis.

Methods: A total of 40 subjects were enrolled after histological evaluation of their colon biopsies. They included 20 subjects with a sporadic colorectal adenoma (SpCA group) and 20 without precancerous lesions (controls). Biopsy samples were processed for gene expression analysis and protein expression, using Real-time PCR and immunofluorescence confocal microscopy, respectively.

Results: Gene expression analysis revealed a statistically significant reduction of Nrf2 ($p=0.007$) and Gfer ($p=0.003$) mRNA expression in SpCA tissues compared to normal mucosa obtained from controls. Furthermore, immunofluorescence analysis confirmed a relevant reduction of Nrf2-related signal in SpCA tissue compared to normal tissue from controls.

Conclusions: The present preliminary data support the hypothesis that the reduction of anti-oxidative and anti-inflammatory defenses could contribute to the carcinogenetic process. In this contest, Nrf2 and Gfer could represent new possible biological markers to include in the evaluation of colonic adenomatous lesions in order to implement preventive strategies. Future studies including colonic adenomatous lesions at different evolutionary stages are necessary to confirm the potential use of Nrf2 as marker/risk factor for CRC development.

Biography

Michele Barone graduated in experimental physics from the University of Bari (Italy) in 1974. Following experimental work at CERN, as a Physics Fellow in the group of Carlo Rubbia, he held teaching and research positions in Switzerland, Italy (University of Perugia and INFN National Laboratory of Frascati), and in Greece (Institute of Nuclear and Particle Physics at the National Scientific Research Center Demokritos and University of Athens). His interest in experimental work led to managerial positions in international companies manufacturing systems for medical and scientific research. He has been member of the NESTOR Collaboration and, even if retired a few years ago, he is an active member of the CMS Collaboration. During his career he authored about a hundred and fifty publications and was involved in the organization of several international congresses, for which he was the Editor of the related proceedings with Elsevier, Plenum, and World Scientific. He has been the Industrial Liaison and Technology Transfer Officer for Greece at CERN and recently appointed by the CERN Alumni Network as Advisor Liaison with industry and Contact Person with the Hellenic Society for the Study of the High Energy Physics.

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Viral hepatitis B and pregnancy: Current approaches to treatment and prevention

Maria Belopolskaya

Saint-Petersburg, Russia

Hepatitis B remains a major health problem worldwide, especially in the Asian Pacific region. In endemic countries, more than 50% of patients with chronic hepatitis B were infected as children. In most cases, they received the virus from mothers with chronic hepatitis B. The appearance of a highly effective vaccine and the introduction of vaccination of newborns in the first hours of life into national vaccination schedules has significantly reduced the risk of vertical transmission of hepatitis B. The World Health Organization's (WHO) Global Health Sector Strategy on Viral Hepatitis 2016–2021 set targets for eradicating viral hepatitis

as a major global public health threat by 2030. This goal cannot be achieved without reducing the risk of mother-to-child transmission of the hepatitis B virus. Nonetheless, vertical transmission is still the most common cause of newborn infection. The most commonly, mother-to-child transmission of the virus occurs in women with a high viral load as well as with a high HBsAg level. The administration of nucleoside analogs in the third trimester of pregnancy for mothers with a high viral load along with the introduction of a vaccine and immunoglobulin to a newborn reduces the risk of vertical transmission in this group.

Biography

Maria Belopolskaya done her Internship from 1995-1996 at the Botkin Clinical Infectious Diseases Hospital, St-Petersburg, Russia. From 1999-2003 she did her PhD thesis on "*Course of pregnancy, childbirth and newborns conditions in women with chronic viral hepatitis C and HIV infection*". Her subject areas are "Infectious diseases" and "Obstetrics and gynecology", from RUDN University, Moscow. From 1998 – 2022 she is working as an infectious diseases doctor at the Botkin Clinical Infectious Diseases Hospital St-Petersburg, Russia with total work experience 26 years treating 3000 – 4000 patients per year.

