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INTERNATIONAL CONFERENCE ON GASTROENTEROLOGY

Journal Collaboration

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BOOK OF ABSTRACTS

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20-22 APRIL

BOOK OF
ABSTRACTS

INTERNATIONAL CONFERENCE ON

GASTROENTEROLOGY

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Thank You All...

Welcome Message

Gastroeneterology, and medicine in general might be best characterized by analogy with the so-called perfect storm (Sebastian Junger) . In 1989, a storm formed in the North Atlantic from the convergence of hurricane Grace and massive storm systems moving from the west to yield nearly the most powerful storm physically possible. Medicine in the United States and in all western countries arguably faces the perfect storm—convergence of challenges that include constraints on patient and physician choice imposed by third parties and fiscal pressure of every sort. The lack of any comprehensive organization to the delivery and financing of health care inevitably contributes to pervasive anxiety. In academic centers, these stresses are compounded by special financial strains that derive in part from the nature of their clinical mission but also uncertainty about government commitment to the support of education and training and the unpredictability of research funding. These factors threaten to result in a summative wave that will leave medicine truly at sea.

Although in many respects our subspecialty is thriving with a continued demand for more well-trained gastroenterologists (in the United States), gastroenterologists and gastroenterology, the field, do not in fact have safe haven, and we face additional challenges superimposed on the factors facing medicine in general. In the broadest terms, these are both sociopolitical and technical challenges to the franchise of gastroenterologists as the preeminent providers of digestive disease care. These include generalist, most obviously the family practitioner, and specialist physicians at the interface with gastroenterology including radiologists as well as nonphysician providers. We ignore the potential for nurses and other nonphysician providers to pursue an enlarging role for themselves untethered from physicians at our peril. In the technical dimension, several waves are building that could deliver a heavy blow. For example, virtual colonoscopy has the potential to finesse the need for endoscopic screening for colorectal cancer. Laparoscopic Nissen fundoplication may indeed offer better cost-effective relief for chronic gastroesophageal reflux disease in many individuals than lifelong medical treatment. Interventional endoscopy is stealing larger and larger fields of Surgery, with decreasing cost for Health service but increasing costs for ewuipment and training. Artificial intelligence is trying to help clinician in their business, genetic is playing an increasing role in prevention and in therapy of oncology and and not only. Acute pancreatitis is the first diagnosis for admission for gastrointestinal disease in hospital, but recent research shows a role for pregnancy ias risk factor and breastfeeding for prevention.

Finally, and arguably most importantly, we should seek growth through innovation. Ultimately, I believe our future will be secured by progress made through basic and applied clinical research. A better understanding of disease mechanism and causation will enable the gastroenterologist to bring better treatment for patient needs.

Looking into the future, we can expect to be buffeted by the storms in the evolving landscape of health care, but there is a safe port if we set the right course. This depends on unflinching commitment to the best interests of patient care, vigorous advocacy, and aggressive pursuit of research and innovation in the laboratory and the clinic.

Alberto Maringhini

ARNAS Civico palermo, Italy

Welcome Message

Dear congress visitors, it is an honor to write a few welcome notes. Immune checkpoint molecules are defined as ligand-receptor pairs that exert inhibitory or stimulatory effects on immune responses. Most of the immune checkpoint molecules are expressed on cells of the adaptive immune system, particularly on T cells, and of the innate immune system. In this study, we focus on the alteration of the Immune checkpoint molecules pathways in Celiac Disease (CD). CD is a chronic inflammatory disorder with autoimmune disease features that results from a loss of gluten tolerance. Intestinal damage is caused by CD4+T cells, which recognize deamidated gluten peptides presented in complex with HLA-DQ2.5, HLA-DQ2.2, and/or HLA-DQ8. The role of T regulatory cells in the loss of tolerance to gluten remains poorly understood. The Immune checkpoint molecules may be relevant to the determination of a correlation between markers of the autoimmune response, inflammation, and disease activity.

Isabel Torres

Maria Isabel Torres Lopez

University of Jaen, Spain

Welcome Message

Dear congress visitors, it is an honor and pleasure to write a few welcome notes. The microbiology of neurologic injury is an emerging concept gaining much interest. It influences outcomes for patients with neurotrauma, subarachnoid hemorrhage, ischemic strokes, and hemorrhages. New innovations have been made in the pre-clinical setting that are trickling into clinical practice. The focus of this special symposium is to increase awareness of this growing topic. We present data and insights that will have long reaching impact for years to come.

Brandon Lucke-Wold MD, PhD, MCTS

University of Florida, United States

ABOUT
MAGNUS GROUP

Magnus Group (MG) is initiated to meet a need and to pursue collective goals of the scientific community specifically focusing in the field of Sciences, Engineering and technology to endorse exchanging of the ideas & knowledge which facilitate the collaboration between the scientists, academicians and researchers of same field or interdisciplinary research. Magnus Group is proficient in organizing conferences, meetings, seminars and workshops with the ingenious and peerless speakers throughout the world providing you and your organization with broad range of networking opportunities to globalize your research and create your own identity. Our conferences and workshops can be well titled as 'ocean of knowledge' where you can sail your boat and pick the pearls, leading the way for innovative research and strategies empowering the strength by overwhelming the complications associated with in the respective fields.

Participation from 90 different countries and 1090 different Universities have contributed to the success of our conferences. Our first International Conference was organized on Oncology and Radiology (ICOR) in Dubai, UAE. Our conferences usually run for 2-3 days completely covering Keynote & Oral sessions along with workshops and poster presentations. Our organization runs promptly with dedicated and proficient employees' managing different conferences throughout the world, without compromising service and quality.

ABOUT
GASTRO 2023

Magnus Group welcomes you to join “International Conference on Gastroenterology” Gastro 2023 scheduled during April 20-22, 2023 in Virtual Format. Gastro 2023 exemplifies how gastroenterology professionals can get inspired by industry-leading speaker and claim opportunities for clinical development to energize their passions and fuel advances in the field of dentistry regardless of experience or sector. The main motto is to foster exchange and develop a common vision to advance the science and practice of gastroenterology. The meeting’s innovation isn’t limited which includes classroom speakers, exhibitors and several posters which explain to learn detailed section and the role of gastroenterologists in day to day life. Gastro Conferences 2023 strives to get together all likeminded people and industry peers together from different geographical areas to strengthen those skills that each individual needs to improve by achieving success in their academic environment by putting the learned skills into practice.

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20-22 APRIL

DAY 01

KEYNOTE FORUM

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Co-inhibitory immune checkpoints in celiac disease

Immune checkpoints are regulators of key processes in the immune system. These molecules represent the modulators of the signalling pathway responsible for immunological tolerance, a concept that prevents the destruction of "auto" cells by the immune system. Specifically, immune checkpoint inhibitors are currently the new targets due to their therapeutic potential. We have provided the first evidence of high PD-L1 expression levels in celiac patients on the surface of intestinal epithelial cells and lamina propria cells. Also, we have found that the enzyme IDO is highly expressed in intestinal biopsies from patients with celiac disease, that result in elevated levels of kynurenine in the serum of these patients. The aim of this study was show that signalling by co-inhibitory PD-L1, CD200 and by immunosuppressive IDO was altered in celiac disease patients Therefore we have analysed the CD200/CD200R pathway expression with important clinical and laboratory parameters in celiac disease. Many researches have demonstrated the importance of CD200 in controlling autoimmunity and inflammation, between others diseases associated with increased immune system activity. CD200/CD200R pathway provides immunomodulatory effects to induce immune tolerance and regulate cytokines release. CD200/C200R-signaling pathway has not been fully investigated in celiac disease. We have found abnormalities in the expression of elements of the CD200/CD200R pathway in celiac disease patients in the form of overexpression of the ligand and down-regulation of the receptor when compared to health controls. We demonstrated a significantly higher level of soluble CD200 in the serum of celiac disease patients as compared to healthy controls. CD200s protein expression was positively correlated with PD-L1 and IDO expression. Co-inhibitory immune checkpoints expression may reflect a compensating mechanism among them, when other immunoregulatory pathways such as direct PD-1/PD-L1 and CD200R/CD200 mediated inhibition fails

Audience Take Away Notes

- The immune checkpoint inhibitors are altered in celiac disease and can be new targets due to their therapeutic potential
- Dietary gluten peptides can modulate processes required for cell homeostasis through the splicing of pre-mRNAs encoding these regulatory proteins
- Alterations in the alternative splicing process could lead to the production of deficient proteins that contribute to the development of celiac disease

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Biography

Dr. Torres studied Biology and graduated at the Granada University. She has received PhD with special award in 1994 at the same institution. She has joined at the Jaen University School of Sciences faculty as an assistant professor of cell biology from 1995 to 1999. She obtained the position of a Professor of Cell Biology in 1999. Her lab research in the field of inflammation and tolerance on two areas: (1) In vitro evaluation the immunotoxic ability of the peptidic fragments derived from gluten); and (2) the role of tolerance molecules in inflammatory bowel disease and celiac disease.

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20-22 APRIL

DAY 01

SPEAKERS

INTERNATIONAL CONFERENCE ON

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Lorenzo Ricolfi[1*], Laura Patton, Endocrinologist[2]

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[2]Rehabilitation Department, Istituto San Gregorio, Valdobbiandene (TV), Italy

The chyliferous vessels; From “de lactibus sive de lacteis venis” to the clinics of today

The Chyliferous Vessels; from “De lactibus sive de lacteis venis” to the clinics of today.

In 1622, while vivisecting a dog previously subjected to a poor diet, the famous Italian anatomist, Gaspare Aselli, accidentally noticed the presence of numerous vessels with milky contents in the intestine. He reported his experimental research in "De lactibus sive de lacteis venis" (On lacteals or lacteal veins), where chyliferous vessels were first described. Today we know that chyle is produced in the small intestine to absorb emulsified long-chain fatty acids, albumin, fibrin, chylomicrons (formed by triglycerides, cholesterol esters, proteins and phospholipids) and other components of the diet. It appears as an odourless milky fluid and is transported by the chyliferous vessels.The chyliferous vessels are extremely important for the absorption of specific nutritional elements by directing them to the cisterna chyli without blocking the lymph node structures.

The pathophysiological procession of the chyliferous vessels is extremely varied and has a specific semiotic. The heterogeneity of the clinical excursus of patients with problems affecting this district is extremely wide and is closely linked to the variability of the etiopathogenesis. The symptoms change according to the anatomical structures involved, the location of the obstruction of the chyliferous vessels and the patient's compliance.

If the problem is located near the cisterna chyli, various backflow mechanisms can occur, including the following: pyelolymphatic backflow, ilioinguinal backflow, inguinoscrotal backflow, lower extremity backflow. Alternatively, if located above the cisterna chyli, thoracic backflow, intestinal backflow commonly occur if the base of the mesentery is altered.

In 1963, Marceau Servelle recorded structural alterations in the thoracic duct in great detail in patients with chylous reflux starting proximally and with subsequent distal progression towards pubic, renal and abdominal areas, including the genital and inguinal regions.

Audience Take Away Notes

- Diseases of the chiliferous vessels are often little studied and little known, despite the clinical impact they can have and this aspect makes diagnosis and management of patients difficult
- Unfortunately, there are few gastroenterologists who have experience in this field; often the patient is forced to undergo numerous medical opinions before finding a diagnosis and starting a therapeutic path
- It is essential that no aspect of this disease is underestimated, also in consideration of the possible long-term complications that may arise and that require the patient to be taken care of by a multidisciplinary team

Biography

Dr. Lorenzo Ricolfi studied Medicine at the Genova University (Italy), graduated in 2016, degree thesis on “Current role of microsurgery in Lymphatic Diseases: Experimental Bases, Clinical Case Studies and Long Term Results ". He has a university degree in Lymphology at the University of Montpellier (France, 2019), “Lympological Disease” at the University of Sorbone (France, 2021), “Aesthetic medicine” (Rome, 2021). Master's degree: “Lymphological Clinic, Surgery of Lymphatics and Microsurgery " (Genova, Italy), “Drainages Adapted to Veno- Lymphatics “(Montpellier, France), “Bandages Adapted to Veno-Pathologies Lymphatics” (Montpellier, France), “Rehabilitation of the patient with Lymphedema” (Rome, Italy), “Lymphological Surgical Clinic” (Genova, Italy).

B. Bosch[1], Saliha Moutaharrik[*], A. Maroni[2], K. Hiippala[1], G. Meroni[3], P. Martino[3], L. Palugan[2], H. Santos[4], A. Gazzaniga[2], R. Satokari[1]

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[3]Universita degli Studi di Milan, One Health Unit, Department of Biomedical, Surgical and Dental Sciences, Milan, Italy
[4]University of Helsinki, Faculty of Pharmacy, Drug Research program, Division of Pharmaceutical Chemistry and Technology, Helsinki, Finland

Formulation of odoribacter splanchnicus for oral colon delivery: Manufacturing and in vitro evaluation

Gut microbiome is gaining increasing interest as an innovative field of research mainly because of the growing evidence on implications of its alteration in a variety of diseases, ranging from intestinal to cardiovascular and brain ones. Therefore, identification and replenishment of specific bacterial strains, whose depletion is associated with a certain disease, could provide an interesting therapeutic option. Odoribacter splanchnicus, an anaerobic member of the human intestinal microbiota, has been reported to establish a beneficial interaction with the host, and a decrease in its abundance has been related to a wide range of pathologies, such as Inflammatory Bowel Disease (IBD), non-alcoholic fatty liver and cystic fibrosis. Colonization of mice with *O. splanchnicus* led to an increase in Foxp3+/RORYT+ regulatory T cells, induction of Interleukin-(IL) 10 and production of short-chain fatty acids, all of which resulted in limiting colitis in the mouse model. Given the anti-inflammatory properties of *O. splanchnicus* and its possible therapeutic use for IBD, colon delivery would be highly beneficial and protect the bacteria from the hostile upper gastrointestinal environment. Based on these premises, the aim of the present work was to formulate pure culture of *O. splanchnicus* 57 for colonic release according to a time-dependent delivery strategy. In particular, an inner swellable/erodible hydrophilic polymer layer and an outer enteric coating were applied by powder-layering and spray-coating techniques, respectively. Powder-layering was attempted due to limited working temperatures, amount of water in use and processing time. The bacterial viability was assessed after freeze-drying, tableting, powder-layering and spray-coating manufacturing steps. Furthermore, the anti-inflammatory properties of the bacterial strain were assessed before and after processing. The study pointed out that, while freeze-drying did not affect bacterial viability, tableting and coating processes were more stressful. However, the strain was importantly found to maintain its ability to attenuate LPS induced IL-8 release from HT-29 cell line.

Audience Take Away Notes

- Scientists interested in leveraging the gut microbiota as a therapeutic target or a therapeutic strategy will learn that release of probiotics to the colon may be more advantageous than to the proximal gastrointestinal tract, and an anaerobic bacterial strain can be formulated and processed for oral delivery provided that suitable technologies and operating conditions are set up

Biography

Dr Moutaharrik studied Industrial Chemistry at Universita degli Studi di Milano, Italy. In January 2020, she earned her PhD in Pharmaceutical Sciences from the same institution. She also spent a period of secondment at the University of Lille. After two years of postdoctoral fellowship, she obtained her current position as a research associate. Dr Moutaharrik has authored more than 20 research articles in peer- reviewed international journals and 25 presentations at national and international scientific conferences.

Zhang Jie*, Gan Lu

Department of Oncology, the First Affiliated Hospital of Chongqing Medical University, Chongqing, and People's Republic of China

The role of transforming growth factor-β1 signaling pathway during the process of angiogenesis induced by chronic stress in colorectal cancer

Chronic stress could induce Stress-Related Hormone (SRH), including Norepinephrine (NE). In this study, Chronic Restraint Stress (CRS) was demonstrated to attenuate the efficacy of bevacizumab and promote tumor growth and angiogenesis in a colorectal tumor model. Propranolol blocked this effect and inhibited the elevation of TGF-□1 caused by CRS or NE. Furthermore, we found that NE up-regulated HIF-1α expression, which was reversed by propranolol and Ly2157299 (the inhibitor of TGF-β receptor Type I kinase). Therefore, β-AR/TGF-β1 signaling/HIF-1α/VEGF was a signaling pathway involved in chronic stress-related tumor angiogenesis.

Audience Take Away Notes

- This study indicates that psychosocial stress could weaken the efficacy of anti-angiogenic therapy in colorectal cancer
- Propranolol blocked chronic stress-stimulated tumor growth and angiogenesis
- Norepinephrine induced TGF-β1 and HIF-1α expression leading to VEGF secretion
- It also indicates that psychosocial stress might be a risk factor in cancer patients

Biography

Dr. Zhang studied oncology at the Sichuan University, China begins in 2010 and graduated as MD in 2016. He joined the research group of Prof. Gan Lu at the Department of Oncology, The First Affiliated Hospital of Chongqing Medical University, and Chongqing up to now. He has published more than 10 research articles in SCI journals.

Pojsakorn Danpanichkul[1*], Tharadon Nilsirisuk[2]

[1]Department of Microbiology, Faculty of Medicine Chiang Mai University, Chiang Mai, Thailand
[2]Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand

Disparities in access to healthcare and outcomes for early onset colorectal cancer patients in low-income countries

Early Onset Colorectal Cancer (EOCRC) among individuals under 50 years of age has emerged as a major global health concern, with a rising incidence in low Sociodemographic Index (SDI) countries. This study examines the Global Burden of Disease (GBD) data from 2000 to 2019 to provide insights into the prevalence, Deaths, And Disability-Adjusted Life Years (DALYs) related to EOCRC in low SDI countries. From the screening, the highest mortality found in the World Health Organization Eastern Mediterranean region and low SDI countries. The increasing prevalence of EOCRC in low SDI countries warrants urgent attention, as well as addressing the persistent mortality rates and entrenched sex-regional-socioeconomic disparities. Etiological factors contributing to this increase include genetic predisposition, lifestyle factors, and environmental exposures. The study emphasizes the need to understand the unique challenges faced by low SDI countries, such as inadequate screening programs, limited resources, and a lack of disease awareness. Additionally, disparities in healthcare access and outcomes contribute to higher morbidity and mortality rates in these regions. In conclusion, the growing burden of EOCRC in low SDI countries, as evidenced by GBD data, necessitates further research to better understand the complex interplay of risk factors and the development of targeted prevention and intervention strategies. Improved screening programs increased public awareness, and equitable access to healthcare resources are crucial for addressing the disparities in EOCRC outcomes and reducing the disease burden in low SDI countries.

Audience Take Away Notes

- The presentation will help raise awareness about the rising trend of Early Onset Colorectal Cancer (EOCRC) in low SDI countries. By bringing attention to this issue, international stakeholders, healthcare professionals, and policymakers may be more inclined to prioritize EOCRC research, prevention, and treatment efforts in these regions
- The audience will gain insights into the specific challenges faced by low SDI countries, such as inadequate screening programs, limited resources, and lack of disease awareness. This understanding can help inform the development of targeted interventions and collaborations to address these challenges, ultimately improving healthcare access and outcomes for EOCRC patients in low SDI countries
- The presentation highlights the need for tailored prevention and intervention strategies to address the complex interplay of risk factors contributing to the rising incidence of EOCRC in low SDI countries. By emphasizing the role of improved screening programs, increased public awareness, and equitable access to healthcare resources, the audience will recognize the importance of implementing context-specific approaches to reduce EOCRC burden and address disparities in low SDI countries.

Biography

Pojsakorn Danpanichkul, MD, Lecturer at Immunology Unit, Department of Microbiology, Faculty of Medicine Chiang Mai University; Researcher at Department of Internal Medicine, Chiang Mai University. Dr. Danpanichkul is a physician and researcher with expertise in basic science, meta-analysis, and systematic review. His main research interests lie in infectious disease and gastroenterology, and his current research endeavors focus on the increasing burden of early-onset gastrointestinal cancer and research regarding pertussis.

Xueping Huang[1,2], Yi Zeng[3], Baihe Wu[4], Yushan Chen[5], Xueyan Lin[1,2], Xinhua Ji[6], Xiang Zhou[6], Biao Suo[7], Qiuzhao Chen[7], Zhihui Lin[1,2], Yanling Zeng[1,2], Hong Lin[1,2], Xiaoling Zheng[1,2]

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Antibiotic resistance profile of helicobacter pylori to 14 antibiotics: A multicenter study in Fujian, China

Aim: Efficacy of helicobacter pylori(H.pylori) eradication is related to the local antimicrobial resistance epidemiology. Our aim was to investigate the antibiotic resistance of H.pylori in Fujian, China.

Methods: H. pylori -infected patients in four centers in Fujian were enrolled in the study from Oct 2019 to Jan 2022. The bacteria were isolated, cultured and identified from the biopsy samples of gastric mucosa of patients. Antimicrobial susceptibility test was performed by broth microdilution method for H. pylori strains to seven guideline-recommended antibiotics (amoxicillin (AMX), tetracycline (TET), clarithromycin (CLR), levofloxacin (LVFX), metronidazole (MTZ), rifampicin (RFP) and furazolidone (FZD)) and seven potential choices (amoxicillin and clavulanate potassium(AMC),cefixime(CFM), gentamicin (GEN), doxycycline(DOX), azithromycin(AZM), sparfloxacin (SPFX), tinidazole (TID)).

Results: A total of 205 H. pylori strains were successfully isolated from the biopsy Samples of gastric mucosa. The antibiotic resistance rates of AMX, AMC, CFM, GEN, TET, DOX, AZM, CLR, LVFX, SPFX, MTZ, TID, RFP and FZD were 11.22%, 12.20%, 7.32%, 12.20%, 4.88%, 4.39%, 44.39%, 43.90%, 30.24%, 21.46%, 40.98%, 45.85%, 5.37% and 10.24%, respectively. The rates of pan-sensitivity, single resistance, double resistance, triple resistance and multiple resistances for seven guideline-recommended antibiotics were 32.68%, 30.24%, 13.17% and 7.76%, 14.15%, respectively. The main double resistance patterns were CLR+MTZ (10/205, 5%) and CLR+LVFX (9/205, 4%). The main triple resistance patterns were CLR+MTZ+LVFX (15/205, 7%). Only AMC resistance rate in female group was lower than that in male group (6.67% VS 16.52%, P =0.032). For the other 13 antibiotics there was no difference in resistance rates for gender. There were no significant statistical differences of H. pylori resistance among different ages and diseases (P >0.05).

Conclusion: In Fujian Province, the prevalence of H. pylori resistance to AZM, CLR, LVFX, SPFX, MTZ, and TID was high, while the prevalence to AMX, AMC, GEN, CFM, TET, DOX, RFP and FZD was relatively low. CFM and DOX were the promising new choices for H. pylori eradication.