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The comparative characteristics of chloroplast genome from *Clerodendranthus spicatus*, a medicinal plant for preventing and treating kidney diseases from Lamiaceae family

Qing Du

Qinghai Minzu university, China

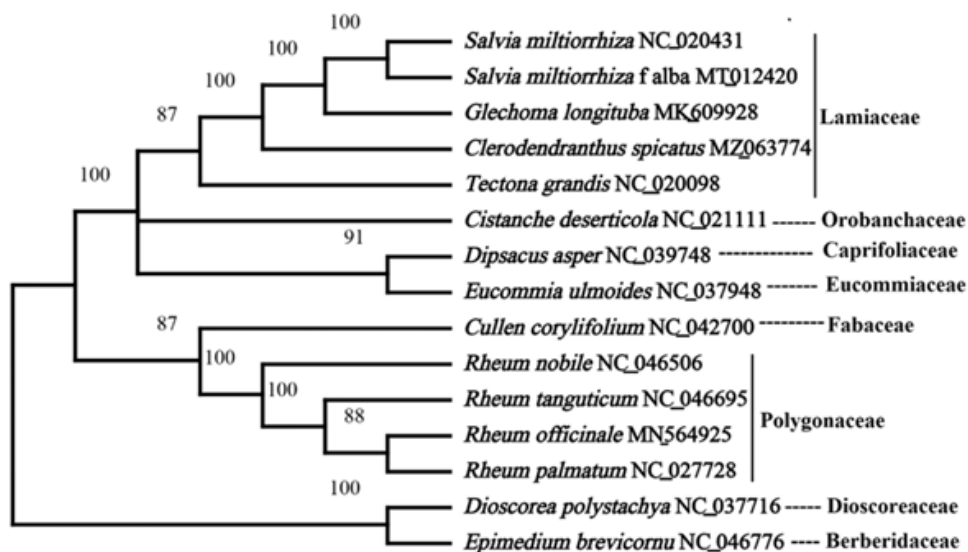
Background: *Clerodendranthus spicatus* (Thunb.) C. Y. Wu ex H. W. Li is one of the most important medicines for the treatment of nephrology in the southeast regions of China. To understand the taxonomic classification of *Clerodendranthus* species and identify species discrimination markers, we sequenced and characterized its chloroplast genome in the current study.

Methods and Results: Total genomic DNA were isolated from dried leaves of *C. spicatus* and sequenced using an Illumina sequencing platform. The data were assembled and annotated by the NOVOPlasty software and CpGAVAS2 web service. The complete chloroplast genome of *C. spicatus* was 152,155 bp, including a large single-copy region of 83,098 bp, a small single-copy region of 17,665 bp, and a pair of inverted repeat regions of 25,696 bp. The Isoleucine codons are the most abundant,

accounting for 4.17% of all codons. The codons of AUG, UUA, and AGA demonstrated a high degree of usage bias. Twenty-eight simple sequence repeats, thirty-six tandem repeats, and forty interspersed repeats were identified. The distribution of the specific *rps19*, *ycf1*, *rpl2*, *trnH*, *psbA* genes were analyzed. Analysis of the genetic distance of the intergenic spacer regions shows that *ndhG-ndhI*, *accD-psaI*, *rps15-ycf1*, *rpl20-clpP*, *ccsA-ndhD* regions have high K2p values. Phylogenetic analysis showed that *C. spicatu* is closely related to two Lamiaceae species, *Tectona grandis*, and *Glechoma longituba*. Conclusions In this study, we sequenced and characterized the chloroplast genome of *C. spicatus*. Phylogenomic analysis has identified species closely related to *C. spicatus*, which represent potential candidates for the development of drugs improving renal functions.