Audience Take Away Notes

- To our knowledge, this is the first multicenter study in Fujian China to evaluate antibiotic resistance profile of Helicobacter pylori (H. pylori) to 14 antibiotics including seven seven guideline-recommended antibiotics and seven potential choices
- Our study demonstrated that the prevalence of H. pylori resistance to azithromycin, clarithromycin, levofloxacin, sparfloxacin, metronidazole and tinidazole was high, whereas the prevalence of H. pylori resistance to amoxicillin, amoxicillin and clavulanate potassium, gentamicin, cefixime, doxycycline, tetracycline, rifampicin and furazolidone was relatively low in Fujian. Cefixime and doxycycline were the promising new choices for H. pylori eradication
- This research that other faculty could use to expand their research or teaching in helicobater pylori infection
- This research will provide a practical solution to the problem those patients with helicobater pylori infection

Biography

Dr. Huang was a chief physician who graduated from Sun Yat-Sen Univeristy with a master degree in internal medicine of digestive science in 2012. The main focus of my master degree was in the study of digestive tract cancer. Previous work experience at the fifth affiliated hospital of Sun Yat-Sen University. Currently working at Fujian provincial hospital where I received the full support from Fujian Nature Science Fund. This fund project allowed her to conduct research on the immunotherapy for hepatocellular carcinoma. Now she is working as a visiting scholar of University of Missouri in United States. She has published more than 10 research articles.

Zhu Jing

Oncology Department, the First Affiliated Hospital of Chongqing Medical University, Chongqing 400016, China

Clinicopathological characteristics and prognosis analysis of ovarian metastases in colorectal cancer: A single-center experience

Purpose: This study aimed to improve the management of Ovarian Metastases (OM) in Colorectal Cancer (CRC) by evaluating the clinicopathological characteristics, therapeutic strategies, and prognostic factors associated with OM originating from CRC.

Methods: Medical records of patients who were histopathologically diagnosed with OM of CRC origin were reviewed from january 2011 to december 2018 in our medical center. Data related to clinicopathological characteristics, therapeutic strategies, and survival time were recorded and analyzed. Survival and prognosis analyses were carried out to identify variables significantly associated with the outcomes.

Results: Forty-six patients were included in the study with a median follow-up of 14 months. Premenopausal (< 50 years) and colon cancer patients were more likely to develop OM. Synchronous OM was found in 34 patients and elevated carbohydrate antigen 125 value could be seen in 67.4% of patients. Bilateral ovarian involvement (27/46, 58.8%) and combined extra-ovarian metastases (32/46, 69.6%) were common in included patients. Complete cytoreduction surgery (R0 resection) was finally achieved in 19 of included patients and 41 patients received postoperative chemotherapy. However, the overall prognosis remains poor, with a median survival time of only 12 months. In univariate analysis, histological types (P = 0.002), peritoneal metastasis (P < 0.0001), the extent of metastatic lesions (P = 0.0001), and completeness of cytoreduction surgery (P < 0.0001) were found to be closely related to prognosis. Finally, completeness of cytoreduction surgery was considered to be the independent determinant of patients' outcome (HR 0.186, 95% CI 0.047–0.727, P = 0.016) by multivariate analysis.

Conclusions: In multitudinous factors, complete cytoreduction surgery (R0 resection) may provide survival benefits in patients with OM of CRC origin. Thus, it is reasonable to recommend aggressive surgery with curative intent even if extra-ovarian metastases are present.

Audience Take Away Notes

- Complete cytoreduction surgery (R0 resection) may provide survival benefits in patients with OM of CRC origin
- It is reasonable to recommend aggressive surgery with curative intent even if extra-ovarian metastases are present
- Furthermore, postoperative chemotherapy may exert a positive effect on the treatment, but needs to be confirmed by large-scale trials with more participants in the future

Biography

Dr. Zhu Jing studied Oncology at the Chongqing Medical University, Chongqing, China as MS in 2013, and then received her PhD degree in 2004 at the Zhejiang University, Hangzhou, China. Then she was the Doctor-in-charge and Lecturer at Department of Oncology, The first affiliated hospital of Chongqing Medical University, and Chongqing, China. Her Clinical Specialties were: Diagnosis and treatment of gastrointestinal cancer, lung malignant tumor, head and neck malignant tumor, etc. Palliative care and optimal supportive treatment for patients with advanced malignant tumors. She has published more than 20 research articles in SCI (E) journals.

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Investigating healthcare inequalities in pancreatic cancer: Insights from the global burden of disease study in low-SDI nations

Pancreatic cancer represents a significant global health challenge, particularly in regions with low Socio Demographic Indices (SDI). This investigation leverages data from the Global Burden of Disease (GBD) study to analyze the prevalence, mortality, and Disability-Adjusted Life Years (DALYs) pertinent to pancreatic cancer in low-SDI locales. The insidious nature of pancreatic cancer, characterized by non-specific clinical manifestations, frequently results in delayed diagnosis, exacerbating the disparities experienced in these areas. The analysis reveals an escalating incidence of pancreatic cancer in low-SDI countries and delves into potential etiological contributors, such as genetic predispositions, lifestyle factors, and environmental exposures. It accentuates the necessity to comprehend the distinctive challenges confronting low-SDI countries, encompassing inadequate screening infrastructure, restricted resources, and insufficient disease awareness. Furthermore, the study addresses the disparities in healthcare access and outcomes that contribute to elevated morbidity and mortality rates in these regions. The mounting burden of pancreatic cancer in low-SDI countries, as evidenced by GBD data, calls for more extensive research to elucidate the intricate interplay of risk factors and to devise targeted prevention and intervention approaches. The enhancement of screening programs, heightened public awareness, and equitable healthcare resource allocation are vital to mitigating disparities in pancreatic cancer outcomes and alleviating the disease burden in low-SDI countries. This rigorous examination of GBD data underscores the urgency to confront healthcare disparities in pancreatic cancer and refine diagnostic and therapeutic strategies in low-SDI settings.

Audience Take Away Notes

- The presentation will help raise awareness about the increasing trend of pancreatic cancer in low SDI countries. By drawing attention to this issue, international stakeholders, healthcare professionals, and policymakers may be more motivated to prioritize pancreatic cancer research, prevention, and treatment efforts in these regions
- The presentation highlights the need for tailored prevention and intervention strategies to address the complex interplay of risk factors contributing to the rising incidence of pancreatic cancer in low SDI countries. By emphasizing the role of improved screening programs, increased public awareness, and equitable access to healthcare resources, the audience will recognize the importance of implementing context-specific approaches to reduce the pancreatic cancer burden and address disparities in low SDI countries
- The audience will gain insights into the diagnosis of pancreatic cancer, a condition with vague clinical manifestation yet contributed significant mortality to patient especially country with low socioeconomic status

Biography

Pojsakorn Danpanichkul, MD, Lecturer at Immunology Unit, Department of Microbiology, Faculty of Medicine Chiang Mai University; Researcher at Department of Internal Medicine, Chiang Mai University. Dr. Danpanichkul is a physician and researcher with expertise in basic science, meta-analysis, and systematic review. His main research interests lie in infectious disease and gastroenterology, and his current research endeavors focus on the increasing burden of early-onset gastrointestinal cancer and research regarding pertussis.

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A serine peptidase from burkholderia gladioli with hydrolytic activity toward celiac disease- eliciting pro-immunogenic peptides and potency enhancement through modification of its active site pocket

Celiac disease is an autoimmune disease triggered by oral ingestion of gluten found inside wheat, barley, and rye grains. Gluten is a water-insoluble protein group composed of ethanol-soluble prolamins and ethanol-insoluble glutelins. The most common prolamins are the ones in wheat grains called gliadins, which possess high proline and glutamine content. When consumed orally, specific residues of gliadin are resistant to enzymes secreted by digestive tracts, such as 33-mer peptides and 26-mer peptides. Inside the duodenum, these remaining peptides incite immunogenic responses, including the production of autoantibodies and long-term inflammation, eventually causing irreversible damage. The major pathological features of celiac disease are intestinal villous atrophy and crypt hyperplasia. The prevalence of celiac disease in Caucasians is about 1% population. No permanent cure has been found, and patients will continuously suffer without following strict gluten-free diets. Here we found a gram-negative bacterium, *Burkholderia gladioli*, producing a serine peptidase with gliadin-degrading activity, named Bga1903. Heterologous expression of Bga1903 by E. coli can be done in an extracellular secretory manner, and then purified by immobilized metal affinity chromatography. Bga1903 can hydrolyze pro-immunogenic peptides with a preference for glutamine in the P1 position. The cleavage pattern of Bga1903 indicated its ability to diminish the toxicity of immunogenic peptides completely. The crystal structure of Bga1903 was determined by x-ray crystallography, featuring an α/β/α-folded core with a twisted six-stranded parallel β-sheet sandwiched between two layers of α-helices. Adjacent to the active site pocket, a hood-like loop protruded from the core and together formed a negatively charged cleft. The single-substitution mutations at the active site were predicted by FoldX software, based on the calculation of energy change in protein stability. The method is to enhance the peptidase's affinity toward tetrapeptide PQPQ, mimicking the toxic gluten-derived peptides. Wild-type Bga1903 and four mutations were evaluated by enzyme kinetic assays utilizing four chromogenic substrates, Z-HPK-pNA, Z-HPQ-pNA, Z-HPL-pNA, and Z-QPQ-pNA. One of the mutants, S387L showed a 17-fold increase in specificity constant toward Z-QPQ-pNA compared to the wild type, and QPQ motifs were repetitively present inside immunogenic peptides. Mutant S387L also improved the hydrolysis effectiveness toward 33-mer peptides and 26-mer peptides. These results uncover the characteristics of Bga1903 and its potential as an oral therapy enzyme for celiac disease future.

Audience Take Away Notes

- Understand the basic information and the risks of celiac disease
- A potential oral enzyme therapy to ease the symptoms of celiac disease
- Provide the modification methods to enhance the effectiveness of future enzymes to treat celiac disease

Biography

Yu-You Liu participates in Ph.D. Program in Microbial Genomics at National Chung Hsing University and Academia Sinica, Taiwan, as a Ph.D. candidate. He is a member of the research laboratory of Prof. Meng at Graduate Institute of Biotechnology, National Chung Hsing University, Taiwan since 2016. For now, he has published two research articles in SCI (E) journals as the first author.

Xueping Huang[1, 2*], Zhihui Lin[1, 2], MingXia Wang[1, 2], Hong Lin[1, 2], Xunbin Yu[1, 2], Yanling Zeng[1, 2]

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Study on the expression and relationship of CD24, CD47, and PD-L1 in HBV-associated hepatocellular carcinoma

Background and purpose: Hepatocellular Carcinoma (HCC) is one of the most common and invasive malignancies, and Hepatitis B Virus (HBV) infection is the leading risk factor of HCC worldwide. Currently, Immune Checkpoint Inhibitor (ICI) therapy is the new standard treatment for advanced or metastatic HCC, yet many patients still fail to respond. The purpose of this study was to explore the expression and prognosis of CD24, CD47 and PD-L1 in patients with HBV-associated HCC.

Materials and methods: The postoperative specimens and clinical data of patients with HBV-associated HCC who underwent radical surgery in Fujian Provincial Hospital between January 2014 and January 2018, September 2022 and October 2022 were collected in this study, and the end events were defined as death when reaching the follow-up time. Immuohistochemical staining was used to detect the expression of CD24, CD47 and PD-L1 in paraffin-embedded specimens. Real-time qPCR was used to detect the expression of CD24, CD47 and PD-L1 in nine pairs of fresh cancerous tissues and pericarcinomatous tissues. And the relationship between CD24, CD47, PD-L1 and the prognosis and clinicopathological factors of HBV-associated HCC was analyzed.

Result: A total of 67 patients with HBV-associated HCC were included, including 55 males (82.09%) and 12 females (17.91%); the age range was 23 to 74 years. The median OS of the patients was 44 months (95% CI: 38.69-49.31months), and the median PFS of the patients was 32 months (95% CI: 26.19-37.81months). The cumulative 1-year survival rate was 86.57%, the cumulative 2-year survival rate was 80.60%, and the cumulative 5-year survival rate was 29.85%. The rate of 1-year PFS after operation was 71.64%, the rate of 2-years PFS was 61.94%, and the rate of 5-years PFS was 16.42%. Univariate survival analysis showed that high expression of PD-L1 and CD24 was related to poorer OS and PFS in patients with HBV-associated HCC, but there was no significant difference in OS and PFS between low and high CD47 expression. The correlation analysis showed that the expression of PD-L1 was significantly correlated with the neoplasm staging and differentiation of HBV-associated HCC, and the expression of CD24 was significantly correlated with the expression of hepar-1 and tumor staging. The results of correlation analysis also showed that PD-L1 was significantly positively correlated to CD24 and CD47, respectively. Whereas there was no significant correlation between CD24 and CD47. Real-time qPCR results showed the expression of CD24 was significantly higher in cancerous tissues than pericarcinomatous tissues in five patients, the expression of CD47 was significantly higher in cancerous tissues than pericarcinomatous tissues in four patients and the expression of PDL1 was significantly higher in cancerous tissues than pericarcinomatous tissues in three patients.

Conclusion: This study demonstrated that high PD-L1 and CD24 expression can be used as risk factors for poor prognosis in patients with HBV-associated HCC. Additionally, we found that PD-L1 was significantly positively correlated to CD24 and CD47, which provided a basis for clinical double-targeted immunotherapy for HBV-associated HCC.

Audience Take Away Notes

- This study demonstrated that high PD-L1 and CD24 expression can be used as risk factors for poor prognosis in patients with HBV-associated hepatocellular carcinoma. Additionally, we found that PD-L1 was significantly positively correlated to CD24 and CD47
- Our research provided evidence for combined immunotherapy for HBV-associated hepatocellular carcinoma
- This research that other faculty could use to expand their research or teaching in hepatocellular carcinoma
- This research will provide a practical solution to the problem that patients with hepatocellular carcinoma have poor prognosis

Biography

Dr. Huang was a chief physician who graduated from Sun Yat-Sen Univeristy with a master degree in internal medicine of digestive science in 2012. The main focus of my master degree was in the study of digestive tract cancer. Previous work experience at the fifth affiliated hospital of Sun Yat-Sen University. Currently working at Fujian provincial hospital where I received the full support from Fujian Nature Science Fund. This fund project allowed her to conduct research on the immunotherapy for hepatocellular carcinoma. Now she is working as a visiting scholar of University of Missouri in United States. She has published more than 10 research articles.

Honggang Yu[1, 2, 3]

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Application of artificial intelligence in the gastrointestinal endoscopy

This lecture will show the most advanced Artificial Intelligence (AI) researches related to the gastrointestinal endoscopy, and introduced the most proven AI device in the field of digestive endoscopy till now.

Early detection is the key to improve the prognosis of cancer. The quality of endoscopy examination plays a vital role for the detection of early cancers, which is the prerequisite for patients' welfare. To ensure endoscopy quality, guidelines and expert consensus prescribed quality indicators for endoscopy. However, the quality of examination varied greatly due to the recommendations is not well implemented due to insufficient practical quality control tools and strong supervision. Here the first AI system I will introduce to you is ENDOANGEL, it aims at monitoring blind spots in the upper endoscopy, monitoring the withdraw speed, calculate the BBPS score, prompt blind spots, and report the percent of over speed time in the lower endoscopy. Furthermore, the second AI system is the BP-MASTER, the system aims at providing real-time pancreaticobiliary and mediastinum EUS navigation.

Besides quality control, it is also vital to enhance the ability of lesion recognition. Here I will introduce a series of functions aimed at assisting in detecting lesions and diagnosing early cancer in real-time, for both upper and lower endoscopy. The systems were proved to have great performance in detecting lesions, which could improve the performance of endoscopists. Furthermore, explainable systems were constructed to further fulfill the clinical needs.

Electronic endoscopic reports facilitate effective communication and understanding among endoscopists, patients, and second-opinion advisors. Photo-documentation is a prerequisite for generating comprehensive and qualified reports. The manual procedure was usually problematic. Then, I will introduce an endoscopic automatic image reporting system, aiming to generate high quality image report. Automatic report is an important subject in future AI studies, especially in the field of digestive endoscopy.

Audience Take Away Notes

- Information about one of the most proven AI device in the field of digestive endoscopy
- Experience of designing and conducting studies related to the artificial intelligence
- Experience of introducing researches into clinical practice
- Learning about how to use AI in endoscopy and how to make your own practice

Biography

Prof. Yu studied Clinical medicine at the Heinrich-Heine-UniversitätDüsseldorf as MD in 1998. He then joined the research group of Prof. David.D.Schlaepfer at the Scripps Research, USA as post-doc. He is now the chief of The Department of Gastroenterology, Renmin Hospital of Wuhan University, Chairman of Big Data Group of CSDE (Chinese Society of Digestive Endoscopy) and Standing Committee Member of CSDE. He has published more than 100 research articles in SCI (E) journals with more than 2,000 sites. He has been authorized more than 40 Chinese patents related to the AI in endoscopy.

Gilles R G Monif
University of Florida, United States

Redefining gastrointestinal pathogenicity with crohn's diseases

Crohn's disease is an experiment in nature that has identified a new mechanism by which an exogenous organism, Mycobacterium Avium subspecies Paratuberculosis (MAP), can produce disease within the gastrointestinal tract. Once it was evident that disruption of the immune system's Th 1 pro-inflammatory response could ameliorate the symptomology of individuals afflicted with Crohn's disease, solving the enigma of its causation took a back seat to the rush to develop patentable drug therapy. Crohn's disease became the poster-boy for autoimmune diseases despite its inability to induce anything more than a 40% temporary remission and to explain the epidemiological features that characterized Crohn's disease. In 2015, the Hruska Postulate was introduced which has since been shown to be able to address every fact embedded in the natural history of disease as well as offer scientific proof. Crohn's disease is an immune-mediated disease whose trigger mechanism is created by MAP infection of newborn infant in the absence of acquired immunity. Its translation into disease requires repeated and concentrated ingestion of MAP adulterated milk-based food.

The Hruska Postulate explains why Crohn's disease is preventable, why dietary manipulation are one of the rare causes of permanent remissions, and why the permanent sequelae of disease are secondary to physician failure to treat sub -lamina propria infection by the gastrointestinal microbiota.

Audience Take Away Notes

- The events that combine to produce Crohn's disease
- Intergradation of this knowledge into current therapeutics
- How a global pandemic within industrialized nations can be defused
- Introduction into how an infectious disease can be transformed into an immune mediated disease

Biography

Dr. Monif graduated from Boston University School of Medicine. He has been a research associate at the National Institutes of Health, assistant and associated professor of Obstetrics and Gynecology at the University of Florida College of Medicine, professor and assistant dean at Creighton University School of Medicine. Currently, He is President of Infectious Diseases Incorporated. He has published more than 140 peer-reviewed medical articles and wrote and edited the textbook, Infectious Diseases in Obstetrics and Gynecology (in its sixth edition). After 2001, his research concentrated on the pathogenesis, prevention, and therapy of Crohn's Disease.

Bibek Karki[1,2*], MD, Samjhana Belbase, MBBS, Calvin Ghimire[3], MD, Ali Zreik[1], MD, Ghassan Bachuwa[1, 4], MD, MS, FACP, MHSA, AGSF, Sunil Kaushal[5,6], MD

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[6]Clinical Associate Professor, Department of Medicine, Michigan State University, MI

Incidence trend of colorectal cancer among screening age group in the United States: An observational study from SEER Database 2009-2019

Background: Colorectal Cancer (CRC) is a major public health concern in the United States. We conducted an observational study to examine the incidence trend of CRC over the past decade, with a focus on age, sex, race, and median household income.

Methods: We used the Surveillance, Epidemiology, and End Results (SEER) database to identify CRC cases among the general population aged 45-74 years from 2009 to 2019. We calculated the Average Annual Percentage Change (AAPC) in CRC diagnosis using join point regression, stratified by age, sex, race, and median household income based on the 2000 US standard population.

Results: Our study identified 437,125 cases of CRC among the 45–74 years age group from the SEER database using 21 registries. The overall incidence of CRC decreased over the study period, with an AAPC of -1.0 (-1.2 to -0.8, p-value <0.001). The AAPC was higher among men (-1.4 [-1.8 to -1.0], p-value 0.001) than women (-0.2 [-0.4 to -0.1], p-value 0.016). Black individuals had the highest incidence of CRC, followed by Asians/Pacific Islanders and American Indian/Alaska Natives, while white individuals had the lowest incidence. The AAPC for CRC incidence was highest among black individuals (-1.4 [-1.7 to -1.1], p-value <0.001). The cumulative CRC incidence increased among those with a median household income <$35,000 (AAPC 1.6 [0.9 to 2.4], p-value 0.001) and decreased among those with a median household income >$75,000 (AAPC -1.3 [-1.8 to -0.9], p-value <0.001).

Conclusion: Our study reveals a decreasing trend in CRC incidence among 45–74-year-olds in the United States, with higher rates among men, black individuals, and those with lower median household incomes due to lower utilization of screening services. Men are at higher risk for CRC compared to women due to higher rates of lifestyle factors like smoking, alcohol consumption, and lower physical activities in men, and the protective role of estrogen in women. These findings underscore the importance of targeted screening and prevention efforts to reduce the burden of CRC, particularly among vulnerable populations.

Audience Take Away Notes:

- Incidence trend of Colorectal Cancer (CRC) in the United States over the past decade, with a focus on age, sex, race, and median household income
- The differences in CRC incidence rates among different demographic groups, including men, black individuals, and those with lower median household incomes
- The importance of targeted screening and prevention efforts to reduce the burden of CRC, particularly among vulnerable populations

- The audience will be able to use this information to improve their understanding of CRC incidence trends and risk factors. They can also use this information to develop targeted screening and prevention efforts to reduce the burden of CRC among vulnerable populations
- This research provides valuable insights for other faculty members who are interested in studying the incidence and risk factors of CRC. They can use the methods and findings of this study to expand their research or teaching in this area
- The practical solution provided by this research is the importance of targeted screening and prevention efforts to reduce the burden of CRC among vulnerable populations. This can simplify the job of healthcare providers and policymakers by providing a clear direction for their efforts to reduce the incidence and burden of CRC
- The benefits of this research include an improved understanding of CRC incidence trends and risk factors, the development of targeted screening and prevention efforts, and the reduction of the burden of CRC among vulnerable populations. This research can ultimately contribute to better health outcomes for individuals at risk for CRC

Biography

Dr. Karki studied medicine at Nobel Medical College, Nepal, and graduated in 2015. He started to learn about clinical research from scratch at Mayo Clinic, Rochester, MN for 18 months, where he learned research methodologies and presented the abstract to different national and international journals. He is currently doing an internal medicine residency at Hurley Medical Center, Flint, MI, and he obtained the position of cinical assistant professor at Michigan State University. He is also studying Master of Public Health (MPH) online at SUNY Albany while doing his residency. He has published 10 articles in different journals.

Seung-Oe Lim

Department of Medicinal Chemistry and Molecular Pharmacology, Purdue University, West Lafayette, IN, USA

Development and preclinical evaluation of immuno-oncology drugs

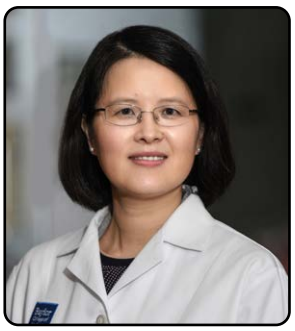
Immunotherapy, a rapidly evolving area in the field of oncology, is a treatment option that relies on and utilizes the body's immune system to combat cancer. Ranging from immune checkpoint blockade therapies to vaccines and T-cell transfer therapies, immunotherapy has demonstrated great clinical promise and potential since its development. However, clinical and pre-clinical studies have shown that immunotherapy is only successful in a minority of patients and highly depends on the tumor microenvironment. Therefore, new immunotherapeutic strategies to improve the therapeutic efficacy of current immunotherapy are urgently needed. To improve immune checkpoint blockade-based therapies, relevant pre-clinical animal models are an essential component in the development and testing of multiple combination approaches and strategies. In the current seminar, I will introduce how we develop immunotherapeutic antibodies and validate their therapeutic efficacy in both in vitro and in vivo.

Audience Take Away Notes

- How to develop a therapeutic antibody and evaluate it in preclinical model
- A new strategy for evaluating a therapeutic efficacy of immunotherapeutic antibody in vivo

Biography

Dr. Seung-Oe Lim is an assistant professor in the Department of Medicinal Chemistry and Molecular Pharmacology at Purdue University. He completed his doctoral study in liver cancer at Seoul National University in South Korea in 2008. As a postdoctoral fellow, he enhanced anti-tumor immunity in breast cancer by developing a new immune checkpoint blockade antibody, anti-PD-L1 antibody, at UT MD Anderson Cancer Center. As an assistant professor at Purdue University, Dr. Lim has developed novel immunotherapies by targeting immune receptors and established preclinical mouse models for evaluating therapeutic efficacy of immunotherapeutic antibodies.



RU Chen, PhD

Department of Medicine, Division of Gastroenterology, Baylor College of Medicine Houston, TX, USA

Molecular pathogenesis of IBD associated colon cancer

The Inflammatory Bowel Diseases (IBD) are chronic inflammatory diseases of the gastrointestinal tract, and are associated with an elevated rate of developing Colitis-Associated Colorectal Cancer (CAC). Although the precise etiology and pathogenesis of CAC are not completely understood, it is now believed that several factors could contribute to the development of CAC, including chronic inflammation, immune dysregulation and gut microbial dysbiosis. Compared to sporadic Colorectal Cancer (CRC), CAC arises in a chronically inflamed mucosa, in which the colon epithelium undergoes repeated cycles of inflammation and tissue repair, resulting in oxidative stress and accumulation of Reactive Oxidative Species (ROS). Excessive ROS causes oxidative stress and damage to DNA, proteins and lipids, leading to tumour initiation. While sporadic CRC typically develops from polyps to early adenoma and progress to invasive carcinoma, CAC usually arises from flat dysplastic mucosa and progresses in a step-wise fashion from negative for dysplasia to low-grade dysplasia to high-grade dysplasia to carcinoma. Genetics and epigenetic analyses of CAC and animal models of chronic GI inflammation have shown that molecular alterations of CAC are distinct from sporadic CRC. This presentation will first review the current understanding of the molecular pathogenesis of CAC, followed by discussion of ongoing studies in our lab in genomic and proteomic characterization of CAC and its precursors to elucidate the pathogenesis and develop diagnostic biomarkers and therapeutic targets. Finally, we will discuss tumor necrosis factor receptor-associated protein 1 (TRAP1), a CAC biomarker, as a potential diagnostic and therapeutic target for CAC.

Audience Take Away Notes

- Update on the molecular pathogenesis of colitis-associated colorectal cancer
- Understand the molecular characteristics that are specific to colitis-associated colorectal cancer
- Understand how chronic inflammation promotes CAC development
- Better understanding of the mechanisms could lead to new insights in developing diagnostic and therapeutic targets for prevention, early detection and treatment of CAC

Biography

Dr. Chen obtained her PhD degree and postdoctoral training at University of Washington, United States. Dr. Chen is currently an associate professor of medicine and member of Dan L. Duncan Cancer Center at Baylor College of Medicine. Her laboratory studies genomic and proteomic alterations associated with tumor progression, and translate the knowledge for development of biomarkers for early detection of cancer. Dr. Chen has published over 60 research articles in SCI journals.

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Characterizing the molecular and physiological changes associated with colorectal cancer in wistar rats

The high mortality rate associated with Colorectal Cancer (CRC) underscores the need for improved diagnostic and therapeutic approaches. To this end, animal models are invaluable tools for enhancing our understanding of the disease, as they can be used to gain insights into disease mechanisms and to test potential treatments. This study aimed to characterize a model of Colorectal Cancer (CRC) chemically-induced in Wistar rats. Twenty-nine male Wistar rats were randomly assigned to two control groups (CTRL1 and 2) and two induced groups (CRC1 and 2) who were administered 1, 2-Dimethylhydrazine (DMH). Animals were monitored weekly for signs of stress and physiological parameters were recorded. At the end of the study, animals were sacrificed, and tissue and blood samples were collected for further analysis. Stool samples were collected for gut microbiota analysis. Unexpectedly, five animals in the induced groups died during the protocol with hemorrhagic enteritis. Abdominal temperature was significantly higher in the CRC2 group compared to the CTRL2 group. The CRC group had lower microhematocrit. Serum concentrations of ghrelin and myostatin were higher in the control groups. The control groups showed no proliferative lesions in the colon, whereas pre-neoplastic lesions were observed in the CRC groups, including one adenoma. Inflammatory infiltrate was observed in the intestine, lung, and liver in all animals; however, inflammation was significantly higher in the induced groups. Comet assay and oxidative stress data showed DMH-induced toxicity in the liver and colon of the induced animals, respectively. The analysis of the gut microbiota revealed that induced rats had elevated levels of Firmicutes, Clostridia, Clostridiales, Peptostreptococcaceae, Blautia, Romboutsia, and Clostridium sensu stricto, compared to the controls. However, the control animals had higher levels of Prevotellaceae, Prevotella, Akkermansia and Lactobacillus. Our findings reveal the potential of this model in elucidating the chemopreventive mechanisms of CRC at its earliest stages.

Acknowledgements: This work is supported by National Funds from FCT - Portuguese Foundation for Science and Technology, under the project UIDB/04033/2020. R.S.-R. thanks FCT/MCTES (Fundacao para a Ciencia e Tecnologia and Ministerio da Ciencia, Tecnologia e Ensino Superior) and ESF (European Social Fund) through NORTE 2020 (Programa Operacional Regiao Norte) for her PhD grant ref. 2022.14518.BD.

Biography

Ana Faustino is Professor at Department of Zootechnics of University of Evora and Researcher at CITAB/Inov4Agro and CHRC. She holds a Master in Veterinary Medicine and a European PhD in Veterinary Sciences. Animal models of cancer, tumoral angiogenesis and imaging are her main areas of interest. She has collaborating in several Financed Research projects. The results of her works were published in more than 250 publications in several formats. She received several prizes of scientific merit, and highlights and press honors. She has experience in supervising graduate and post-graduate students. She participated in several courses, workshops, international and national meetings. She is editorial member of several scientific journals and reviewer of more than 300 manuscripts. She is Guest Editor of several special issues.

Akshay Prasannakumar Bavikatte

Department of General and Colorectal Surgery, West Suffolk NHS Foundation Trust, United Kingdom

Hartmann's procedure: Hard to revise?

Aim: The Hartmann's procedure is commonly regarded as a two-stage procedure. This study aims to evaluate the outcome of the Hartmann's procedure with respect to the rate of reversal and associated morbidity.

Methods: This retrospective study analyzed all patients who underwent either the Hartmann's procedure or Hartmann's reversal at Amrita Institute of Medical Sciences, Kochi, between 2008 and 2014.

Results: A total of 110 patients underwent the Hartmann's procedure during the study period. Rectal and sigmoid malignancies were the most common indications (64.9%), followed by perforated sigmoid diverticulitis (13%). The mean age of patients was 65 years (range 28-94), and 62.5% were males. Elective Hartmann's procedure was performed in 60.5% of patients. In the immediate postoperative period, 11.8% of patients died. All surviving patients were followed up for a median of 550 days. Of the remaining 97 patients, 52.5% underwent reversal after a median period of 5 months. The postoperative morbidity rate was 40%, including anastomotic site stricture, leaks, surgical site infection, and the need for diverting ileostomy. There was no mortality in this group. Among the 46 patients who did not undergo reversal, all had Hartmann's due to malignancy. In 55.2% of these patients, Hartmann's was not reversed due to either patient frailty or unwillingness to undergo surgery. Non-reversal of Hartmann's was more common in patients with stage 3 tumours (92%) and age above 69 years (70%). There was no significant difference in comorbidity between the two groups.

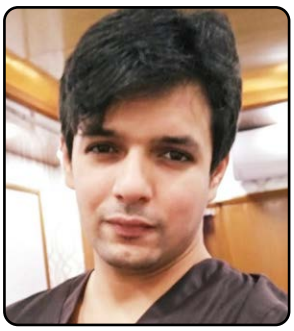
Conclusion: The Hartmann's procedure has approximately a 50% chance of reversal and is associated with significant morbidity. Hartmann's procedure performed for benign pathology and in younger patients is more likely to be reversed compared to malignancy and older patients.

Audience Take Away Notes

- The audience will learn about the outcome of Hartmann's procedure in terms of its reversal rate and associated morbidity
- This will help the audience to discuss the real chance of stoma reversal when consenting patients for Hartmann's procedure
- The audience will learn that Hartmann's procedure is associated with a 50% chance of reversal and significant morbidity. The decision to undergo the procedure should be made after considering the patient's age, co-morbidities, and the underlying pathology

Biography

Dr. Akshay Bavikatte completed his residency in General Surgery followed by an additional three-year specialization in Gastrointestinal Surgery at the renowned Amrita Institute in India in 2016. He then relocated to the United Kingdom due to his profound interest in Colorectal Surgery, where he quickly made a name for himself within his department. Dr. Bavikatte has successfully completed the prestigious Surgical Leadership Course at Harvard Medical School and has achieved the highly coveted Fellowship of the Royal College of Surgeons, widely recognized as one of the most challenging exams in the field. In addition, he has contributed to numerous publications and now runs an exam preparation course for medical students both in the United Kingdom and around the world.



Muhammad Bilal Akbar
Dr. Grays Hospital NHS Grampian, United Kingdom

Which to choose pre incisional or post incisional bupivacaine for pain relief in patients undergoing elective surgery

Background: Pain is the most important concern after surgical intervention that needs to be addressed for better compliance and early mobilization to avoid complications. The need of better analgesic and timings of its administration is the key to success.

Objective: To compare the mean post-operative pain score with pre incisional versus post-operative injection of bupivacaine in patients undergoing elective surgery.

Method: Patients Age between 18-60 years undergoing elective surgery were studied, they were divided into two groups. The cases in group A were given pre incision bupivacaine and group B with postoperative bupivacaine and were assessed at 1 hour after surgery regarding pain on VAS.

Inclusion criteria:

i. Patients of both genders with ages in the range of 18-60 years undergoing elective surgery

ii. Patients who sign written informed consent

Exclusion criteria:

i. Allergy to bupivacaine, Steroid intake

ii. Deranged coagulation profile

iii. ASA Class ≥III

Results: Studied participants were 64 cases equally divided between two groups (32 in each group) There were 19 (59.37%) males in group A vs 18 (56.25%) in group B. The mean age of 47.56±7.51 years in the group A and 49.13±8.03 years in group B.The mean post-operative pain in group A was 3.07±0.67 vs 3.59±0.91 in group B on VAS with p= 0.03. Mean post-operative pain in males was 3.12±0.65 vs 3.47±0.86 and in females it was 3.21±0.66 vs3.53±0.90 in group A and B with p values of 0.21 and 0.23 respectively. Mean Post-operative pain was 3.11±0.66 vs 3.44±0.83 in age group 18-39 years and 3.08±0.68 vs 3.47±0.88 in age group 40 to 60 years in group A and B with p values of 0.25 and 0.20 respectively. There was significant difference in terms of post-operative pain in cases undergoing open surgery with pre- incisional Bupivacaine.

Conclusion: Post-operative pain is significantly better in cases treated with pre- incision bupivacaine as compared to post-operative bupivacaine and this difference was significant in cases undergoing open Surgery.

Biography

Dr. Muhammad Bilal Akbar did his M.D from Semey State Medical University, Kazakhstan in 2012. Completed his Surgical Training in Advanced Laparoscopic Surgical Unit at National Hospital and Medical Centre Lahore. Obtained Fellowship degree from College of Physicians and Surgeons of Pakistan in 2019. Worked at King Edward Medical University and National Hospital Lahore as a Senior Registrar and Assistant Professor of Surgery respectively. Relocated to UK to train in Upper GI and Bariatric Surgery. Currently working in NHS Grampian Scotland. Involved in research, teaching and training as an associate with University of Aberdeen.

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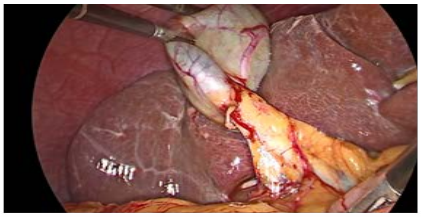
DAY 02

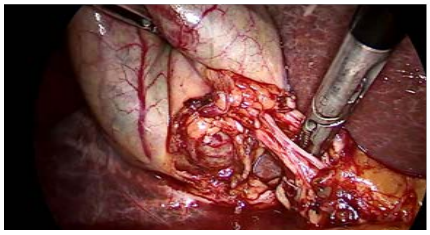
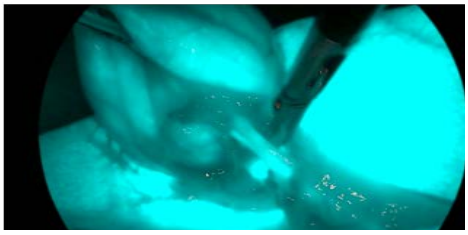
KEYNOTE FORUM

INTERNATIONAL CONFERENCE ON GASTROENTEROLOGY

Use of indocyanine green fluorescence imaging in the extrahepatic biliary tract surgery

Cholelithiasis presents in approximately 20 % of the total population, ranging between 10% and 30 %. It presents one of the most common causes for non-malignant surgical treatment. The cornerstone therapy is laparoscopic cholecystectomy, urgent of elective. Laparoscopic cholecystectomy is nowadays the gold standard surgical treatment method, however bile duct injury occurred to as high as 0.4-3% of all laparoscopic cholecystectomies. The percentage has decreased significantly to 0.26-0.7% because of increased surgical experience and advances in laparoscopic imaging the past decade which have brought to light new achievements and new methods for better intraoperative visualization such as HD and 3D imaging system. However, bile duct injury remains a significant issue and indocyanine green fluorescence imaging, mainly cholangiography but also angiography, can further enhance the safety of laparoscopic cholecystectomy as it allows the earlier recognition of the cystic and common bile duct, even in several times before dissecting the Callot triangle. Fluorescence cholangiography could be an ideal method in order to improve bile tree anatomy identification and enhance prevention of iatrogenic injuries during laparoscopic cholecystectomies and also it could be helpful in young surgeons training because it provides enhanced intraoperative safety, but however this method does not replace CVS. Finally, our ongoing current study results comparing intravenous to direct administration of ICG in the gallbladder will be presented.



Audience Take Away Notes

- ICG fluorescence cholangiography can enhance the safety of laparoscopic cholecystectomy as it allows the earlier recognition of the cystic and common bile duct, even in several times before dissecting the Callot triangle
- The best timing and dosage of ICG administration in order to perform ICG cholangiography and angiography
- ICG fluoresce imaging doesn't replace the critical view of safety

Orestis Ioannidis

4th Department of Surgery, Medical School, Aristotle University of Thessaloniki, General Hospital George Papanikolaou, Thessaloniki, Greece

Biography

Dr. Ioannidis studied medicine in the Aristotle University of Thessaloniki and graduated at 2005. He received his MSC in "Medical Research Methodology" in 2008 from Aristotle University of Thessaloniki and in "Surgery of Liver, Biliary Tree and Pancreas" from the Democritus University of Thrace in 2016. He received his PhD degree in 2014 from the Aristotle University of Thessaloniki for his thesis "The effect of combined administration of omega-3 and omega-6 fatty acids in ulcerative colitis Experimental study in rats." He is a General Surgeon with special interest in laparoscopic surgery and surgical oncology and also in surgical infections, acute care surgery, nutrition and ERAS. He has received fellowships for EAES, ESSO, EPC, ESCP and ACS and has published more than 130 articles with more than 3000 citations and an H-index of 28. He is currently an Assistant Professor of Surgery at the Aristotle University of Thessaloniki.

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SPEAKERS

INTERNATIONAL CONFERENCE ON

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Luca Tonia[1*], Cinti Saverio[2], Castorina Sergio[1]

[1]Department of Medical, Surgical Sciences and Advanced Technologies "GF Ingrassia", University of Catania, Italy
[2]Obesity Center, Department of Experimental and Clinical Medicine, Marche Polytechnic University School of Medicine, Ancona, Italy

Anatomy of human gastric ghrelin cells in normal and obese patients

Ghrelin is a hormone produced in the gastrointestinal tract mainly by gastric gland cells with central and peripheral effects. The endocrine cells that produce it are mainly located in the gastric fundus. Their distribution in obese subjects is controversial. In this study we examined gastric samples from the fundus of stomachs removed by sleeve gastrostomy in 49 obese subjects. In each sample we quantified the presence of ghrelin cells (GPCs) by immunohistochemistry with a specific antibody and verified their relative amount compared to general endocrine population revealed by Chromogranin Immunoreactive Cells (CPCs). The density of a specific endocrine cell in the general endocrine population (expressing chromogranin) has been considered as the more reliable method of analysis. Data were compared with those of 13 lean subjects evaluated by gastroscopy for various diagnostic suspects and resulting negative for any gastric disease. The obese subjects were also divided into three groups: normoglycemic (OB-Normoglic), hyperglycemic (OB-Hypergolic) and diabetic (OB-Diab). In 44 cases (11 controls and 33 obese patients) a gene expression analysis of ghrelin and its functional enzyme ghrelin O-acyl transferase (GOAT) was performed. In 21 cases (4 controls and 17 obese patients), the protein levels of unacylated and acylated-ghrelin were measured by ELISA tests. In samples selected on the basis of gene expression (4 controls and 14 obese patients), the ultrastructure of ghrelin producing cells was also evaluated.

Measuring the GPC density (GPCs/CPCs), we did not observe any difference between obese and lean patients. Comparative statistical analysis between groups did not find significant differences in ghrelin cell density (CTRL: 26.63 +/- 3.59, OB-Normoglic: 36.54 +/- 3.87, OB-Hypergolic: 27.65 +/- 4.08, OB-Diab: 39.1 +/- 4.91) even when the obese group was divided into subgroups and compared with lean controls. Interglandular smooth muscle fibres were increased in obese patients. In line with a positive trend of the desacylated form found by ELISA, ghrelin and GOAT mRNAs in obese patients were significantly increased. When considering the three groups, gene expression was significantly different only for the OB-Hperglyc group ($p = 0.02$). The ghrelin cell ultrastructure, which is characteristic and allows it to be distinguished from other endocrine cells, is maintained even in obese subjects. In the hyperglycemic obese group, with high levels of gene expression of the hormone, the cells, while maintaining the general characteristics, showed clear signs of endocrine hyperactivity. A positive correlation between ghrelin gene expression and glycemic values, body mass index and GOAT was also found. All obese patients with type 2 diabetes recovered from diabetes at follow-up after 5 months with a 16.5% of weight loss. Given the known anti-insulin actiooghrelin, data suggest a possible role for gastric ghrelin in the complex Architecture that takes part in the pathogenesis of type-2 diabetes.

Audience Take Away Notes

Our data are only preliminary results which could open new frontiers in the field of medicine, with references to anatomists and endocrinologists

The results I presented could bring together the work that researchers are carrying out around the world on several topics regarding different aspects obesity, diabetes or dysregulation of secreting cells in the stomach

This research could be used by the audience as a clear starting point for more in-depth research regarding the metabolic improvement obtained in type-2 diabetic patients after sleeve-gastrostomy and could be a good lesson in endocrinology or cellular and molecular molecular biology

Biography

Dr. Tonia Luca studied Pharmaceutical Chemistry and Technology and graduated in 2000. After collaboration with S.I.F.I. S.P.A. Molecular Biology laboratory and a scholarship in the field of Gene Therapy of Neurodegenerative disorders at TIGET, Milan, she carried out her research activity at Department of Experimental and Clinical Pharmacology, University of Catania Sch Med, and she received her PhD degree in 2006. She then was a permanent full-time researcher at Mediterranean Foundation "G.B. Morgagni", Catania, coordinating also the research activity. In 2022 she obtained the position of Researcher of Human Anatomy at University of Catania. She has attended a lot of courses and published several research articles.

Tracy E Hill
MGS Products LLC, United States

The impact emotions and mental health have on enteral or parenteral nutrition: How the Bette can help

A small study was performed to assess the satiation and overall wellbeing of participants receiving Home Parenteral or Enteral Nutrition (HPN) using the Bette. One hundred twelve participants were measured on a survey response using before and after use of the Bette. 54.95% of the participants were on a NG tube, 37.84% of participants were on a PEG tube, 8.1% obtained their nutrition through a J tube and nearly 4% were receiving their nutrition intravenously. All participants receive their nutrition at home. Results indicated an overwhelming positive outcome of the Bette. 99% of participants felt more satiated with HPN using the Bette compared to nearly 65% of participants who felt not at all satiated prior to using the Bette. 91% of participants felt the Bette most often made them feel better emotionally while eating. Each participant received three samples of the Bette that corresponded to a morning meal, lunch meal, evening meal and/or snack meal. One sample (E) was for adults only.

Little research has been conducted on how enteral or parenteral nutrition affects patients' satiation, dry mouth, emotional and mental wellbeing. Yet, there is research that demonstrates patients who have better emotional and mental health in general, improve more readily when hospitalized or recovering from illness when home. The Bette demonstrated that participants who marry taste and smell while simultaneously receiving their parenteral or enteral nutrition increased their emotional response to eating, feel more satiated and have an overall better experience in their nutritional experience. We hypotheses this may decrease their recovery times in both hospital and at home settings.