Table 2 Genes contents of the cp genome of *C. spicatus*

Category for genes	Group of genes	Name of genes
rRNA	rRNA genes	<i>rrn16S</i> (×2), <i>rrn23S</i> (×2), <i>rrn5S</i> (×2), <i>rrn4.5S</i> (×2)
tRNA	tRNA genes	36 unique trna genes (6 contains 1 intron)
Self-replication	Small subunit of ribosome	<i>rps11</i> , <i>rps12</i> (×2), <i>rps14</i> , <i>rps15</i> , <i>rps16</i> , <i>rps18</i> , <i>rps19</i> , <i>rps2</i> , <i>rps3</i> , <i>rps4</i> , <i>rps7</i> (×2), <i>rps8</i>
	Large subunit of ribosome	<i>rpl14</i> , <i>rpl16</i> , <i>rpl2</i> (×2), <i>rpl20</i> , <i>rpl22</i> , <i>rpl23</i> (×2), <i>rpl32</i> , <i>rpl33</i> , <i>rpl36</i>
	DNA dependent RNA polymerase	<i>rpoA</i> , <i>rpoB</i> , <i>rpoC1</i> , <i>rpoC2</i>
Photosynthesis	Subunits of NADH-dehydrogenase	<i>ndhA</i> , <i>ndhB</i> (×2), <i>ndhC</i> , <i>ndhD</i> , <i>ndhE</i> , <i>ndhF</i> , <i>ndhG</i> , <i>ndhH</i> , <i>ndhI</i> , <i>ndhJ</i> , <i>ndhK</i>
	Subunits of photosystem I	<i>psaA</i> , <i>psaB</i> , <i>psaC</i> , <i>psaI</i> , <i>psaJ</i>
	Subunits of photosystem II	<i>psbA</i> , <i>psbB</i> , <i>psbC</i> , <i>psbD</i> , <i>psbE</i> , <i>psbF</i> , <i>psbI</i> , <i>psbJ</i> , <i>psbK</i> , <i>psbL</i> , <i>psbM</i> , <i>psbN</i> , <i>psbT</i> , <i>psbZ</i> , <i>ycf3</i>
	Subunits of cytochrome b/f complex	<i>petA</i> , <i>petB</i> , <i>petD</i> , <i>petG</i> , <i>petL</i> , <i>petN</i>
	Subunits of ATP synthase	<i>atpA</i> , <i>atpB</i> , <i>atpE</i> , <i>atpF</i> , <i>atpH</i> , <i>atpI</i>
	Large subunit of rubisco	<i>rbcL</i>
	Maturase	<i>matK</i>
Other genes	Protease	<i>clpP</i>
	Envelope membrane protein	<i>cemA</i>
	Subunit of Acetyl-CoA-carboxylase	<i>accD</i>
	c-type cytochrome synthesis gene	<i>ccsA</i>
	Genes of unknown functions	<i>ycf1</i> , <i>ycf15</i> (×2), <i>ycf2</i> (×2), <i>ycf4</i>

**Fig. The phylogenetic tree of 15 species.**

The tree was constructed with the sequences of 21 CDs shared in all 15 species by using the maximum likelihood method. Bootstrap supports were calculated from 1000 replicates.

Biography

Du Qing is a doctor, pharmacist, pharmaceutical engineer, quality auditor. From Year 2016-present, she engaged in the teaching and scientific research of traditional Chinese medicine in Qinghai Minzu university. In Year 2015-2016, she is graduated from the Institute of Medicinal Plants of Peking Union Medical College, Chinese Academy of Medical Sciences and acquired the doctor of medicine. During the Year 2006-2012, she has been engaged in the research and development registration of new drug, functional foods, and medical devices. From 2015 to 2016, she experienced the postdoctoral research on plant seed size at the institute of genetics and development biology, Chinese Academy of Sciences. In additions, she works as the reviewers of the diverse journals. She participated in more than 10 projects, published more than 30 papers in the Chinese and foreign magazines with experts.

3rd Edition of GLOBAL Congress on **Advances in Gastroenterology and Hepatology**



Endoscopic retrograde appendicitis therapy in the management of Chronic Fecalith appendicitis in a patient with ulcerative colitis. The first human case report

Muhammad Zulqarnain¹ and LYU. WEN²

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Aims: To evaluate the diagnostic and treatment value of Endoscopic Retrograde Appendicitis Therapy (ERAT) for chronic fecalith appendicitis complicated with active ulcerative colitis disease. The purpose of this procedure was to preserving the appendix and its function. According to the previous research on ERAT, it has been proved to be effective and safe in managing acute appendicitis and chronic appendicitis. In patients with ulcerative colitis, once they develop appendicitis. It's uncertain whether appendectomy is suitable for such patients. Until so far, relevant research is limited. Many studies have shown that surgery cannot bring benefit for a patient with ulcerative colitis, due to the fact that surgery can cause higher risks of complications such as fistula, infection etc.