Biography

Dr. Hill graduated from George Washington University with an undergraduate Bachelor of Arts in Psychology (1985), a Master of Science in Counseling Psychology from West Chester University (2002) and a Ph.D. in Educational Psychology from Temple University (2010). Dr. Hill has worked in the field for the past two decades in a variety of counseling and psychological roles. She is currently the Director at a practice in Bethlehem PA where she oversees six clinicians and two interns and is the CEO at MGS Products LLC. The Bette is patent pending and was developed and named after her mother-in-law (Bette Reynolds) who was on enteral nutrition for five years before her death.

Ashfaq Chandio*, Mehak Chandio, Zainab Shaikh, Zawar Khichi, Najeeb Memon, Aijaz Memon , Katherine Brown

Department of Colorectal Surgery, Luton & Dunstable University Hospital, UK

Does gender matter in colorectal cancer?

AColorectal cancer is one of the most common and lethal cancer worldwide, and it exhibits differences in incidence, pathogenesis, molecular pathways, and outcome depending on the location of the tumour. Colorectal cancer is a disease strongly influenced by gender, mortality rates in males considerably higher than females.

Aim: To determine the gender disparities in the incidence of Colorectal cancer.

Methods: All patients managed with colorectal cancer from January 2015 through December 2019 were retrospectively identified from the referral database created by the colorectal specialist nurses in the colorectal service.

Inclusion: All patients diagnosed with colorectal cancer.

Exclusion: Tumour in the Appendix, Anal canal, small bowel, metastatic tumours of unknown primary.

Results: 976 patients were diagnosed with bowel cancer percentages of studied participant were Male 52.60% and Female 47.40%. The mean age of 74.14 years. Sixty six (66) 6.76% patients were excluded from the study. The location of colon cancer is also changing. The incidence rate of Right side colon cancer in women was much higher than that in men 1.20:1, and on Left side colon cancer including rectum was much higher in men than that in women this was especially exhibited in cases of rectal cancer, for which the male to female ratio was increased to 1.54:1 whereas the male to female ratio of left colon cancer 1.26:1 The incidence rates were increasing in all groups over time, especially in the 50 -79 years group. Incidence of colorectal cancer was greater for cancers of the left side of colon than right colon (62.41% vs 37.58%).

Conclusion: There are not significant sex differences in access to and effectiveness of colorectal cancer treatment. Screening provides effective opportunity to prevent colorectal cancer. Gender-specific guidelines for screening, treatment, and prevention protocols for colorectal cancer can be established to decrease the mortality and increase the quality of life.

Biography

Mr. Ashfaq Chandio is a surgeon specializing in general surgery, employed by the NHS Trust, graduated from Chandka Medical College Larkana Pakistan. Obtained training in various specialities of general surgery (General Surgery, Urology, Emergency medicine, Vascular, Breast & Endocrine, and Colorectal) in Ireland and UK. Mr. Chandio obtained the degree of FRCSI from Royal College of Surgeons in Ireland. He was awarded Diploma of Laparoscopy from France. He was awarded FEBS/General Surgery by European Surgical Board. He was awarded FEBS/Coloproctology by European Surgical (Coloproctology) Board. Mr. Chandio obtained comprehensive training in general surgery. He has extensive experience in various surgical specialities as a surgeon. He also actively participate teaching of medical students and juniors doctors. He is Faculty member of Royal College of Surgeons England, for teaching Basic surgical skills, START and CCZISP course. Mr. Chandio has peer – reviewed publications and national and international presentations, mentor International conference on Gastroenterology. Mr. Chandio is awarded with Star Champion Award Bedfordshire NHS Foundation Trust, Certificate of Appreciation in recognition of excellence service, dedication and commitment to the Western Health Board, Certificate of honour by Overseas Medics of Ireland and Shield of pride 40th Alumni Chandka Medical College & Shaheed Benazir Bhutto Medical University, Larkana Sindh, Pakistan.

Rodrigo Cristofoletti
Department of Pharmaceutics, College of Pharmacy, University of Florida, Orlando, FL, US

Human enteroids/colonoids and intestinal organoids functionally recapitulate normal intestinal physiology and pathophysiology

Identification of Lgr5 as the intestinal stem cell marker as well as the growth factors necessary to replicate adult intestinal stem cell division has led to the establishment of the methods to generate "indefinite" ex vivo primary intestinal epithelial cultures, termed "mini-intestines." Primary cultures developed from isolated intestinal crypts or stem cells (termed enteroids/colonoids) and from inducible pluripotent stem cells (termed intestinal organoids) are being applied to study human intestinal physiology and pathophysiology with great expectations for translational applications, including regenerative medicine. Here we discuss the physiologic properties of these cultures, and potential applications.

Biography

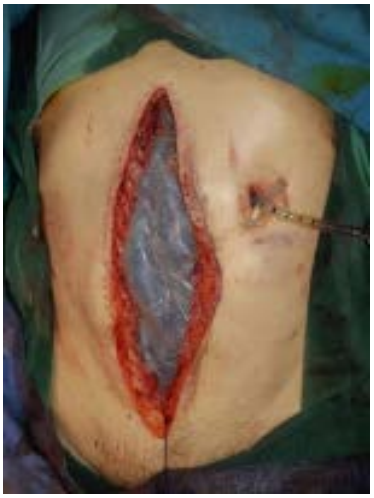
Rodrigo Cristofoletti, Ph.D., joined the University of Florida in 2020 as assistant professor in the Center for Pharmacometrics and Systems Pharmacology (Orlando) in the Department of Pharmaceutics. He received his B.S. in Pharmaceutical Sciences from the University of Sao Paulo, Brazil in 2004. Dr. Cristofoletti received his Ph.D. summa cum laude from the Johann Wolfgang Goethe University (Frankfurt am Main, Germany). The Clinical Pharmacology & Biopharmaceutics Office of the Brazilian Drug Regulatory Agency (ANVISA) has been Dr. Cristofoletti's place of employment for the last 15 years. Currently, Dr. Cristofoletti's labs focus on translational DMPK research and disease modeling.

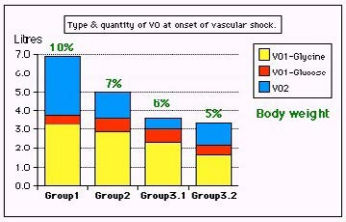
Orestis Ioannidis

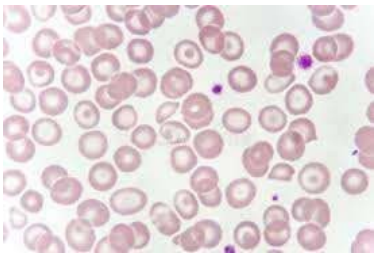
4th Department of Surgery, Medical School, Aristotle University of Thessaloniki, General Hospital George Papanikolaou, Thessaloniki, Greece

Open abdomen and negative pressure wound therapy for acute peritonitis especially in the presence of anastomoses and ostomies

Acute peritonitis is a relatively common intra-abdominal infection that a general surgeon will have to manage many times in his surgical carrier. Usually it is a secondary peritonitis caused either by direct peritoneal invasion from an inflamed infected viscera or by gastrointestinal tract integrity loss. The mainstay of treatment is source control of the infection which is in most cases surgical. In the physiologically deranged patient there is indication for source control surgery in order to restore the patient's physiology and not the patient anatomy utilizing a step approach and allowing the patient to resuscitate in the intensive care unit. In such cases there is a clear indication for relaparotomy and the most common strategy applied is open abdomen. In the open abdomen technique the fascial edges are not approximated and a temporarily closure technique is used. In such cases the negative pressure wound therapy seems to be the most favourable technique, as especially in combination with fascial traction either by sutures or by mesh gives the best results regarding delayed definite fascial closure, and morbidity and mortality. In our surgical practice we utilize in most cases the use of negative pressure wound therapy with a temporary mesh placement. In the initial laparotomy the mesh is placed to approximate the fascial edges as much as possible without whoever causing abdominal hypertension and in every relaparotomy the mesh is divided in the middle and, after the end of the relaparotomy and dressing change, is approximated as much as possible in order for the fascial edges to be further approximated. In every relaparotomy the mesh is further reduced to finally allow definite closure of the aponeurosis. In the presence of ostomies the negative pressure wound therapy can be applied as usual taking care just to place the dressing around the stoma and the negative pressure can be the standard of -125 mmHg. However, in the presence of anastomosis the available date are scarce and the possible strategies are to differ the anastomosis for the relaparotomy with definitive closure and no further need of negative pressure wound therapy, to low the pressure to -25 mmHg in order to protect the anastomosis and to place the anastomosis with omentum in order to avoid direct contact to the dressing. The objective should be early closure, within 7 days, of the open abdomen to reduce mortality and complications.







Audience Take Away Notes

- Open abdomen should be carefully tailored to each single patient taking care to not overuse this effective tool
- Every effort should be exerted to attempt abdominal closure as soon as the patient can physiologically tolerate it
- All the precautions should be considered to minimize the complication rate
- Negative pressure wound therapy in peritonitis seems to improve results in terms of morbidity and mortality and definitive abdominal closure
- When an ostomy is present there are only subtle differences in management
- When an anastomosis is present consider:
    - Placing the anastomosis remotely to visceral protective layer and thus the negative pressure
    - Place the omentum over the anastomosis
    - Decrease the negative pressure to even as low as -25 mmHg
    - Perform a sutured anastomosis rather than a stapled one

Biography

Dr. Ioannidis studied medicine in the Aristotle University of Thessaloniki and graduated at 2005. He received his MSC in "Medical Research Methodology" in 2008 from Aristotle University of Thessaloniki and in "Surgery of Liver, Biliary Tree and Pancreas" from the Democritus University of Thrace in 2016. He received his PhD degree in 2014 from the Aristotle University of Thessaloniki for his thesis "The effect of combined administration of omega-3 and omega-6 fatty acids in ulcerative colitis. Experimental study in rat" He is a General Surgeon with special interest in laparoscopic surgery and surgical oncology and also in surgical infections, acute care surgery, nutrition and ERAS. He has received fellowships for EAES, ESSO, EPC, ESCP and ACS and has published more than 130 articles with more than 3000 citations and an H-index of 28. He is currently an Assistant Professor of Surgery at the Aristotle University of Thessaloniki.

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DAY 02

POSTERS

INTERNATIONAL CONFERENCE ON

GASTROENTEROLOGY

Maria Kim C Hernandez, MD

Department of Internal Medicine, Dr. Paulino J. Garcia Memorial Research and Medical Center, Cabanatuan City, Nueva, Ecija, Philippies

A case report: Menetrier's disease in a 62-year old Filipino male

Menetrier's Disease is rare type of gastropathy characterized by large gastric folds, reduced acid secretion, and hypoalbuminemia. It may mimic a lot of conditions from inflammatory, infiltrative, to malignant states. The pathophysiology is not clearly understood in adults. This case report described a 62-year old male who presented with epigastric pain, body weakness, and hematemesis. There was noted distended abdomen, ascites, and whole abdominal tenderness. Laboratory findings showed anemia and hypoalbuminemia. Upper gastrointestinal endoscopy was done revealing hyperplastic gastropathy. Biopsy showed gastric mucosal hyperplasia and chronic active gastritis. Whole abdominal computerized tomography scan revealed gastric mass. Patient was treated medically and refused surgical intervention. This was the first documented case of Menetrier's Disease in the institution.

Audience Take Away Notes

- This is a case report on a rare type of gastropathy
- For patients presenting with the same or similar signs and symptoms, diagnosis of Menetrier's Disease may be considered
- Audience will learn the approach, diagnostics, and treatment for Menetrier's Disease

Biography

Dr. Hernandez is a board-certified internist of the Philippine College of Physicians. She finished her internal medicine residency at Dr. Paulino J. Garcia Memorial Research and Medical Center in Nueva Ecija, Philippines. After residency, she underwent the Post-Residency Deployment Program of the Department of Health wherein she catered to medical cases in a district hospital in the same region. She is currently undergoing Adult Neurology fellowship at East Avenue Medical Center.

Vesri Yoga[1*], Murdani Abdullah[1], Arnelis[2]

[1]Division of Gastroenterology, Pancreato-biliary and Digestive Endoscopy, Department of Internal Medicine, Faculty of Medicine, University of Indonesia, dr. Cipto Mangunkusumo General National Hospiotal, Jakarta
[2]Division of Gastroentero-hepatology, Department of Internal Medicine, Faculty of Medicine, Andalas University, M. Djamil General Hospital, Padang

A rare disease: Chilaiditi's syndrome in geriatric patient with covid-19

Chilaiditi Syndrome is a rare disease with an incidence of 0.025-0.28% cases, where it shows colon interposition between diaphragm and liver. Usually related to weakness, or elongation of suspensory ligaments of transversal colon, or the absence in congenital malformation. The 83-year-old woman was admitted with abdominal pain, fatigue, sometimes nausea and vomitting. Patient often had chronic constipation and a history of hypertension.

Physical examination of abdomen shown epigastric tenderness (+). From thoracic X-ray found visible interposition of colon at right-upper quadrant of abdomen. Patient had coincidence with COVID-19 with comorbidity and geriatric syndrome. This patient is a geriatric patient with multiple diagnosis and frailty. Patient has a history of osteoarthritis contributes to patient's instability. Chronic constipation also quite disturbing cause an interposition of colon. Thorough care, close monitoring, and optimal management should be applied.

Keywords: Chilaiditi's syndrome, geriatric syndrome, COVID-19.

Audience Take Away Notes

- The audience will be able to know about Chilaiditi's Syndrome
- This is a rare disease

Biography

Vesri Yoga, MD studied Gastroenterologist at the Univeristy of Indonesia and graduated as Consultant of Gastroenterologist and Hepatologist in 2022.

Jennifer DeFazio[1], Gennell, Tania[1] and Walaa Abdullah Alshaia[2*]

[1]Department or Division Name, **Columbia University**, Manhattan, New York, USA
[2]Institute of Human Nutrition, **Columbia University**, Manhattan, New York, USA

A pilot study of the correlation between dietary fiber and water intake and successful bowel management after surgery for hirschsprungs disease and anorectal malformation

Hirschsprung's Disease and Anorectal malformations each represent 1 in 5,000 births in the pediatric population. These conditions require surgical intervention in the neonatal period with postoperative challenges including fecal incontinence, constipation, and affected quality of life. Many of these patients utilize a "bowel management" program, which refers to mechanically preparing the colon via enemas and irrigations to have better bowel control and improved quality of life. Most studies evaluating the impact of dietary fiber do not include this population or how their quality of life may be impacted. The primary objective: increased fiber intake might have positive impact improved constipation as evidence by Cleveland clinic score in the bowel management population. Secondary objective: measure the quality of life of the bowel management population. This is a case-control study design. A total of 24 patients (12 cases vs 12 control) were recruited from the pediatric surgery department. Inclusion Criteria: Male or female patients with diagnosed HD or AMF, aged 2-10 years old. Exclusion Criteria: patients diagnosed with Neurofibromatosis, Waardenburg syndrome, down syndrome, and multiple endocrine neoplasia type II. Dietary recall (3 days) was obtained and analyzed via the Automated Self-Administered 24-hour Dietary Assessment Tool (ASA24). Constipation was evaluated via the Cleveland Clinic constipation scoring system. Quality of life was examined using the Pediatric Quality of Life Inventory™ (PedsQL™). Result shows children with Hirschsprung's Disease and Anorectal malformations had significant high constipation score comparing to the control (p=<0.001). The average and adequate fiber and water intake were similar between the two groups. This study was not able to determine correlation between adequate fiber and water intake and high constipation score. Furthermore, the study group had significant low scores in the dimensions of the quality of life in comparison with the control. Finally, no correlation detected between high fiber intake and relatively high constipation score. The quality of life was adversely affected by Hirschsprung's Disease and Anorectal malformations

Audience Take Away Notes

- Shedding the light on the role of fiber on the management of HD and AMF0
- Sharing the current gap in the practice/knowledge
- Clinical will learn about the current knowledge gap in the correlation of fiber and HD and AMF
- Yes, the current finding might be used by other clinician/ researcher to conduct extending research.
- Learning from other peer experiences on the matter

Biography

Walaa Abdullah Alshaia studied clinical nutrition under the college of Applied Medical Science at Imam Abdulrahman bin Faisal University. She worked as a Clinical Dietitian for three years. After that she earned her Master of Science degree at Columbia University in 2022. Currently she is continuing her research experience in the biomedical research field.

Al-Bishri W, Mousa R M A, Hanaa Ali Saeed Alghamdi*

Department of Biochemistry, College of Science, University of Jeddah, Jeddah, Saudi Arabia

Innovative approach for beetroot (betavulgarisl.) aqueous extraction by cyclodextrins and its use to alleviate ethanol induced gastric ulcer in rats

Gastric ulcer is considered one of the high-risk diseases linked with the current lifestyle, while supplementation of natural antioxidants could affect the progression of gastric ulcer. In the current work, a novel aqueous extraction of beetroot, as a source of natural antioxidants, was used for effective mitigation of gastric ulcer in rats as a way for human health promotion suggestion. For the first time, different amounts of β-CD and HP-β-CD ranged from 0.5-7% (w/w) were used for developing the beetroot extraction efficiency in the presence of stirring and ultrasound emerged technology. It was found that the highest total phenolic compounds and total betanin values (3.1 mcg/mL and 3.01 mg/mL, respectively) were achieved in HP-β-CD solution. After that, the effect of modified beetroot extract on ethanol induced Gastric Ulcer in male albino rats was studied. Serum malondialdehyde (MDA), nitric oxide (NO), serum reduced glutathione (GSH), serum tumor necrosis factor alpha (TNF-β), interleukin -6 (IL-6)), serum IL-10, serum myeloperoxidase (MPO) and serum prostaglandin E2 (PGE2) were investigated. Moreover, the histological examination of stomach was performed after treatment with beetroot extraction alone and combined with omeprazoleas a reference drug. The obtained results showed that pretreatment with beetroot extract and/or the combination with omeprazole protected markedly (P≤0.0001) the gastric tissue from the damaging impact by absolute ethanol. Therefore, the proposed synergistic pretreatment approach could be used as a model for further investigation of natural antioxidants impact on several gastrointestinal (GI) diseases.

Audience Take Away Notes

- Improving the extraction efficiency of aqueous natural antioxidants
- Using aqueous extract of beetroot for mitigation of gastric ulcer
- Biochemical and histopathological investigation of stomach pretreated
- Suggested model for human health promotion

Biography

Hanaa Ali Saeed Alghamdi is a master's student in Biochemistry department at Jeddah University. She has a B.Sc. degree in Biochemistry from King Abdulaziz University, Saudi Arabia, and she is interested in continuing to study the effect of various natural products and plants on treating diseases, her current research has focused on the gastric ulcer and the ways to alleviate it using innovative approaches in aqueous extraction of beetroot.

Natalia Rodriguez-Martino[1*], Rafael Cordero-Arill[2]

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Acute neurological deficit as initial presentation of extranodal marginal zone lymphoma

Extranodal Marginal Zone Lymphomas (EMZL) originate in the post germinal centers of the B-cell marginal zone and have a tendency to develop in various epithelial tissues. Gastric Marginal Zone Lymphoma (GMZL) is the most common subtype, accounting for 75% of gastrointestinal lymphomas. It typically involves a single site, but has potential for systemic spread and progression to B cell lymphoma. Risk factors that tend to play a key role in EMZL include genetic and environmental factors; being H. Pylori infection the most common. Although usually misdiagnosed, regression can be achieved with eradication therapy during the early stages of disease when secondary to Helicobacter Pylori infection. This is the case of a 62-year-old male, former smoker; with unremarkable past medical history, who came to the Emergency Department with a complaint of right labial commissure deviation and right-sided lower extremity weakness. Patient was admitted due to Acute Neurological Deficit (AND) and treated accordingly. During inpatient admission patient presented complaint of severe left lower quadrant abdominal pain associated with non-bloody diarrhea. Abdominopelvic CT scan revealed nonspecific soft tissue through the mesentery suggestive of carcinomatosis, and a hepatic mass lesion involving posterior segment of right lobe. Subsequent colonoscopy revealed sigmoid diverticulosis and internal hemorrhoids. Upper endoscopy was remarkable for clean base gastric ulcers and a fundic gland polyp (Figure 1) with histological evidence of gastric mucosa with EMZL and antral biopsies with chronic antral gastritis negative for H. Pylori (Figure 2). Immunohistochemical testing also revealed CD45, and B-cell markers (CD20, CD79a, and CD10). These immunohistochemical data, confirms that the gastric fundus lesion is EMZL. Unfortunately, our patient presented a very aggressive course of disease and expired within 2 weeks of diagnosis. EMZL abides a rare pathology and can easily be misdiagnosed due to its unspecific symptoms, such as in our patient, who presented with AND due to underlying malignancy and hypercoagulable state. Although primary lymphomas of GI tract may be rare, it is of utmost importance to screen for risk factors. In our patient, H. Pylori staining, the most common cause for developing such a tumor was confirmed negative. Because of its rapid progression, other etiologies such as viral diseases (HIV, Hepatitis B virus, Epstein-Barr virus) and genetic disorders were unable to be ruled out. Our aim is that this case may serve for educational purpose, in order to help recognize gastric cancer with unusual presentation.

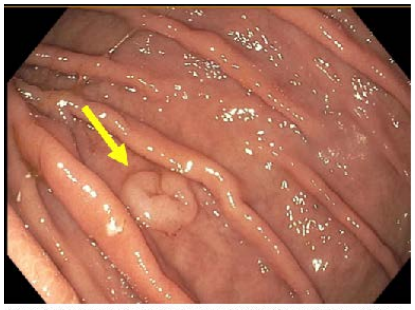

Figure 1: Endoscopic Gastroduodenoscopy View of Gastric Fundus Polyp

Macroscopic appearance of a 1.5 cm sessile polyp (yellow arrow) during white light gastroduodenoscopy via a retroflexed view of the gastric fundus.

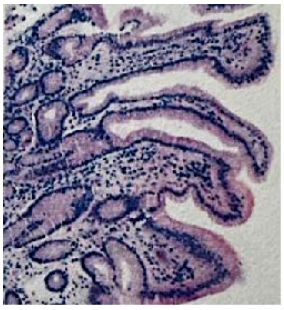

Figure 2: Immunohistochemical Staining of Stomach Fundus Sessile Polyp

H&E staining of a polypoid fragment of gastric mucosa with extranodal marginal zone lymphoma.

Audience Take Away Notes

- Will help recognize gastric cancer with unusual presentation. Our aim is to educate the gastroenterology community about rare presentations of GI cancers, in order to improve screening and diagnostic procedures and improve quality of life of our patients

Biography

Dr. Natalia Rodriguez-Martinostudied Interdisciplinary Sciences at University of Puerto Rico, Rio Piedras campus and graduated as MS in 2015. She then joined University of Medicine and Health Sciences Saint Kitts, where she completed her studies as Medical Doctor and graduated in 2021. She is currently completing her Internal Medicine Residency at Centro Medico Episcopal San Lucas, in Ponce Puerto Rico. Her field of interest is Gastroenterology.

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Case study: Pseudomyxoma peritonei secondary to rectal mass adenocarcinoma: A rare clinical presentation

Pseudomyxoma Peritonea (PMP) are a rare malignant disease, involving the peritoneum, characterized by the production of large quantities of mucinous ascites. PMP has a low incidence of 2-4 per million people, it's challenging to diagnose, and has a limited prognosis. Normally, it's extremely rare but the most common presentation is PMP induced by low-grade appendicle mucinous neoplasm. This reports a case of a 76-year-old female who presented to the Emergency Department due to abdominal pain, rectal mass with bleeding of several months of evolution. The patient has poor medical follow-up and has never had a colonoscopy before. A colonoscopy was performed on admission alongside a biopsy of the rectal mass that resulted with adenomatous colon mucosa with positive immunostain (CK-20). Pathology from ultrasound-guided biopsy results came back positive with PMP primarily from adenocarcinoma from the rectum. CEA resulted elevated. The patient presented with Pulmonary Embolism (PE) occluding the Right-Upper Lobe (RUL) with bilateral lower extremities Deep Vein Thrombosis (DVT). Due to a hypercoagulable state, an Inferior Vena Cava (IVC) filter was placed. Diagnostic laparoscopy was performed and resulted with carcinomatosis in the peritoneal cavity. An attempt to do a colostomy for the palliative process was not possible due to extension of tumor to bowel. Cytoreductive Surgery (CRS) associated with Hyperthermia Intraperitoneally Chemotherapy (HIPEC) is the optimal treatment for PMP. However, in patients with an extensive or recurrent disease, few therapeutic opportunities are available. In this case, tumor marker elevations correlate with worse prognosis and increased recurrence rates.

Keywords: Pseudomyxoma peritonea, Rectal cancer, Adenocarcinoma.

Audience Take Away Notes

- Management of a rare cause of cancer as pseudomyxoma peritonea
- Known about its rare presentation and the importance of early diagnosis
- Yes Is this research that other faculty could use to expand their research or teaching

Biography

Dr. Milaris Sanchez-Cordero studied Chemistry at the University of Puerto Rico, Rio Piedras Campus and graduated in 2015. She then started in Medical School in 2016 and finished it in May 2020. As the pandemia arrived, clinical rotations were delayed, and she decided to complete a master's degree in Autism and Neurodevelopmental Disorders. Then she started in an internship for one year. In 2022 she got accepted in Internal Medicine Residency and is currently a first-year resident. She loved research since was an undergraduate student and participate in several research focused on Prostate Cancer. She is interested in Gastroenterology branch and her plans are to continue in this fellowship.

Noor Ul Ain*, Behram Khan, Jalseen Kour
The Jewish Hospital of Cincinnati, United States

Dilemma of the diagnostic criterion with an atypical presentation of pancreatitis

Acute Pancreatitis (AP) is a medical condition that requires prompt diagnosis and treatment. Its diagnosis requires at least two of the following three criteria: acute abdominal pain, serum lipase/amylase ≥ 3 times of normal, and imaging consistent with pancreatitis. High morbidity and mortality is associated with delay in diagnosis and management in patients who do not meet these criteria.

This case reports a 55 years old male who presented to the Emergency Department (ED) with left upper quadrant pain, lipase in a normal range, and Computed Tomography (CT) Scan findings non-consistent with pancreatitis. In following ED visits, he presented with Right upper, left upper and epigastric pain. Lipase level remained in a normal range. On admission, he was tachycardic and hypertensive. Basic labs were normal. Liver function test were slightly elevated. Hepatitis panel was normal. Lipase trended up to 173 U/L. Serial CT scans to establish the etiology of the abdominal pain was read to be unremarkable. Later, Magnetic resonance cholangiopancreatography showed findings of acute pancreatitis. The patient died within two days due to multi-organ failure secondary to pancreatitis despite aggressive resuscitation. AP has mortality rate of 5% and can be potentially fatal if misdiagnosed. While diagnosis of AP requires meeting a certain criteria, it can be missed or delayed in patients with either nonspecific abdominal pain, normal levels of lipase and unrevealing CT imaging for pancreatitis. It is suggested that patients that do not fit well into criterion be monitored very closely in a hospital setting using other severity or predictability scores like APACHE and RANSONS' criteria.

Gowthami Sai Kogilathota Jagirdhar[1*], Rewanth Katamareddy[1], Rakhtan K. Qasba[2] Harsha Pattnaik[3], Rahul Kashyap[4], Praveen Reddy Elmati[5], Saraswathi Lakkasani[6], Vikas Bansal[7], Yatinder Bains[6]

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Systematic review with meta-analysis: Comparative efficacy of various biologics for maintenance of mucosal healing in crohn's disease and ulcerative colitis controlled trials

Introduction: Inflammatory Bowel Disease (IBD) is a chronic gastrointestinal illness comprising two distinct clinical entities, Crohn's disease, and Ulcerative colitis. Various treatment modalities like corticosteroids and immunomodulator drugs like azathioprine, methotrexate, and cyclosporine are used. Biologic agents targeting key inflammatory pathways are considered effective induction agents. IBD causes inflammation of the intestinal mucosa and disease severity is easily determined by the mucosal condition. Mucosal healing is an early and sensitive indicator of control of active inflammation and hence, of effective induction. We conducted a systematic review and meta-analysis to consolidate the existing literature on randomized controlled trials studying biological agents as induction agents in IBD.

Materials and methods: A systematic review of literature databases Pubmed, Cochrane, and Embase was conducted from inception to Oct 2022. Randomized controlled trials that studied patients with inflammatory bowel disease and mucosal healing outcomes were included. Studies that assessed mucosal healing using Mayo endoscopic sub score, simple endoscopic activity score for Crohn's disease and Crohn's disease endoscopic index of severity score were included. The protocol of the study was registered in Prospero CRD42022356543 and PRISMA guidelines were followed. Meta-analysis was performed on studies with mucosal healing outcomes using RevMan software. The mantel-Haenszel odds ratio was generated to describe the overall effect size using random effect models.

Results: A total of 23 RCTs were included in the systematic review and meta-analysis (CD-7 maintenance, UC-16 maintenance). The duration of maintenance was from 13 weeks to 4 years. In Crohn's disease, biologics were more effective than placebo with an odds ratio (OR) of 3.84, 95% confidence interval (CI) of 2.19- 6.73, and $p<0.05$. Adalimumab was better than infliximab for the maintenance of mucosal healing in Crohn's with an OR of 7.73 vs 3.17 (Figure 1). In Ulcerative colitis, biologics were more effective than a placebo for the maintenance of mucosal healing with an OR 2.50, 95% CI of 1.94- 3.21, and $p<0.05$. Tofacitinib was better than adalimumab, golimumab, infliximab, and vedolizumab for the maintenance of mucosal healing in ulcerative colitis with an OR of 4.70. Vedolizumab was the next efficacious biologic with an OR of 4 (Figure 2).

Conclusion: Adalimumab was better than infliximab for the maintenance of mucosal healing in Crohn's disease. Tofacitinib and vedolizumab were superior to adalimumab, golimumab, and infliximab for the maintenance of mucosal healing in ulcerative colitis.

Figure 1: Forest Plot and Meta-analysis for the maintenance of mucosal healing in Crohn's disease

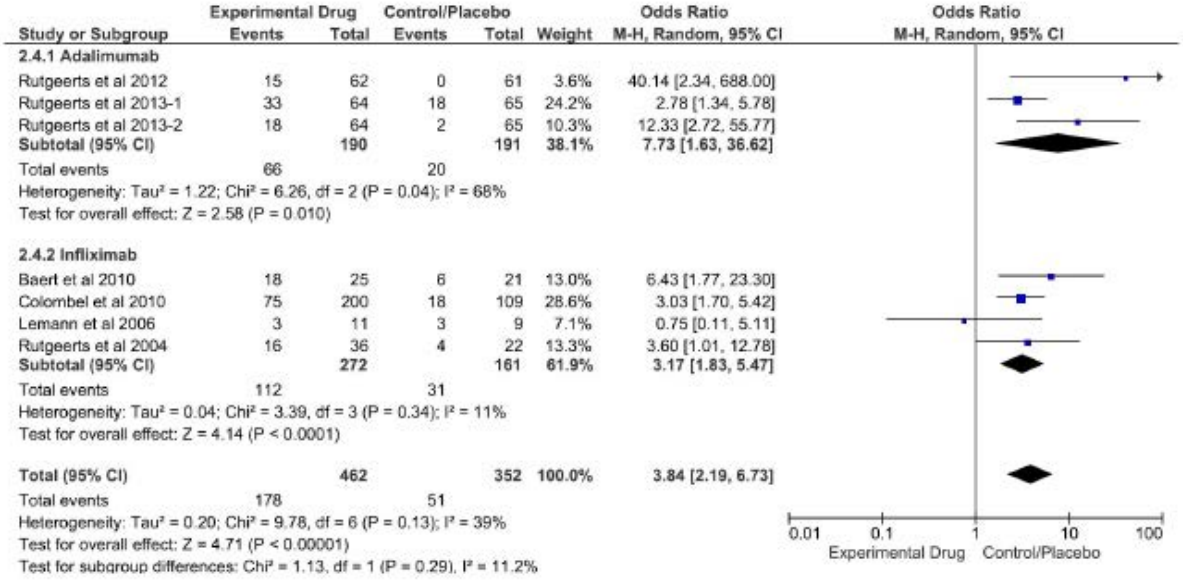
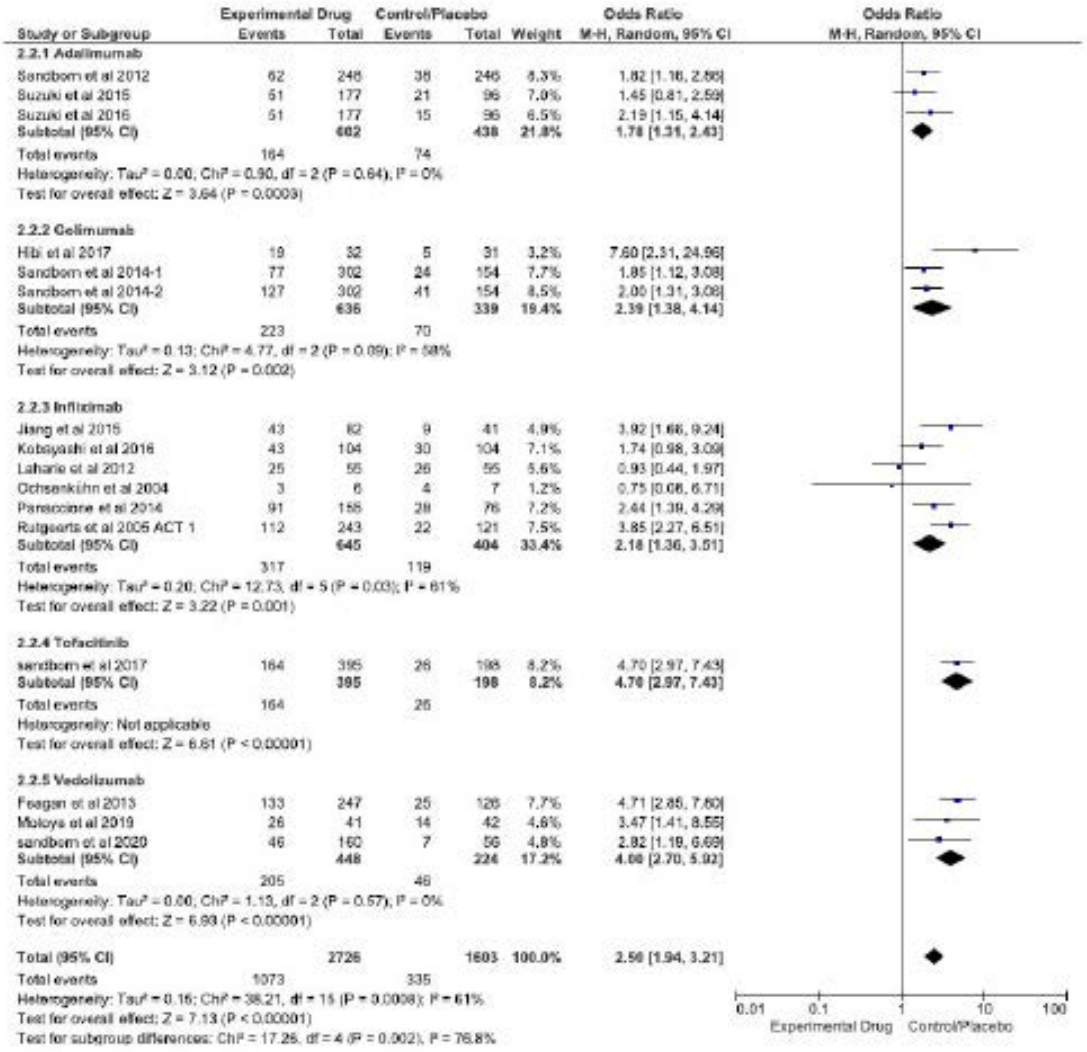
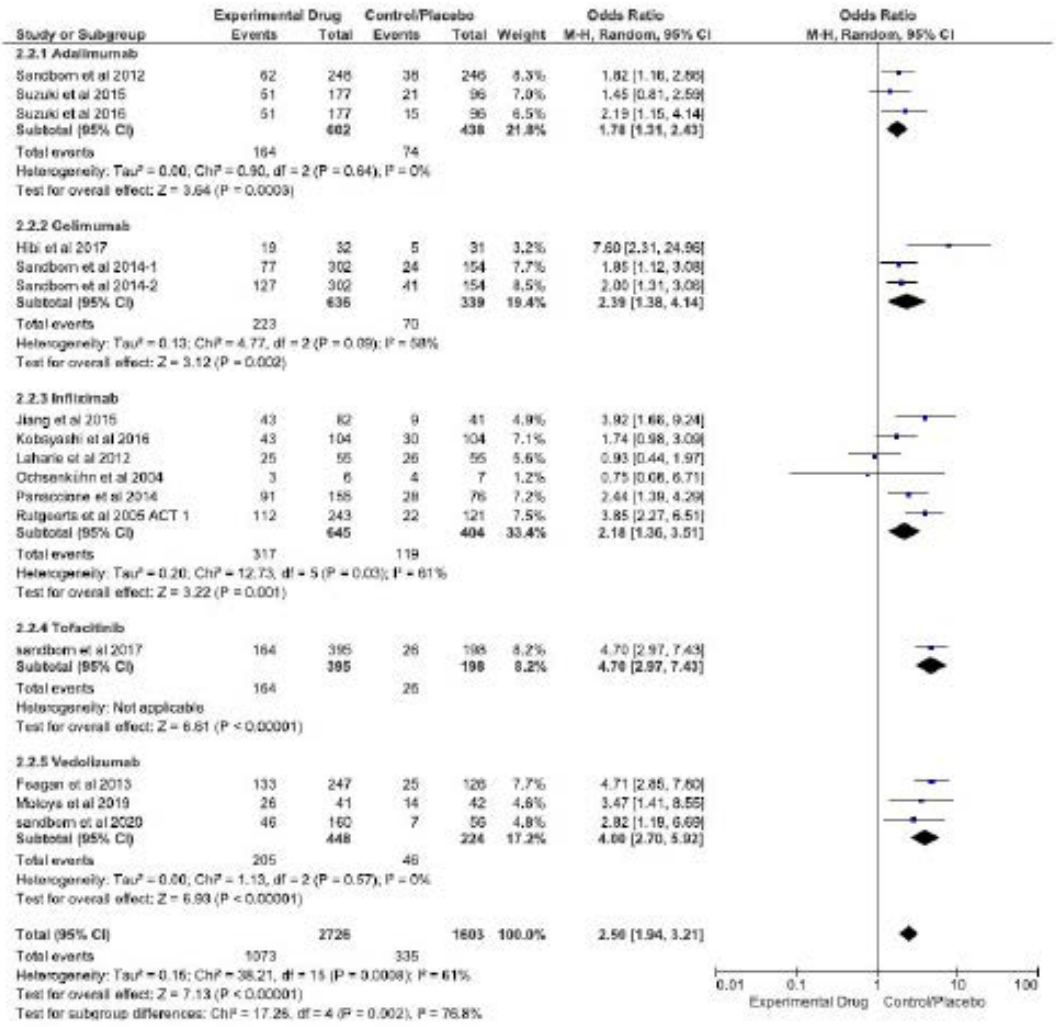


Figure 2: Forest Plot and Meta-analysis for the maintenance of mucosal healing in Ulcerative Colitis





Audience Take Away Notes

- A Comparison of the efficacy of various biological agents and Understanding the most potent agent for achieving maintenance of mucosal healing in IBD patients is necessary for the appropriate management of patients
- Although biologic therapy is considered the standard of care for IBD patients, especially those refractory or resistant to first-line anti-inflammatory treatments, a comprehensive and comparative synthesis of studies on all the available biologics was missing therefore we conducted this systematic review and meta-analysis.
- Future Randomized controlled trials should focus on comparing biological agents in induction and maintenance in IBD patients. Studies that focus on complex patient

Biography

Dr. Gowthami Sai Kogilathota Jagirdhar is a PGY3 internal medicine resident at Saint Michaels medical center, Newark, NJ. She is also the research chief resident for her program. She recently completed her Global clinical scholar's research training program at Harvard Medical School where she studied how to perform data analysis and conduct research studies including grant submissions. She did her research fellowship at Johns Hopkins University in 2020. She is an incoming Gastroenterology fellow at Saint Michaels's medical center, Newark, NJ. She has published close to 15 manuscripts and abstracts at various conferences particularly focusing on gastroenterology and related research.

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Variation of ferroportin expression in IBD patient intestinal macrophages

Background: Hepcidin and ferroportin are master regulators of systemic iron homeostasis in mammals. Hepcidin is encoded for by the HAMP gene and is released by hepatocytes to regulate systemic iron levels. Thereafter, hepcidin frequently affects duodenal cells for dietary iron transport or splenic red pulp macrophages to facilitate iron recycling. However, earlier work from Bessman Lab has shown that hepcidin also affects local tissue iron in both the cecum and colon during states of intestinal inflammation and may further have an impact on the observed recovery (1). Additionally, mouse experiments using 3.5% DSS in water to induce an IBD model have shown that oral gavage hepcidin leads to significant weight recovery when compared to control. When this experiment was repeated in mice that contained hepcidin-resistant macrophages, the results were no longer significant, indicating that the observed therapeutic effect relied on the inhibition of macrophage ferroportin. Accordingly, we sought to stain colon sections from human IBD samples to see if there was an increase in ferroportin expression across colonic macrophages.

Methods: In preparation of staining, the slides were deparaffinized and subsequently run through an antigen retrieval step. Slides were then placed with a blocker solution in addition to a primary co-stain for ferroportin using Alexa 647 and macrophages using CD68. The following day, the sections received secondary stain with Rabbit Anti-Alexa488 and tertiary stain with Goat Anti-Rabbit Alexa 647. The slides were then mounted with a mounting medium containing DAPI. The slides were imaged using a Nikon A1R spectral confocal microscope and visualized through NIS-Elements software.

Results: In healthy patient samples, there was no apparent overlap of ferroportin and macrophages found in the images that were stained. Additionally, there was little positive ferroportin staining to be seen across the section overall. Rather, the areas that were positive for ferroportin were distinct from those that were positive for macrophage staining as well. In comparison, the IBD samples displayed a noticeable overlap between the macrophage and ferroportin stains. This overlap became progressively more apparent in slides that taken from areas significant for some underlying pathology (stenosis, fistula, etc).

Conclusion: In accordance with earlier work, a phenotype characterized by an increase in intracellular iron efflux via macrophages was observed through the staining results of healthy and IBD human patient samples. This work confirms that macrophage ferroportin may be a tractable therapeutic target for promoting mucosal healing after IBD flares. In the future, we aim to assess to macrophage ferroportin expression in a wider panel of IBD patients to determine which patients are most likely to benefit from ferroportin inhibition, and in further pre-clinical work we aim to define the mechanism by which ferroportin inhibition promotes mucosal healing.

Audience Take Away Notes

- It will help people understand the physiological processes occurring in an inflammatory state within the intestine
- It will help people further understand the role of iron metabolism in these diseases

- May help people in approaching intestinal staining or design of staining experiment
- Potentially investigate different avenues for therapeutics for IBD patients

Biography

Waleed Mujib is the lab manager for Bessman Lab located in New Jersey Medical School (NJMS). He joined shortly after graduating Summa Cum Laude from NJIT to further explore his research interests. Waleed has applied to medical school this cycle and is looking to start at Yale School of Medicine in the coming summer.

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Efficacy and safety of ser-109, an investigational microbiome therapeutic for the treatment of Recurrent Clostridioides Difficile Infection (RCDI): A phase 3 double-blind, randomized trial (ECOSPOR III)

Background: Antibiotics alone are often insufficient to treat *C. Difficile* Infection (CDI) because they have no effect on C. difficile spores that germinate within a disrupted microbiome. SER-109, an investigational, oral microbiome therapeutic comprised of purified Firmicutes spores, was designed to reduce rCDI through microbiome repair. Here, we report efficacy and safety data through week 24 from ECOSPOR III, a double-blind, placebo-controlled trial of SER-109.

Methods: Adults with rCDI (≥3 episodes in 12 months) were screened at 56 US/Canadian sites. After completing standard-of-care antibiotics, subjects were randomized 1:1 to SER-109 (4 oral capsules x 3 days) or placebo. The primary endpoint was rCDI (recurrent toxin+ diarrhea requiring treatment) through week 8; secondary endpoints included efficacy and safety through 24 weeks.

Results: 281 subjects were screened and 182 randomized (59.9% female; mean age 65.5 years). SER-109 was superior to placebo in reducing rCDI at week 8 (12.4% vs 39.8%, respectively); relative risk (RR), 0.32 [95% CI, 0.18-0.58; P<0.001 for RR<1.0; P<0.001 for RR<0.833], consistent with a relative risk reduction of 68%. Significantly lower rates of rCDI in SER-109-treated subjects compared to placebo were observed as early as 4 weeks posttreatment and were maintained through 24 weeks (absolute risk reduction of 22.1%, 27.4%, 28.3%, and 26.0% at weeks 4, 8, 12, and 24, respectively). SER 109 was well-tolerated with an observed favorable safety profile. Mild to moderate gastrointestinal symptoms were the most common Treatment Emergent Adverse Events (TEAEs). No serious TEAEs or deaths were deemed related to treatment.