Methods: This procedure was performed on a patient who suffered Ulcerative colitis complicated with chronic fecalith appendicitis which was treated by endoscopic retrograde appendicitis therapy (ERAT) at Gastroenterology

Department of Hangzhou First People Hospital in China in December, 2021.

Result: In this case, the patient had sudden and persistent right lower abdominal pain for 6 days. Abdominal enhanced CT scan and ultrasonography both showed obviously dilated appendix considered chronic fecalith appendicitis in a patient with ulcerative colitis. Which had an indication for the ERAT procedure. In this case, the ERAT procedure was performed to manage chronic fecalith appendicitis. The patient was discharged after abdominal pain was relieved and inflammatory indexes were normal.

Conclusion: We consider that ERAT procedure is effective and safe in patients with ulcerative colitis combined with chronic fecalith appendicitis. Because of ERAT procedure, such cases can avoid surgery and its related complications. Further research are needed to be carried out to prove efficacy and safety of ERAT in patient with UC.

Biography

Muhammad Zulqarnain is working in the department of Gastroenterology and Hepatology affiliated with Hangzhou First People's Hospital at Zhejiang Chinese Medical University, China. His research is Endoscopic retrograde appendicitis therapy. The first human case report.

3rd Edition of GLOBAL Congress on **Advances in Gastroenterology and Hepatology**



Spinal cord stimulation & Intrathecal therapy with Ziconotide: A solution for painful diabetic neuropathy?

Georgios K. Matis

University of Cologne, Germany

Spinal cord stimulation is one of the many available neuromodulation options to treat patients with chronic pain. Ziconotide is a synthetic, water-soluble cone snail venom-derived peptide. It is a nonopioid analgesic that selectively binds to N-type voltage-sensitive calcium channels on primary nociceptive afferent nerves in the dorsal horn of the spinal cord. This mechanism releases analgesic neurotransmitters into the synaptic gap and subsequently blocks pain signal transmission. Ziconotide does not easily cross

the blood-brain barrier, instead revealing its highly potent antinociceptive effect only after intrathecal administration. Because it has a narrow therapeutic window, careful dose titration, and a lag time to allow for onset (and offset) of analgesia and adverse effects are required. The presentation will focus on a recently published consensus proposal and publications and highlight the potential of this drug and of spinal cord stimulation as well as the areas where additional experience is needed.

Biography

Georgios K. Matis is a senior consultant for neurosurgery. He leads the chronic pain / spasticity sector of the Department of Stereotactic & Functional Neurosurgery in the University Hospital of Cologne. He has been trained in Greece (General University Hospital of Alexandroupolis, G. Papanikolaou General Hospital of Thessaloniki & 417 Army Equity Fund Hospital of Athens), USA (Department of Neurosurgery, Weill Cornell Medical College, New York, NY), Switzerland (Department of Neuroradiology, University Hospital of Zurich, Zurich) and Germany (Department of Stereotactic & Functional Neurosurgery, University Hospital Cologne, Cologne).

He is a member of two medical associations (Thessaloniki, Greece & North Rhine, Germany) and also a member of the German Neuromodulation Society (DGNM) and the International Neuromodulation Society (INS). He serves as reviewer for many international journals and is Editorial Board member for *Neuromodulation: Technology at the Neural Interface* and *Interventional Pain Medicine and Neuromodulation*. He holds the position of Editor-in-Chief of the *Internet Journal of Neurosurgery*. He has published many articles in Greek and international Pubmed-indexed journals and hold many lectures as invited speaker in numerous international congresses and webinars. At the same time, he is Public Education Committee member of the International Neuromodulation Society.

He involved in many international clinical studies and has been active as instructor for many colleagues in Germany and abroad. He is also an active member of the medical advisory board of the German CRPS Support Group and member of several online consultation platforms. He is actively involved in social media trying to raise awareness about spinal cord stimulation and neuromodulation.



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