Conclusions: SER-109 was superior to placebo in reducing rCDI at week 8, and was well-tolerated. The favorable impact of SER-109 was observed as early as week 4 and sustained through 24 weeks, highlighting the clinical benefit of early microbiome repair in this two-pronged therapeutic approach.

Audience Take Away Notes

- The audience will learn about the potential clinical benefit of an investigational oral microbiome therapeutic, SER-109, for patients with recurrent Clostridioides difficile infection

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Serum pepsinogen I / II in patients with esophagogastroduodenoscopy and biopsy in two third level care institutions in Bogota, Colombia

Background: Esophagogastroduodenoscopy (EGD) is the diagnostic imaging procedure of choice in the work-up of gastric carcinoma and chronic atrophic gastritis. Specialized personnel are scarce in areas of high occurrence and late diagnosis is frequent. Serum pepsinogen concentration (PEP) provides information on the morphological and functional status of the gastric mucosa. We described PEP I/II values and EGD + biopsy findings in patients attending to endoscopy services in two institutions in Bogota-Colombia, in order to provide information of how PEP I/II levels will be in population with usual gastrointestinal symptomatology.

Methods: Cross-sectional study in adult population requiring GED except gastrectomized patients from two high care level institutions in Bogota, Colombia. Patients were recruited by consecutive sampling (June to August 2019). Gastroenterologists followed institutional protocols for GED + biopsy. Blood samples were drawn from a peripheral vein before the EGD. Samples were sent to external laboratory to PEP subtype I and subtype II detection by chemiluminescence. We estimated 138 patients based on prevalence of chronic gastritis (18%) in our institution using proportion estimate formula α=8 0.10, β= 0.8. Descriptive statistics were used and the pepsinogen I/II ratio was calculated. All participants signed informed consent and protocol was approved by the Ethics Committee in both institutions.

Results: Data were collected from 108 patients. Median (Me) age 63 years (Q1:53; Q3:71), women accounted for 74%. PEP me/II levels me 7 (Q1: 5; Q3: 10). We did not find differences among patients with atrophic gastritis and other patologies in esdoscopies or biopsies reports. We did not found evidence to reject differences among PEP I/II medians among patients H.pylori positive and Pylori negative. We found atrophy in corporoantral region mainly.

Discussion: Our results identifyed some characteristics for different levels of PEP I/II detected by an ultrasensitive standardized technique, not jet commertial in the country. The included population characterize population with gastrointestinal symptomatology that attend to GDE services, reflecting real life patient conditions in Bogotá, Colombia. In the abscence of endoscopy and pathology standardization, the analyses have proven complicated. The PEP I/II levels did not differ when comparing patients with atrophy and other patologies.

Audience Take Away Notes

- Different levels of PEP I/II will be used by researchers, for example in systematic literature review, in order to elucidate utility of this biomarkers in stomach pathology diagnosis
- We attempt to explore operational and logistic procedure, as well explore levels of PEP I/II in population with usual GI symptoms

Biography

She is a career senior lecturer at the School of Medicine and Health Science, with extensive experience in health research methodology, chronic diseases, early detection of cervical cancer and stomach cancer, and implementation science. She also coordinates and teaches the undergraduate medical research methodology course.

Mandaik Moussa Ahmed*, A. Benhamdane, T. Addajou, B. Khadija, B. Aourarh, S. Mrabti, I. El Koti, F. Rouibaa, A. Benkirane, H. Seddik

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Endoscopic biliary drainage in the palliative treatment of klatskins tumors: Outcomes and factors associated with success or failure

Introduction: Klatskin's tumor is a cholangiocarcinoma that develops from the right or left bile ducts and the upper part of the main bile duct. They are usually diagnosed at an advanced, inoperable stage, and have an extremely poor prognosis. Biliary drainage is proposed in palliative situation and carries a high risk of infectious complications.The aim of our work is to report the results of endoscopic biliary drainage as well as the factors associated with its success or failure.

Aims & Methods: This is a retrospective and analytical study of 75 patients, conducted between July 2009 and August 2021, including all patients admitted with Klatskin's tumor and for whom endoscopic drainage was indicated. Factors associated with the success or failures of endoscopic treatment were studied by logistic regression analysis. Statistical analysis was performed using SPSS version 22.0 software.

Results: Average age of our patients was 62.67 +/-12 years with extremes ranging from 31 years to 93 years. Our series was characterized by a male predominance of 68% or a sex ratio of 2.12.

Cholangiocarcinoma was classified as bismuth IV in 50.6% of patients, bismuth IIIa in 30% of patients, bismuth IIIb in 13% of patients and bismuth II in 6% of patients.

Sixteen percent of patients had liver metastases.

Endoscopic drainage was successfully performed in 81.3% of patients by plastic prosthesis in 32% of cases (n=24), by a metal prosthesis in 45.2% (n=34) and by nasobiliary drain in 4.1% (n=3).

Forty-seven percent of patients (n=35) had dilatation of the stenosis prior to stenosis prior to prosthesis placement.

Causes of stenting failure were primarily related to failure of papilla catheterization, failure to pass the guidewire through the stenosis, or duodenal invasion by the tumor.

In multivariate analysis and adjusting for age, gender, Bismuth tumor type, presence of metastases and endoscopic dilatation of the stenosis, only the presence of metastases, endoscopic dilatation of the stenosis and Bismuth tumor type modified the outcome.

The Bismuth classification affect the success rate.

Indeed, endoscopic dilatation of the stenosis prior to stenting increases the success rate fourfold. prosthesis increases the success rate by a factor of 4 [OR=4; p=0.01], whereas the presence of metastases decreases this rate by 65% [OR=0.35; p<0.001]. However, tumors classified as Bismuth IV [OR=8; p<0.001] or Bismuth IIIa [OR=5; p=0.004] were associated with a risk of endoscopic treatment failure.

Conclusion: Our study suggests that the presence of metastatic hilar cholangiocarcinoma classified as Bismuth IV or Bismuth IIIa appear to be associated with failure of endoscopic endoscopic biliary drainage of Klatskin's tumors, whereas endoscopic dilatation prior to prosthesis placement appears to be associated with success.

Biography

Mandaik Moussa Ahmed was graduated in general medicine from the Faculty of Medicine of Djibouti in April 2017 and Inter-university diploma in proctology in June 2022 at the Faculty of Medicine and Pharmacy in Rabat (Morocco). Actually, resident doctor in the hepato-gastro-enterology department at the Mohammed V military instruction hospital in Rabat.

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The Role of ADAR1 RNA Editing in the Pathogenesis of Crohn's Disease

Intracellular Double-Stranded RNA (DSRNA) is recognized by mammalian cells to be viral in origin and leads to an immune response through intracellular Pattern Recognition Receptors (PRRs). Human nuclei produce endogenous double stranded RNA from simian retroviruses that represent roughly 8% of the genome. To attenuate the immune reaction to endogenous DSRNAs, mammalian cells perform Adenosine to Inosine (A to I) editing, preventing recognition of DSRNA by intracellular PRRs. A too I editing is predominantly performed by Adenosine Deaminase acting on RNA (ADAR) enzymes, of which humans have 2 functional isoforms, ADAR1 and ADAR2. ADAR1 mutations in humans have been shown to lead to congenital conditions (e.g. Aicardi-Goutieres syndrome) characterized by a lupus-like inappropriate activation of innate immunity. Previous research has shown that ADAR1 deletion in murine CD4+ T cells leads to fulminant colitis. Our lab has shown that CD4+ T cells in Crohn's patients had lower levels of ADAR1 expression and decreased levels of A to I editing than unaffected controls. Our lab has also shown that a novel long intergenic non-coding RNA (LINCRNA) (XLOC_000261) is unregulated in Crohn's disease CD4+ T cells. We therefore hypothesized that decreased expression of ADAR1 in Crohn's T cells contributed to the pro-inflammatory phenotype seen within Treg and Th17 cells in Crohn's disease. We sought to assess this hypothesis by knocking down ADAR1 and ADAR2 via SIRNA transfection in human primary Treg and Th17 T cells. Gene expression was assessed using through quantitative PCR analysis. Our knockdown model achieved a 25-30% decrease in expression of ADAR1 and ADAR2 in Treg cells, with an inconsistent decrease in Th17 cells. This was associated with an increase in expression of XLOC_000261 in Tregs by 1.47-fold (ADAR1) and 1.91-fold (ADAR2). XLOC_000261 expression was found to be elevated in Th17 cells by 1.2-fold (ADAR1) and 1.44-fold (ADAR2) with SIRNA knockdown. Interferon stimulated gene (ISG) expression was assessed in TREG cells following ADAR1 and ADAR2 knockdown, which revealed a broad increase in expression of ISGs with particular increase in APOBEC (1.61-fold with ADAR1 KD), IFITM2 (1.65-fold with ADAR1 KD), IFIT3 (2.04-fold with ADAR2 KD), and IFITM3 (2.10-fold with ADAR2 KD). Our results show for the first time in human T cells that inhibition of RNA editing leads to an increase in ISG expression along with upregulation of a Crohn's disease-associated lINCRNA. Future directions will include producing a more robust knockdown model of ADAR1 and ADAR2 and evaluating whether inhibition of DSRNA sensing in Crohn's T cells will attenuate their pro-inflammatory phenotype.

Audience Take Away Notes

- RNA editing plays key role autoimmunity
- T cells in Crohn's disease have evidence of decreased RNA editing
- Inhibiting RNA editing appears to induce a pro-inflammatory phenotype in human Treg and Th17 T cells

Biography

Dr. Matthew L Vincent studied biochemistry and cell biology at the University of Western Ontario, graduating in 2012. He then went on to complete a MSc at the University of Toronto in 2014 looking at extracellular matrix biology. He attended medical school at St. George's Hospital in London, UK, graduating with an MBBS in 2019 with prizes in Medicine & Surgery and Renal Transplant Medicine. He then worked as an Academic Foundation Doctor in Northwest London before starting his residency in internal medicine at Mayo Clinic, Rochester in 2021. His research interests include immunology, double stranded RNA, and inflammatory bowel disease.

Anita Yegappan, B.S, Rethika Kumar, B.S, Alyssa Woodward*, B.S, Kaylie Machutta, B.S
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Disorders of gut brain interaction in us veterans: A narrative review

There are around 19 million US Veterans alive today, which is about 7 percent of the US adult population. Veterans ranging from 18 to over 100 years of age have served and deployed around the world over the last century in support of a variety of combat and non-combat operations characterized by unique exposures that include infectious, environmental, and psychological stresses. Chronic gastrointestinal disorders are an important health concern in Veterans, and military- and Veteran-associated stressors are known to be important in our understanding of Disorders of Gut-Brain Interaction (DGBI) under the Rome IV framework, which were previously classified as Functional Gastrointestinal Disorders (FGID). While many reviews have summarized current knowledge and research gaps on DGBI in the general adult, approaching these disorders uniquely focusing on the Veteran sub-population has not been described. To achieve this review, a comprehensive search using PubMed and DynaMed databases was performed using key words pertaining to the topic. We found a depth of research has described the epidemiology, mental health, and overlap with multi-symptom complex disorders among this population, but significant gaps in estimation of disease burden, pathogenesis, and effective treatment are present.

Audience Take Away Notes

- The prevalence of IBS was significantly increased in deployed Gulf War Veterans compared to their counterparts who were nondeployed and or deployed elsewhere
- The risk of gastrointestinal disorders was strongly associated with degree and number of mental health comorbidities
- Environmental chemical exposures such as pyridostigmine bromide and permethrin may be associated with intestinal dysbiosis found in the affected population. It is helpful for physicians to recognize this association and be aware of the implications when providing care to veterans.
- Treatment approaches include GI-directed therapeutics, psychological intervention, and lifestyle modifications

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Systematic review with meta-analysis: Comparative efficacy of various biologics for induction of mucosal healing in crohn's disease and ulcerative colitis controlled trials

Introduction: Inflammatory Bowel Disease (IBD) is a chronic gastrointestinal illness comprising two distinct clinical entities, Crohn's disease, and Ulcerative colitis. Various treatment modalities like corticosteroids and immunomodulator drugs like azathioprine, methotrexate, and cyclosporine are used. Biologic agents targeting key inflammatory pathways are considered effective induction agents. IBD causes inflammation of the intestinal mucosa and disease severity is easily determined by the mucosal condition. Mucosal healing is an early and sensitive indicator of control of active inflammation and hence, of effective induction. We conducted a systematic review and meta-analysis to consolidate the existing literature on randomized controlled trials studying biological agents as induction agents in IBD.

Materials and methods: A systematic review of literature databases Pubmed, Cochrane, and Embase was conducted from inception to Oct 2022. Randomized controlled trials that studied patients with inflammatory bowel disease and mucosal healing outcomes were included. Studies that assessed mucosal healing using Mayo endoscopic sub score, simple endoscopic activity score for Crohn's disease and Crohn's disease endoscopic index of severity score were included. The protocol of the study was registered in Prospero CRD42022356543 and PRISMA guidelines were followed. Meta-analysis was performed on studies with mucosal healing outcomes using RevMan software. The mantel-Haenszel odds ratio was generated to describe the overall effect size using random effect models.

Results: A total of 15 RCTs were included in the systematic review and meta-analysis (CD-2 Induction, UC- 13 Induction). The duration of induction was from 4- 12 weeks. In Crohn's disease biologics were more effective than placebo for induction of mucosal healing with an odds ratio (OR) of 4, 95% Confidence Interval (CI) of 0.98- 16.32, and p=0.05. Infliximab was better than adalimumab for induction of mucosal healing in Crohn's with an OR of 11.37 vs 2.50 (Figure 1). In Ulcerative colitis, biologics were more effective than placebo for induction of mucosal healing with an OR 1.99, 95% CI of 1.58- 2.49, and p<0.05. Infliximab was better than adalimumab, golimumab, tofacitinib, and vedolizumab for induction of mucosal healing in ulcerative colitis with an OR of 3.04. Tofacitinib was the next efficacious biologic with an OR of 2.80. (Figure 2)

Conclusion: Infliximab is an effective biologic agent for the induction of mucosal healing in Crohn's disease. In ulcerative colitis infliximab or tofacitinib were superior to adalimumab, golimumab, and vedolizumab.

Figure 1: Forest Plot and Meta-analysis for the induction of mucosal healing in Crohn's disease

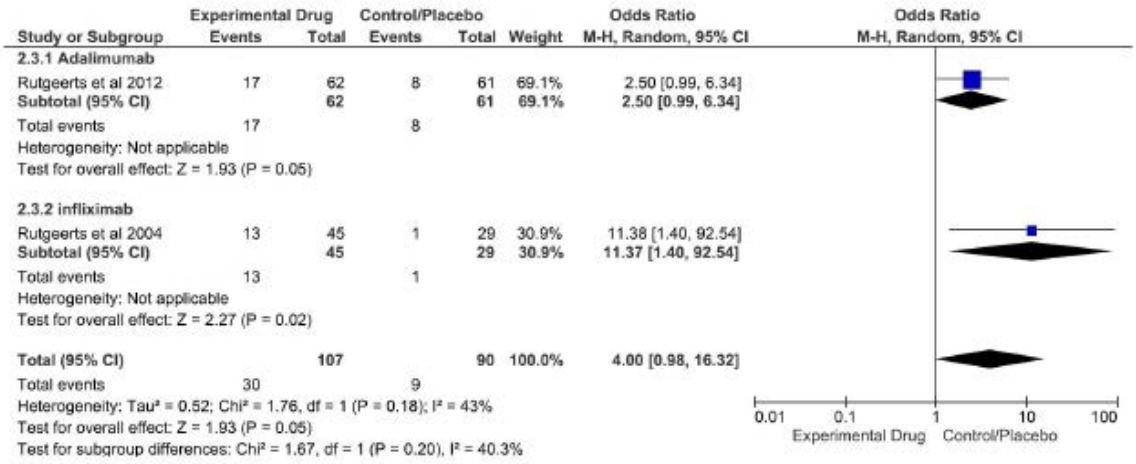
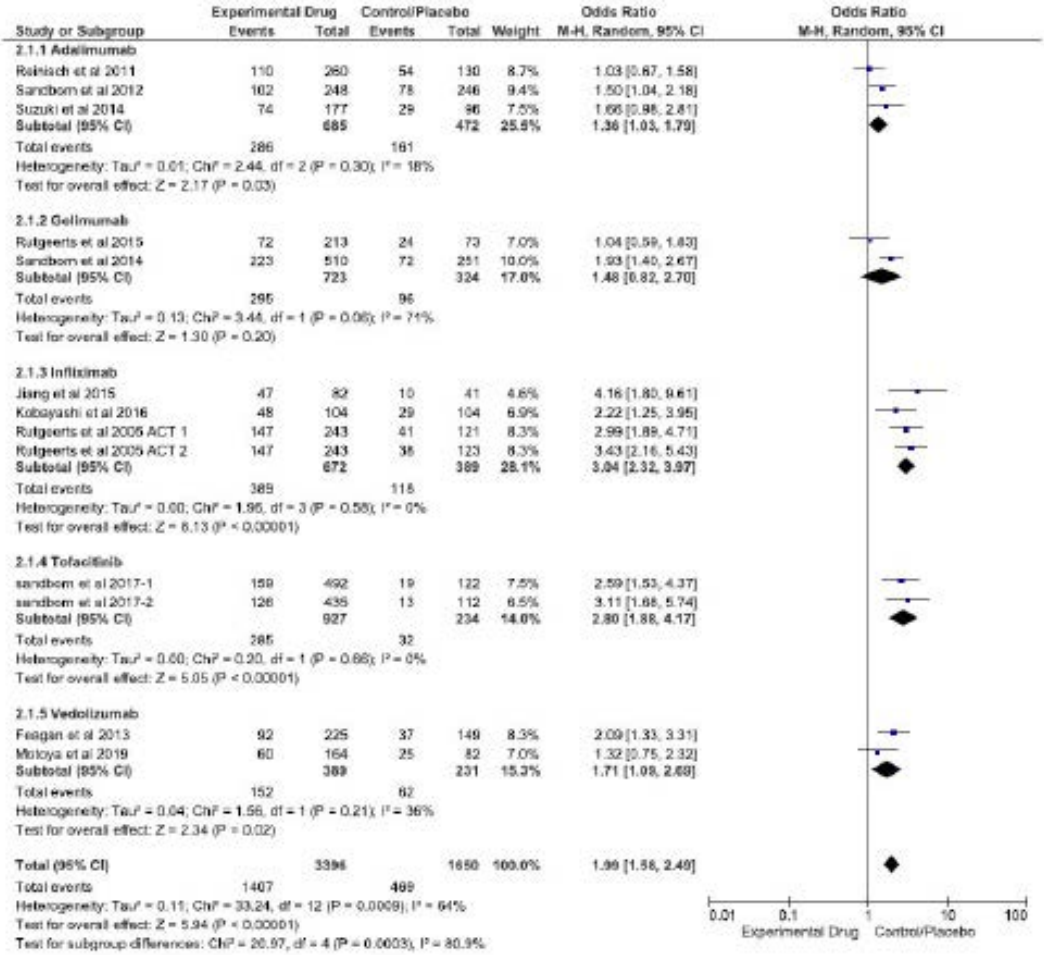
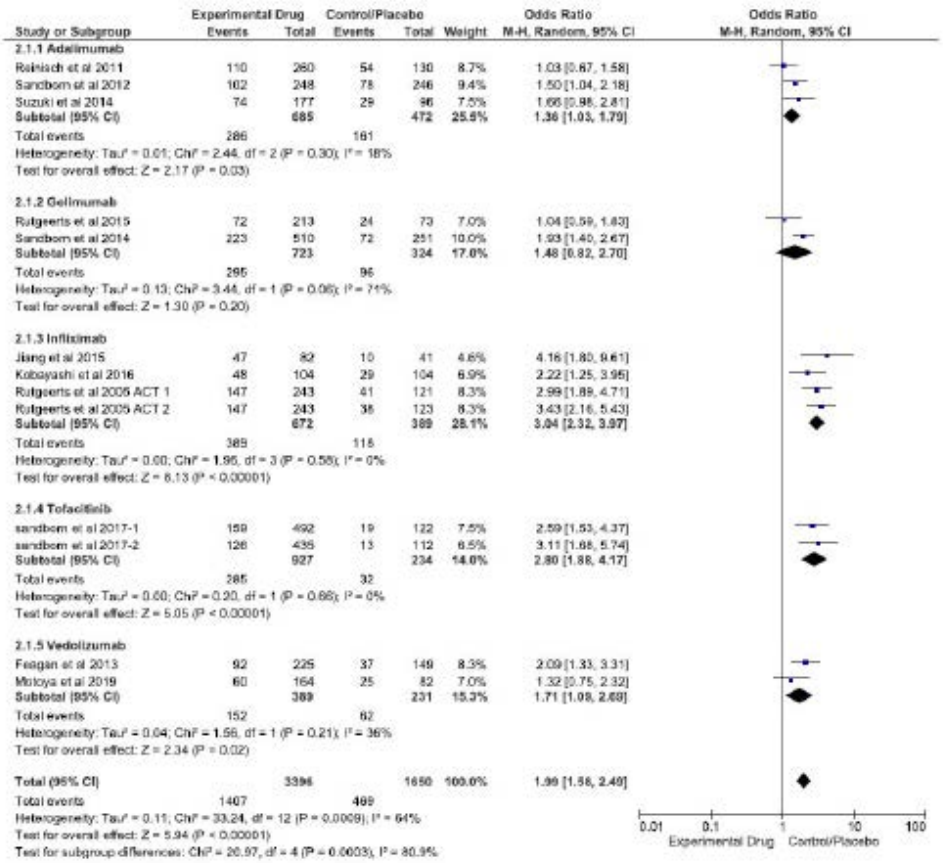


Figure 2: Forest Plot and Meta-analysis for the induction of mucosal healing in Ulcerative Colitis





Audience Take Away Notes

- A Comparison of the efficacy of various biological agents and Understanding the most potent agent for achieving induction of mucosal healing in IBD patients is necessary for the appropriate management of patients
- Although biologic therapy is considered the standard of care for IBD patients, especially those refractory or resistant to first-line anti-inflammatory treatments, a comprehensive and comparative synthesis of studies on all the available biologics was missing therefore we conducted this systematic review and meta-analysis
- Future Randomized controlled trials should focus on comparing biological agents in induction and maintenance in IBD patients. Studies that focus on complex patient populations and research on genetics, immunology, and molecular epidemiology to understand the mechanisms for the failure of biological treatments in patients are essential

Biography

Dr. Gowthami Sai Kogilathota Jagirdhar is a PGY3 internal medicine resident at Saint Michaels medical center, Newark, NJ. She is also the research chief resident for her program. She recently completed her Global clinical scholar's research training program at Harvard Medical School where she studied how to perform data analysis and conduct research studies including grant submissions. She did her research fellowship at Johns Hopkins University in 2020. She is an incoming Gastroenterology fellow at Saint Michaels's medical center, Newark, NJ. She has published close to 15 manuscripts and abstracts at various conferences particularly focusing on gastroenterology and related research.

Mandaik Moussa Ahmed *, A. Benhamdane, T. Addajou, B. Khadija, S. Mrabti, I.El Koti, F. Rouibaa, A. Benkirane, H. Seddik

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Contribution of echo-endoscopy in biliary tract dilatations without obvious obstacle on imaging

Introduction: Echo-endoscopy is an essential technic in the exploration of anomalies of the bilio-pancreatic tract. However, it causes problems of availability and expertise of operators. The aim of our study is to specify the place of echo-endoscopy in the etiological diagnosis of biliary tract dilatations when conventional imaging is not contributive.

Aims & Methods: This is a retrospective descriptive and analytical study conducted between January 2008 and March 2021, including 51 patients with intra and/or extra hepatic bile duct dilatation on imaging without obvious obstruction. For cystic dilatation of the main bile duct, the TODANI classification was taken into consideration. Statistical analysis was performed by SPSS software version 22.0.

Results: Fifty-one (51) patients were collected, which represents about 11% of all indications for echo-endoscopy in our department. The average age of our patients was 60± 12.10 years, with extremes ranging from 28 to 80 years, our series was characterized by a clear female predominance at 78%, is a sex ratio M/F: 0.28. The echo-endoscopy confirmed the dilatation in 56.9% (n=29) of our patients, and a bi-canal dilatation was found in 5.9% (n=3) of patients. The exploration by echo-endoscopy revealed in 43.1% (n=22) of the cases a cystic dilatation of the bile ducts of type I according to the classification of TODANI, a lithiasis of the main biliary duct in 5.9% (n=3) of the cases, an ampulloma in 3.9% of the patients (n=2), pancreatic head cancer was suspected during echo-endoscopy and then histologically was confirmed in 2% of patients (n=1), and biliary tract papillomatosis was diagnosed in 2% of patients (n=1). Nevertheless, echo-endoscopy allowed us to rule out biliary tract dilatation in 43.1% (n=22) of our patients.

Conclusion: Our study showed that echo-endoscopy plays a key role in the diagnostic approach to dilated bile ducts when imaging is inconclusive.

Biography

Mandaik Moussa Ahmed was graduated in general medicine from the Faculty of Medicine of Djibouti in April 2017 and Inter-university diploma in proctology in June 2022 at the Faculty of Medicine and Pharmacy in Rabat (Morocco). Actually, resident doctor in the hepato-gastro-enterology department at the Mohammed V military instruction hospital in Rabat.

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SPEAKERS

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Junwei Zhang*, Xin Lu, Yiyao Xu

From the Department of Liver Surgery, State Key Laboratory of Complex Severe and Rare Diseases, Peking Union Medical College Hospital, Chinese Academy of Medical Science and Peking Union Medical College, Beijing, China

Giant hepatocellular adenoma presenting with chronic heart failure in a young woman

Hepatocellular adenoma (HCA) is a rare benign liver neoplasm associated with the use of oral contraceptives, which could be complicated by bleeding and malignant transformation. Common clinical manifestations of HCA include abdominal pain, an incidental palpable liver mass, or shock in the case of rupture. Most HCAs are incidentally diagnosed without symptom. Heart failure as the initial symptom of hepatic adenoma was not reported before. Herein, we present of a young woman with a large HA who first presented with chronic heart failure and her cardiac function recovered after surgical resection of the tumor. Giant hepatocellular adenomas are usually presented with pain in the epigastrium or asymptomatic abdominal mass. The presentation in this case was unusual, because the heart failure was the chief complaint. Liver tumor usually does not cause heart failure unless metastasis to the right atrium. For this patient, it did not have the metastasis to the right atrium, but the tumor is too large to compress the inferior vena cava. As a result, the patient had insufficient blood return to the heart inducing the cardiac failure. The treatment of tumor was difficult because of the heart failure of this patient. Surgical excision is recommended for tumors larger than 5 cm for HCA. But, at the beginning, the poor cardiac function limits the implementation of surgery. After conservative treatment, the heart function improved, and the LVEF increased to 53%. Drug therapy for heart failure is very helpful for the safety of surgery. Hepatocellular adenoma is difficult to be diagnosed by images. The presence of a stellate central scar was thought to be the specific characteristic of FNH, but in our patient it could lead to the misdiagnosis. However, different from FNH, 5% of patients with hepatocellular adenoma could undergo malignant transformation. The heart failure of the patient could be an indicator of malignant transformation of tumor, which may be associated with the growth of tumor. In summary, we firstly described the heart failure could act as the initial symptom of hepatic adenoma, and surgical resection of hepatic adenoma would be helpful for the recovery of cardiac function.

Audience Take Away Notes

- In summary, we firstly described the heart failure could act as the initial symptom of hepatic adenoma, and surgical resection of hepatic adenoma would be helpful for the recovery of cardiac function
- Hepatocellular adenoma is difficult to be diagnosed by images. The presence of a stellate central scar was thought to be the specific characteristic of FNH, but in our patient it could lead to the misdiagnosis
- Heart failure as the initial symptom of hepatic adenoma was not reported before

Biography

Zhang Junwei is a clinical doctoral candidate in liver surgery of Peking Union Medical College Hospital. He also participated in the establishment of the ALPPS database of Peking Union Medical College Hospital, the liver cancer surgery specimen bank, and the cohort study of advanced liver cancer. As the first author, he published 17 SCI papers related to clinic. The cumulative total impact factor exceeds 200 points.

Dr Lekshmi R Nath*, Ms Aswathy R Devan

Department of Pharmacognosy, Amrita School of Pharmacy, Amrita Vishwa Vidyapeetham, AIMS Health Science Campus, Kochi, Kerala, India

The multifactorial role of transforming growth factor-beta 1 in hepatocellular carcinoma

Transforming growth factor-beta1 (TGF-β 1) is a critical homeostasis regulator aberrantly activated during inflammation, fibrosis, and carcinogenesis. Causative agents of chronic liver diseases, such as viral infection, alcohol, and co-morbidities, such as diabetes and obesity, trigger the release of TGF-β1, which stimulates inflammation, Extracellular Matrix (ECM) production, and accumulation of fibrous material that eventually progresses to cirrhosis. As fibrosis continues, the interaction of overexpressed TGF-β1 with integrins and other ECM proteins can alter signaling, accumulate gene mutations, and induce epithelial-mesenchymal transition and hepatocarcinogenesis. Among other TGF-β isoforms, significant and progressive expression of TGF-β1 during the entire course of HCC pathogenesis, from chronic hepatitis to HCC, makes it a sensitive and accurate diagnostic marker of HCC. Even after establishing HCC, TGF-β1 increases as HCC progresses and is associated with poor prognosis and shorter survival. Since TGF-β1 is the master regulator of the immunosuppressive tumor milieu in HCC, TGF-β1 inhibition could sensitize ICI, tyrosine kinase inhibitors, and other diagnostic, prognostic, and therapeutic candidates in HCC.

Audience Take Away Notes

- Systematic research inputs are essential to establish the Diagnostic-Prognostic-TherapeuticImpact of Transforming Growth Factor-beta 1 in Hepatocellular Carcinoma
- Our presentation will provide the basic science and relevance of TGF-β1 in the context of HCC, which can be helpful to the audience for postulating novel hypotheses and research strategies
- HCC remains the deadliest-refractory tumor predominantly due to its delayed diagnosis, poor prognosis and resistance to treatment. TGF-β1 can be validated appropriately along with current biomarkers such as AFP for early diagnosis and importantly, anti-TGF-β1 agents can be developed as combination therapy to sensitize the current therapy regimen. In this context, our presentation will be helpful to the gastroenterology professionals improve the clinical practice
- As TGF-β1 is a pleotropic cytokine involved in inflammation, fibrosis and carcinogenesis, other faculty can expand their research to evaluate the potential of this target molecule against many pathological conditions as biomarker, drug target, and to design personalized therapy
- We believe that TGF-β1 can be developed as a sensitive-specific easily measurable biomarker for HCC and therapies targeting TGF-β are being combined with immune check point inhibitors makes the target ideal for drug development as well. So, definitely, our content can make an impact among the oncology clinicians and scientistEven though a plethora of supporting evidence is available, still TGF-β1 is not much studied and evaluated compared with other markers such as AFP. By incorporating TGF-β1 in the panel of current biomarker for HCC diagnosis and prognosis can improve the sensitivity of diagnosis, efficacy of treatment and affordable to the society

- Support the development of novel drug candidate against TGF-Beta
- Development of novel-easy detection techniques for TGF-β1
- Knowledge about the current research about TGF-β1 and HCC
- Challenges in establishing the role of TGF-β1 in HCC clinical management

Biography

Dr Lekshmi R. Nath is working as an Associate Professor in the Department of Pharmacognosy at Amrita School of Pharmacy, Amrita Vishwa Vidyapeetham, India. She pursued her PhD. under Dr Ruby John Anto, Cancer Research Program, Rajiv Gandhi Centre for Biotechnology (RGCB), Trivandrum, Kerala, an autonomous Research Institution under DBT, Govt: of India. Her Ph.D. findings on hepatocellular carcinoma recently received four international patents US, Canada, Japan & South Korea (WO 2017208254 A1, "Uttroside B and Derivatives Thereof as Therapeutics for Hepatocellular Carcinoma"). The USFDA has recently granted an Orphan drug designation to the small molecule chemotherapeutic Uttroside–B against hepatocellular carcinoma. MOU signed by RGCB with Oklahoma Medical Research Foundation, USA, for the clinical translation of Uttroside B in liver cancer patients and technology transfer carried out with a multi-national company, Q Biomed. She has more than 45 publications and has been invited as a resource person to many national and international conferences. She is the editorial board member and reviewer of high-impact scientific journals. Her current research interest includes the study of signalling events associated with the fatty liver to Hepatocellular carcinoma, elucidating the role of plant-derived pure compounds in cancer chemoprevention, chemosensitization, and chemotherapy. She is also exploring the potential of traditional knowledge for various infectious diseases, their mechanism of action and validation through pre-clinical models.

Yangkun Guo[1,2*], Chong Zhao[1,2], Wenting Dai[1,2], Enjiang Lai[1,2], Yang Xiao[1,2], Chengwei Tang[1,2], Zhiyin Huang[2], Jinhang Gao[1,2]

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C-C motif chemokine receptor 2 inhibition reduces liver fibrosis by restoring the immune cell landscape

The accumulation of Extracellular Matrix (ECM) proteins in the liver lead to liver fibrosis and end-stage liver cirrhosis. C-C motif chemokine receptor 2 (CCR2) is an attractive target for treating steatohepatitis. However, limited investigations have been conducted to explore the mechanism of CCR2 inhibition in reducing ECM accumulation and liver fibrosis, which is the focus of this study. Liver injury and liver fibrosis were induced by Carbon Tetrachloride (CCl4) in wild-type mice and CCR2 knockout (CCR2-/-) mice. CCR2 was up regulated in murine and human fibrotic livers. Pharmacological CCR2 inhibition with cenicriviroc (CVC) reduced ECM accumulation and liver fibrosis in prevention and treatment administration. In Single-Cell RNA Sequencing (SCRNA-SEQ), CVC was demonstrated to alleviate liver fibrosis by restoring the macrophage and neutrophil landscape. CVC administration and CCR2 deletion can also inhibit the hepatic accumulation of inflammatory FSCN1+ macrophages and HERC6+ neutrophils. The pathway analysis indicated that the STAT1, NFK□, and ERK signaling pathways might be involved in the antifibrotic effects of CVC. Consistently, CCR2 knockout decreased phosphorylated STAT1, NFKB, and ERK in the liver. In vitro, CVC could transcriptionally suppress crucial profibrotic genes (Xaf1, Slfn4, Slfn8, Ifi213, and Il1□) in macrophages by inactivating STAT1/NF□B/ERK signaling pathways. In conclusion, this study depicts a novel mechanism by which CVC alleviates ECM accumulation in liver fibrosis by restoring the immune cell landscape. CVC can inhibit profibrotic gene transcription via inactivating the CCR2-STAT1/NF□B/ERK signaling pathways.

Audience Take Away Notes

- CCR2, as a typical steatohepatitis target, we explored its crucial role in liver. Fibrosis progression at the cellular and molecular levels. Meanwhile, we explored the mechanism of CVC alleviating liver fibrosis in an immune perspective, which shows that CVC could restore the hepatic immune landscape of macrophages and neutrophils. Thus, both of CCR2 and CVC join in the immune regulation of liver fibrosis, and we could try to alleviate fibrotic liver in this novel direction
- We verified that CCR2 is an effective target in alleviating liver fibrosis. CCR2 deletion significantly inhibited hepatic FSCN1+ macrophage and HERC6+ neutrophil infiltration, and we also observed ECM deposition was reduced in the liver lobular septa. These results suggest FSCN1+ macrophages and HERC6+ neutrophils may crosstalk with other pro-fibrotic cells like HSCs in other signaling pathways that really bear looking into
- We designed two modes of administration including prevention and treatment, and compared their efficacy. They both alleviated liver fibrosis without other organ injury, which suggests that whether prophylactic use of CCR2 inhibitor in patients with chronic liver diseases could moderate liver fibrosis progression or even initiation

- A novel mechanism describes CVC in attenuating ECM accumulation and liver fibrosis at the single-cell level. A novel molecular mechanism reveals that CVC reduces profibrotic gene transcription by inactivating the STAT1/NFKB/ERK signaling pathways

Biography

Dr. Yangkun Guo studied clinical medicine at Zhengzhou University and received her bachelor's degree in 2022. Then she was recommended to Sichuan University to join the research group of Prof. Chengwei Tang in the lab of Gastroenterology and Hepatology, State Key Laboratory of Biotherapy, and study for a master's degree under Prof. Jinhang GAO. During her studies, she conducted poster exchanges at the 22nd congress of Gastroenterology China, participated in the writing and graphing of many papers, and published an Editorial article in SCI journals.

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Small intestinal yeast overgrowth and its relation with diarrhea and malabsorption

Fungi present in the human gut play a dual role in health. They make up the gut mycobiome. Their presence as commensals in gut is influenced by type of diet and other factors like excess use of orally acting antibacterial agents. Some yeast strains like Saccharomyces boulardii can actually act as good probiotics and help maintain good gut health, but too much of yeasts can also lead to "leaky gut", loose stool and even malabsorption. Many a time, excess colonization of yeasts in gut can occur due to overuse of broad spectrum oral antibiotics like Clindamycin and Tetracycline. Also, oral candidiasis can cause lesions in oropharynx and this can hinder adequate food intake and absorption. Candida spp. like C. tropicalis can cause diarrhoea and even wasting syndrome, but the mechanism by which they cause diarrhoea in man remains undefined. Candida causing diarrhea has been described in neonates and undernourished children, older patients, severely or chronically ill subjects, in intensive care units, and in patients under chronic antibiotic therapy. Additionally, SIFO or small intestinal fungal overgrowth is now recognized as an important cause of malabsorption and should be researched more. SIFO is usually a part of any immunodeficiency syndrome with other gastrointestinal features like oral and or esophageal candidiasis. So it is very important to know about role of yeasts in gastrointestinal tract in man, its alteration with respect to type of food consumed, and its role in gut dysbiosis.

Audience Take Away Notes

- The audience will get to know new information about gut mycobiome and its role in health and disease
- They can do novel research in this area, publish their results and get good jobs
- Yes, surely this research that other faculty could use to expand their research or teaching
- Yes, options to modulate gut mycobiome can be tried
- Mycobiome can be studied more
- List all other benefits
    - The role of yeasts and other fungi in gut can be known

Biography

(Dr. Sayan Bhattacharyya studied M.D. Microbiology at the PGIMER, Chandigarh, India and before that, graduated as MBBS in 2005 from Medical College, Calcutta, India. He then joined various reputed institutions and is now working as Associate Professor, Microbiology in All India Institute of Hygiene and Public Health or AIIH&PH, Kolkata. His career interest is in medical bacteriology, mycology, nosocomial infections and public health Microbiology. He is editorial board member of many international medical journals. He has published 82 papers in various peer reviewed indexed medical journals and has won several awards.)

Ying Yang*, Zhi Chen

State key laboratory for diagnosis and treatment of infectious diseases, National clinical research center for infectious diseases, collaborative innovation center for diagnosis and treatment of infectious diseases, the first affiliated hospital, college of medicine, Zhejiang university, 310003 Hangzhou, Zhejiang, China

Expansion and exploration of liver disorders

The relationship between liver and other organs, liver-related diseases and the time factors for pathogenesis of liver disease were analyzed and extracted from the research data of Chinese traditional medicine and modern medical science. The other organs related to liver contain spleen, pancreas, lung, and kidney and so on. The liver-related diseases contain eye diseases, depression, muscle cramp and skin diseases. The time factors for pathogenesis of liver disease contain nighttime, season and year. The diseases related to the time factors contain insomnia, season affective disorders and annual incidence. The number cases of liver disease in a prosperous liver year are significantly higher than that in a typical year. We provide literature and thought basis for the treatment of liver diseases from the balance of multiple organs, for diagnosis and treatment of liver-related diseases, for the early diagnosis and treatment of liver diseases, as well as for mass prevention and treatment from the time factors. Maybe we can expand and explore the research fields of liver disorders.

Keywords: Multiple organs, Liver-related diseases, The time factors for pathogenesis of liver disease, Mass prevention and treatment, Expand and explore.

Audience Take Away Notes

- This presentation this help the audience recognize treating diseases from other organs, liver disease-related diseases and liver onset of time factors
- Other faculty could use this research to expand their research or teaching
- It provides new treatments from other organs to assist in treating liver diseases

Biography

Dr. Ying Yang studied Infectious Diseases at the Zhejiang University, Hangzhou and graduated as Dr in 2015. She then joined the research group of Prof. Zhi Chen at the State Key Laboratory for Diagnosis and Treatment of Infectious Diseases. She received her MS degree in 2008 at the China Pharmaceutical University. At the end of 2015 at the State Key Laboratory for Diagnosis and Treatment of Infectious Diseases, she obtained the position of an Associate Researcher. She has published several research articles in SCI journals and has been granted four patents for licensed inventions.

Ravi Kant Avvari

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The mechanics of gastrointestinal motility – how do we digest the food in our bowels?

The small intestinal digestion has been a subject matter of interest to many researchers since its discovery. One of the first discoveries of bowel motion was reported by WB Cannon in his publication, "The movements of the intestines studied by means of the Rontgen rays," Am. J. Physiology 6 (1902). No wonder, the undulations in the bowels were hypothesized to be useful in digestion, but with no scientific reasons as to how it performs the task. These undulated, termed as peristalsis are been speculated to be involved in facilitating digestion by grinding, mixing and transferring the content down the bowels. The clinical studies show that these contractions play a key role in causing efficient digestion and if by any means, the normal motility patterns are disturbed, it may lead to digestive disorders. Mechanisms leading to digestion remains elusive, until recently; where studies signify the relevance of the contractions especially, the propulsive and non-propulsive contractions (segmentation) in the development of the shearing forces to forcefully agitate the contents and bring about the digestion. Studies indicate that the mechanical parameters such as Local Longitudinal Shortening (LLS), LLS spacing, fluid viscosity, velocity, wavelength of the wave, and occlusion play critical role in deciding as to how the contents are agitated and digested. This study presents an up-to-date knowhow in the area of mechanics of small intestinal peristalsis leading to digestion and pathology.

Keywords: Digestion, Small Intestine, Small Intestinal motility, Peristalsis, Local Longitudinal Shortening, Circular Contraction.

Biography

Dr. Ravi Kant Avvari is currently working as Assistant Professor at the Department of Biotechnology and Medical Engineering, National Institute of Technology, Rourkela. He has received Ph.D. in Biomechanics from Indian Institute of Technology (IIT), Kanpur followed by a post-doctoral research in the area of Nanotechnology from IIT Kanpur. He has 9 years of teaching, research and a short industrial experience in an interdisciplinary area covering biomechanics, biofluid mechanics, biomathematics, bionics, controls modelling, high performance computing and nanotechnology. He has published more than 40 papers in various peer-reviewed journals/book series and conferences. Dr. Ravi Kant Avvari has also served as Technical Consultant in the area of robotics, instrumentation, embedded systems, and control & automation to various industries - Akrivia Pvt. Ltd., Arnium Technologies Pvt. Ltd., RKA Technologies & Consultants Pvt. Ltd and CWS Hospital. He has received research funding from reputed organizations (SERB, BDTD-DST, and NSTEDC–DST).

Shrirang Kulkarni
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Isolated acute cholecystitis, with a rare diagnosis

Acute cholecystitis, though a common surgical presentation, may have a rare etiology such as IgG4-Related-Disease [1].Usually IgG4-Related-cholecystitis is associated with involvement of pancreas or biliary tree. Recently, we came across two cases of isolated IgG4-Related-Acute cholecystitis without pancreatic or biliary tree involvement, which were managed successfully. Review of literature showed that only 17 cases of IgG4-Related cholecystitis are reported till date, out of which only 5 are of isolated gallbladder involvement. These two cases operated by us are rare and underline the immense developments in histopathological sciences.

Audience Take Away Notes

- Knowledge of IgG4-Related cholecystitis is important to correctly diagnose and manage this entity. Recent developments in pathological sciences such as immunohistochemistry are of pivotal role towards the diagnosis

Biography

Dr. Shrirang Kulkarni graduated from Dr. Vaishampayan Memorial Government Medical College Solapur and completed MS from the Armed Forces Medical College Pune. He subsequently sought his DNB in Surgical Gastroenterology through the National Board of Examinations, India.
He currently serves as Associate Professor of Surgical Gastroenterology at the Army Hospital Research and Referral, New Delhi, India and is a renowned minimal access surgeon with keen interest in gastrointestinal malignancies. Apart from publishing a number of research articles, delivering faculty lectures, and serving as peer reviewer for about a dozen of national and international surgical journals of repute, he is Editorial Board Member for the Clinical Case Reports (Wiley), European Journal of Medical research (SpringerNature) and World Journal of Surgery (Springer).

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Artesunate ameliorate inflammasome-induced pyroptosis via inhibition of TLR4/NF-KB signaling trajectory in hepatic ischemia/ reperfusion injury

Artesunate (Art), an antimalarial drug, has demonstrated its protective effects against Ischemia/ Reperfusion (I/R) injury in various organs, but its potential function against hepatic I/R is still unknown. This study, hence, examined whether treatment with Art alone or in combination with rapamycin (Rapa), an MTOR inhibitor, can ameliorate hepatic I/R injury via targeting the NLRP3 inflammasome signaling pathway. Rats were allocated into Sham-Operated (SO), I/R, ART post-treated group, Rapa treated group, and combination group. Hepatic I/R were induced via occlusion of the hepatic pedicle using microvascular clamp for 30 min followed by 24 h reperfusion.

On the molecular level, all treatment regimens succeeded to hinder inflammasome assembly and activation which was associated by the inhibition of HMGB1/RAGE and TLR4/MyD88/TRAF6 signaling pathway to inactivate NF-□B and the production of its pro-inflammatory cytokines. Furthermore, this impact also involved a reduction in pyroptosis, necrosis, and apoptosis. Notably, Art's impact on each parameter greatly surpassed that of Rapa, and in the combination group, Art actually enhanced Rapa's influence. In conclusion, Art displays novel therapeutic potential in the management of hepatic I/R injury via inhibition on TLR4/NLRP3 signaling trajectory.

Keywords: Artesunate, TLR4, NF-KB, Oxidative stress, Pyroptosis.

Audience Take Away Notes

- Artesunate (Art) has a hepatoprotective role in hepatic ischemia/reperfusion injury
- Art alleviates hepatic I/R injury via inhibition TLR4/NF-KB/NLRP3 inflammasome
- The hepatoprotective effect was mediated by their anti-inflammatory, anti-oxidant, anti-apoptotic, anti-pyroptotic, anti-necrotic, and immunomodulatory characters
- It is noteworthy to mention that the add-on of Art has augmented the therapeutic benefit of Rapa in the hepatic I/R experimental setting

Biography

Mai El-Sayed Ghoneim is a lecturer of Pharmacology and Toxicology at faculty of pharmacy, university of Sadat City, Egypt. Dr. Mai has obtained her PhD in 2021 from Cairo University. Also, she works as a lecturer at Faculty of Pharmacy, Arab Academy for Science and Technology, Alexandria, Egypt. She has got a postdoc training for 4 months on CAR T cells at Roswell Park Comprehensive Cancer Institute, Buffalo, NY. She serves as a peer reviewer for different international journals. Her h-index is 3 with 60 citations. Her research interest is in Cancer immunotherapy, molecular and cellular pharmacology, autophagy and inflammasome.

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Immune Check Point Inhibitor (ICI) in colorectal CA (CRC)

ACRC are among the common cancers all over the world both in incidence and as a cause of death. A form of genomicinstability occurs through the insertion or deletion of repeating nucleotides during DNA replication and failure of the mismatch repair system to correct errors in nucleotide repeat markers, patients with functional MMR Mechanisms are MSS or PMMR. About 8-10 % of all CRCs have DMMR activity this is due to inactivating “events” to one of several DNA MMR genes MSH2 and MLH1 (the “major” DNA MMR genes) MSH6 and PMS2 (the “minor” DNA MMR genes) DMMR) Will present a cohort of patient with DMMR with highlight on response rate and survival supported by clinical response and images and lab test.

Audience Take Away Notes

- This data provides the framework for immuno- therapy in CRC
- Highlights the clinical impact of biomarker driven therapy in CRC
- The tumor agnostic mismatch repair deficiency population of CRC has the potential eliminate the need for chemotherapy, radiation and surgery

Biography

Kakil Rasul was worked senior consultant in Haem/ Oncology NCCCR, Hamad Medical Corporation Doha, Qatar and Associate prof. in clinical medicine at Weil Cornell Medical College in Qatar; Leading the Hepatobiliary pancreatic Multidisciplinary team Hamad Medical Corporation; Core Member of the Gastrointestinal Multidisciplinary team, Hamad Medical.

Corporation: Active member of ESMO, ASCO; Core member of both colorectal hepatobiliary MENA-NCCN guidelines panels for development of the guideline modifications; Member of the editorial board for the World Journal of Oncology Research and Advance in modern oncology research journal, journal of Hepatology research; Reviewer for many journal: ASCO educational book, British Journal of Medicine Research, Saudi Medical Journal, Annals of Saudi Medicine, and Qatar Medical Journal. Invited as speaker in many conferences international and regional and Publications Published more than 80 articles in peer reviewed international and regional journals.

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Long term memory deterioration associated with hippocampal microglia activation in chronic hepatic encephalopathy

Hepatic Encephalopathy (HE) is a neuropsychiatric syndrome resulting from impaired liver function. There is wide range of neuropsychiatric disturbances following HIM, ranging from minimal alteration in the personality to the complex changes in the brain function leading to impairment in the intellect, cognition and motor activity among others. Under cirrhosis condition, more than 80% of patients can develop HE known as Mild HE (MHE). MHE patients have no recognizable clinical symptoms, but when sophisticated neuropsychological and neurophysiological tests are applied a plenty of neurological and cognitive abnormalities are found. Indeed, learning and memory impairment is among the complaints of MHE patients. Several pathophysiological mechanisms are thought to underlie memory deterioration in HIM. However, the exact mechanism remains undetermined. Microglia activation and the subsequent neuroinflammation might be responsible for memory abnormalities observed in HE patients. The aim of the present investigation is to assess Long Term Memory (LTM) and identify microglial changes in chronic model of HE (CHE). The study was carried out in male Wistar rats with chronic liver failure induced by thioacetamide (TAA. 100mg/kg. B.W) administration. LTM function was assessed by Morris water maze test (MWM), together with an immunofluorescence study of the microglia activation marker; ionized calcium-binding adapter molecule 1 (Iba-1) within the hippocampal subfield; the Dentate Gyrus (DG). Our data showed impaired LTM in our CHE rats with significant elevation of microglia activation in the DG region of the hippocampus which might be responsible for such cognitive impairment. Hence, microglia activation and the subsequent neuroinflammation might underlie memory deterioration in HE patients.

Keywords: Hepatic encephalopathy, Long term memory, Memory impairment, Hippocampus, Morris water maze, Microglia activation.

Audience Take Away Notes

- Hepatic Encephalopathy (HE): Definition, pathogenesis, etiology and Classification
- Memory impairment in HE
- Long-term memory assessment in rat with chronic HE using Morris water maze test.
- We will discuss our results regarding microglia activation in the hippocampus as a potential mechanism underlying memory impairment in HE

Biography

Dr. El-Mansoury is a PhD in Neuroscience, faculty of Science, Chouaib Doukkali University, and El Jadida, Morocco. He graduated with a master degree in Pathophysiology from Cadi Ayyad University, Marrakech, Morocco in 2019.

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Molecular association between the IL-1RN variable numbers of tandem repeats polymorphism and helicobacter pylori infection in the sudanese population

Helicobacter pylorus (H. pylori) colonizes the mucus layer of the human stomach in nearly half of the world's population. In Sudan, a variety of sociodemographic factors contribute to a steady increase in the prevalence rate of H. pylori infection, which ranges from 48% to 65.8%, creating a significant public health challenge. As is obvious, there is an increase in demand for H. pylori eradication treatment in Sudan. Additionally, H. pylori are responsible for gastric cancer in approximately tens of millions of patients. Gastric cancer in Sudan represents one of the top causing deaths among cancers with about 686 cases per year and a 2.7 % mortality rate. However, there is no data in Sudan on the relationship between infection susceptibility and severity, and inter-individual genetic variations in IL-1RN, especially VNTR polymorphism which has been reported to increase the susceptibility to H. pylori and gastric cancer risk. Therefore, this observational study aimed to assess the association between the 86 BP VNTR polymorphism of the IL- 1RN gene and the susceptibility to H. pylori infection and gastric cancer in Sudanese patients. A total of 122 gastric biopsies were taken from patients who had been referred for endoscopy from different regions of Sudan. The DNA extraction was performed using the INNUPREP DNA Mini Kit. H. pylori infection was investigated by a specific 16S rRNA gene. IL-1RN VNTR polymorphism at intron 2 was genotyped using the PCR method and direct Sanger sequencing for random samples. Differences in frequency distribution among the categorical demographic characteristics of the study population were examined with □ 2 tests or Fisher's test. Associations of the IL- 1RN (86 BP VNTR polymorphism) genotype with H. pylori infection and endoscopic series were assessed by Odd Ratios (ORs) and 95% Confidence Intervals (CIs). Differences were considered to indicate statistical significance if P<0.05. Data were analyzed using GraphPAD Prism 5 software. Moreover, the association between IL1RN expression and gastric cancer was assessed computationally by using the Gene Expression Profiling Interactive Analysis (GEPIA) server. In this study, a lack of association was found between IL-1RN 86bp VNTR polymorphism and susceptibility to H. pylori infection (P=0.8412). However, there is a significant association between the carriage of the IL-1RN *2 allele and the risk of gastric cancer in the studied Sudanese population (16.67% versus 50%, P= 0.0086). In silico analysis revealed that the expression of IL-1RN in cancerous gastric tissue was higher than in normal gastric tissue (P<0.01). In conclusion, we found a lack of association between IL-1RN 86bp VNTR polymorphism and susceptibility to H. pylori infection. Independently carriage of the IL-1RN*2 allele contributes significantly to the risk of gastric cancer in the Sudanese population. To the best of our knowledge, this is the first study in Sudan concerning this issue

Audience Take Away Notes

1. Notwithstanding the relatively small sample size of the study population, our findings show that host genetics can be a useful tool for identifying high-risk individuals among dyspeptic patients
2. Also, our findings underscore the role played by host genetics in gastric carcinogenesis
3. Computational tools were found useful for studying the association between gene expression and gastric cancer

Biography

Dr. Abeer Babiker Idris is a Ph. D's degree holder in Microbiology-Medical Laboratory Sciences with more than three years of experience as a Teaching Assistant in the Department of Microbiology (Faculty of Medical Laboratory Sciences - University of Khartoum) and more than one year as a research scientist in Tubitak (Ankara, Turkey). Her research interests include molecular characterization of microorganisms, immunoinformatics, functional analysis of SNPs, and cancer research. She has published more than 8 research articles in SCI (E) journals and one book.

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Effect of rose oil on gastroesophageal reflux disease in comparison with omeprazole: A double-blind controlled trial

Gastro-Esophageal Reflux Disease (GERD) is one of the most common gastrointestinal complaints. The disease leads to troublesome symptoms such as heartburn and regurgitation and has a chronic, relapsing disease course.

Among various natural compounds that have been used in this condition, Rose oil, derived from Persian medical manuscripts and produced by maceration of rose petals in sesame oil for 25 days under sunlight, has been newly proposed as an effective treatment in gastric ailments.

The study is a randomized, double-blind controlled trial in which rose oil softgel was compared with omeprazole capsule on GERD.

The study population was 70 outpatients admitted to the GI clinic of Rasoul Akram hospital, Tehran, Iran. A gastroenterologist visited each patient, and GERD was diagnosed clinically.

Inclusion criteria included: Patients between 16 to 80 years old, patients having at least 12 weeks of history of GERD, and no history of peptic ulcer.

Exclusion criteria included: Appearance of adverse drug effects and loss of patient compliance. After achieving the ethical code and registering the trial in the Iranian Registry of Clinical Trials (IRCT), GERD patients enrolled in the study filled out the written consent form, and the research conditions were explained.

After that, the patients were randomly divided into two 35-patient groups: Group one: Rose oil softgel (two softgels TDS) + one placebo capsule (once daily). Group two: One 20 mg omeprazole capsule (once daily) + placebo softgel (two softgels TDS).

Three visits were accomplished for each patient; At the First admission, ten days later, and 20 days later. The Mayo Gastro-Esophageal Reflux Questionnaire (GERQ) was used to evaluate the manifestations in all three visits. Then, data gathering and analysis with SPSS software were done.

Results showed that Rose oil softgel could significantly improve four important manifestations of GERD, including the number of heartburn episodes and the number and severity of regurgitations, chest pain, and odynophagia ($p<0.05$). However, it did not indicate any significant difference between the two groups.

According to the results, Rose oil can alleviate cardinal manifestations of GERD. Moreover, as there is no significant difference between Rose oil and omeprazole, Rose oil softgel can be used as a trustable supplementary treatment along with proton pump inhibitors.

Audience Take Away Notes

- Our research introduces rose oil as a new herbal medicament for the treatment of GERD
- This achievement could be the subject for future researches in the treatment of GERD
- Further investigations on rose oil can clarify other aspects of rose oil therapeutic effects

Biography

Dr. Meysam Shirzad graduated from Iran University of Medical Sciences, Tehran, Iran, in medicine in 2004. He received his Ph.D. in traditional Persian medicine from Shahid Beheshti University of Medical Sciences, Tehran, Iran, in 2013. He has worked as an assistant professor at the School of Traditional Medicine, Tehran University of Medical Sciences, Tehran, Iran, since 2014. He has close collaborations with some international institutes in Austria (TEM Akademia), Greece (Akademia of ancient Greek and traditional Chinese medicine), and the USA (American College of Acupuncture and Oriental Medicine) in the field of traditional/complementary medicine.

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POSTERS

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GASTROENTEROLOGY

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The sustained overexpression of c-Myc enhances ablation of c-Met/EGFR signaling and progression of liver carcinogenesis in the c-Myc mouse model of liver cancer and in HepG2 cells

The expression of c-Myc, at both gene and protein levels, has been reported in Hepatocellular Carcinoma (HCC) and different tissue tumors. This protein functions in the control of cellular mass, differentiation, and apoptosis. To better understand the relationship between mitogenic stimulation of hepatocytes and c-Myc activity, a transgenic mouse model of HCC was investigated. Notably, the c-Myc transgene and protein were increased by up to 35-fold in HCC. A time-dependent degradation of the epidermal growth factor receptor (EGFR) was noted with nearly complete loss of this receptor in HCC, despite that the EGF itself was increased. The expression of associated mitogen-activated protein kinases remained unchanged, apart from P-ERK signaling, which was strongly induced. Moreover, Dual Specific Phosphatase 6 (DUSP6) and PPAR□, which inhibit PERK activity, remained at their basal levels. The expression of c- Met receptor and hepatic growth factor was reduced as was that of cyclin D1 and members of TGFß signaling, i.e. SMAD 2/3 and SMAD 6/7. However, PCNA and transforming growth factors beta were increased suggesting that c-MYC promotes cell cycle progression. This agrees with reduced pro-apoptotic Fas and p53 activity. To investigate the causes of EGFR degradation, the ubiquitin-ligase Nedd4-1 was studied. This protein ubiquinates activated Cdc-42-associated tyrosine kinase (ACK), and when bound to the EGFR, it facilitates its degradation in the presence of EGF. Notably, in HCC, Nedd4-1 and EGF were induced, while ACK and the mutant variant of ACK were reduced. This suggests successful degradation of ACK to provide a molecular rationale for EGFR degradation, and, consequently, maintain a highly differentiated HCC. Taken collectively, these results revealed that using anti-c-Myc drugs in HCC may be a promising as anti-cancer strategy and need further research.

Biography

Mahmoud Mohamed Elalfy Elhefnawy graduated from Ali mobark High School in Dikerness Dakahlia, Egypt. I graduated in veterinary medical Sciences and had master work at Mansoura University in forensic medicine and toxicology. Mahmoud Elhefnawy received a scholarship for PhD in Fraunhofer institute for toxicology and experimental medicine

(2008-2011). This PhD degree emphasized Molecular Biology, Genetics and imaging modalities in liver cancer with co-operation with excellent cluster research of pharmaco-toxicogenomics institute, pathology and radiology institutes of medical school of Hannover Germany. I later complete my research in University of Mansoura University, Egypt and still share in education, research and reviewing of forensic medicine and toxicology specialist on Mansoura University till now I have cooperation research with Zigzag University, Alexandria University and also in KSA as Abha University. I share in reviewing and also as editorial board of many journals.

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Chronic diarrhea? Never overlook gastrointestinal amyloidosis

Introduction: Amyloidosis is an extremely rare disease frequently diagnosed at an advanced stage, resulting in significant morbidity and mortality. Gastrointestinal amyloidosis can present with unintentional weight loss, diarrhea, abdominal pain, malabsorption, gastroesophageal reflux, and GI bleeding. We present a case of chronic diarrhea in a patient with gastrointestinal amyloidosis due to long-standing chronic inflammation.

Case presentation: A 74-year-old female with a past medical history of Hepatitis C with cirrhosis, chronic recurrent bronchiectasis, and MAC complex colonization in the lung, untreated latent tuberculosis, and systemic lupus erythematosus presented with 7-10 episodes of watery diarrhea worsened with food intake and occasionally associated with hematochezia for past four months. She was admitted twice for similar complaints in the past three months. She has had a 20-pound weight loss in 4 months. Stool studies were unremarkable. Gastroenterology was consulted for chronic diarrhea and weight loss. Gastroduodenoscopy revealed gastritis. A colonoscopy revealed erythema and slightly raised mucosa throughout the large bowel. The pathology report from gastric and intestinal mucosa biopsies showed amyloidosis. Serum protein electrophoresis was negative, ruling out primary amyloidosis, indicating likely AA amyloidosis from long-standing inflammation. The patient was started on antiemetic, loperamide, rifampin, and parenteral nutrition, with only a slight improvement in symptoms.

Discussion: Amyloidosis is an extremely rare disease frequently missed or diagnosed at an advanced stage, resulting in significant morbidity and mortality. Amyloidosis develops when abnormal protein fibrils deposit in the mucosa. It can present with unintentional weight loss, diarrhea, abdominal pain, malabsorption, gastroesophageal reflux, and GI bleeding. Secondary AA amyloidosis can be a complication of any long-term inflammatory diseases like collagen diseases and infectious disorders. However, as underlying conditions are better managed, the prevalence of AA amyloidosis is decreasing. Endoscopic appearance is subtle and non-specified, even with extensive amyloid deposition. Congo-red staining on tissue is the gold standard for diagnosing amyloidosis. Treatment should address the symptoms and underlying conditions causing amyloid deposition. Chronic diarrhea and protein-losing enteropathy caused by gastrointestinal amyloid can be treated with long-acting somatostatin analogs or octreotide and total parenteral nutrition. Loperamide, opiates, and empiric antibiotic treatment for small intestinal bacterial overgrowth are other options for diarrhea treatment. The prognosis is influenced by the underlying disease that causes amyloid production. Because of the non-specificity of symptoms that mimic more common conditions, there is a risk of diagnostic delay. Clinicians should thoroughly investigate the gastrointestinal tract in patients with refractory diarrhea and weight loss to rule out gastrointestinal amyloidosis after other diagnoses have been ruled out.

Audience Take Away Notes

- The above case report explains the presentation of gastrointestinal amyloidosis presenting as chronic diarrhea due to long standing inflammation
- This article emphasizes on the evaluation of the causes of chronic diarrhea and amyloidosis being a rare but important cause that needs to be considered
- We describe the causes, work up for chronic diarrhea, diagnosis, and treatment of amyloidosis

Biography

Dr. Katamreddy studied Medicine at the Sri Venkateswara Medical College, Tirupati, India and graduated as MBBS in 2020. She then joined the Internal Medicine residency at West Anaheim Medical Center, California, USA in 2021. She is currently in second year of Internal Medicine residency.

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Scirrhous carcinoma in disguise: Masked by chronic pancreatitis and alcohol abuse with malnutrition- A case report

Introduction: Chronic pancreatitis is an irreversible inflammatory condition that results in malnutrition due to pancreatic insufficiency. Scirrhous carcinoma is a type of adenocarcinoma of the stomach that can present with gastric outlet obstruction and subsequent malnutrition. We present a case of severe malnutrition initially attributed to chronic pancreatitis and alcohol abuse with underlying gastric adenocarcinoma, which could have been easily missed due to the overlapping symptoms.

Case presentation: A 57-year-old female with a history of alcohol abuse and chronic pancreatitis presented with intractable nausea and vomiting for two weeks and 16 pounds of weight loss in the past six months. No history of foul-smelling stools or diarrhea. On admission, her BMI was 11. A CT scan of the abdomen revealed chronic pancreatitis. Her symptoms were initially attributed to chronic pancreatitis and alcohol abuse. She was put on lipase and a calorie-restricted diet of 800 calories/day to prevent the re-feeding syndrome. Her symptoms initially improved but returned two days later. Gastroenterology was consulted, and EGD was performed, which revealed pyloric narrowing and an inability to traverse the endoscope. Mucosal biopsies were unremarkable. A CT abdomen with oral contrast revealed mucosal thickening of the antrum with narrowing of the lumen, indicating scirrhous carcinoma. She underwent endoscopic ultrasound with biopsy, which revealed adenocarcinoma involving the stomach.

Discussion: Chronic pancreatitis is a chronic inflammatory condition with irreversible fibrosis. It results in decreased absorption of fats and fat-soluble vitamins, as well as protein malnutrition and vitamin B12 deficiency. Malnutrition is common in chronic pancreatitis due to abdominal pain, vomiting, diarrhea, and alcohol abuse. Diarrhea and weight loss can be caused by conditions other than Pancreatic Exocrine Insufficiency (PEI), and PEI can be present even without steatorrhea. Nutrition, laboratory markers, routine BMI measurements, and stool frequency are diagnostic of PEI. Treatment includes lipase supplementation, frequent meals with fat intake, fat-soluble vitamins, smoking cessation, and alcohol abstinence. Most gastric cancers are adenocarcinomas. Scirrhous carcinoma is a type of adenocarcinoma of the stomach that can thicken the stomach wall and presents with gastric outlet obstruction. In most cases, a pinpoint opening consistent with a tight pyloric sphincter with no ulcerations or masses is noted. Diagnosis can also be made by computed tomography, magnetic resonance imaging, and positron emission tomography. Surgery or chemoradiation therapy is the most common treatment. Due to overlapping symptoms of chronic pancreatitis and scirrhous carcinoma, there is the possibility of missing a fatal diagnosis. Scirrhous carcinoma should be considered if concentric, smooth stricture, absence of pyloric or gastric ulcerations, and normal duodenal bulb are noted, even if biopsies are non-specific. If there are symptoms of gastric outlet obstruction and a lack of fatty stools, diarrhea, or postprandial pain, rule out causes like scirrhous carcinoma or other malignancies.

Audience Take Away Notes

- The above case report explains the presentation of Scirrhous carcinoma of stomach which was masked by similar symptoms of overlying pancreatic cancer. We also highlighted the radiological features of that points towards Scirrhous carcinoma
- This article emphasizes on the early diagnosis of the scirrhous carcinoma despite the presentation like chronic pancreatitis to avoid delays in diagnosis
- We describe the overlapping features of both the conditions to prevent delayed diagnosis

Biography

Dr. Katamreddy studied Medicine at the Sri Venkateswara Medical College, Tirupati, India and graduated as MBBS in 2020. She then joined the Internal Medicine residency at West Anaheim Medical Center, California, USA in 2021. She is currently in second year of Internal Medicine residency.

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