

Volume: 12

Breastfeeding in prevention of postpartum acute pancreatitis (AP). A Sicilian population-based case-control study

Alberto Maringhini

ARNAS Civico, Palermo Italy

Background

Gallstones acute pancreatitis has increased incidence in young women in the 2 years postpartum. Middle aged women with longer period of breastfeeding have less hospitalization for gallbladder disease.

Methods

We identified all sicilian women who delivered (2013-2016) and had acute pancreatitis within 2 years postpartum, reviewed their medical records and for each case we matched 4 women of the same age (+ 5 years), date (+ 30 days) and hospital of delivery without acute pancreatitis. Univariate and multivariate logistic regression was used to estimate the Odds Ratio (OR) to assess associations between acute pancreatitis and clinical variables.

Results

In the 74 women with AP and 298 controls at univariate analysis: > 6 months oral contraception history (p<0.01 - OR 3.30 - 95% CI 1.33-8.16); previous biliary disease (p<0.001 - OR 5.90 - 95% CI 1.98-17.57) and smoking (p=0.035 - OR 2.04 - 95% CI 1.04-4.0) were predictors of acute pancreatitis; amenorrhea > 3 months (p<0.001 - OR 0.34 - 95% CI 0.19-0.59) and breastfeeding > 3 months (p<0.001 - OR 0.07 - 95% CI 0.03-0.14) were protective. At multivariate previous biliary disease (p=0.011 - OR 5.49 - 95% CI 1.48-20.38) was predictor and breastfeeding >3 months (p<0.001 - OR 0.06 CI 95% 0.03-0.14) was protective for acute pancreatitis.

Conclusions

Women without a history of biliary disorders and who breastfeed for at least 3 months have reduced risk to develop AP in the 2 years after delivery.

Biography

Alberto Maringhini, M.D. is in biliary and pancreatic diseases. He started with a peculiar interest on portal hypertension and bleeding in cirrhotics and then in diagnosis of portal hypertension and hepatocellular carcinoma. Then he started his interest on gallbladder and pregnancy, acute pancreatitis diagnosis and prognosis, pancreatic cancer clinics and epidemiology. Cronic pancreatitis laboratoruy diagnosis and clinical presentation. Finally, acute pancreatitis and pregnancy and breast feeding in prevention of post partum acute pancreatitis. His clinical work in internal medicine and mainly in gastroeneterology started in 1977 and nowadays he is directore of interbal medicine in the largest hospital in Sicily and in southern Italy after "Cldarelli Hospital" in Naples.

2

alber.ghini55@gmail.com

Volume: 12

Intestinal Parasite: Prevalence Of Intestinal Parasitic Infection, Parasitic Infection In Pregnant Women

Celine Ogunleye

General Medicine/Physician Specialist, Sumy Medical University, Ukraine

Introduction: The major public health problems in the world are that of intestinal parasites (Helminths and protozoans). Parasites composed of helminths (Ascaris lumbricodes, Ancylostoma duodenale, Trichuris trichiura and schistosoma spp.) and protozoa such as Entamoeba histolytica, plasmodium falciparum and Giardia lambliarepresent the main pathogenic parasites that lead to significant death in the world. These parasites are very epidemic in population attached with low economic status, poor hygiene , oral faecal transmission , skin penetration by favoring larvea and low household income. These intestinal parasites have their various importance and act ascasual agents for gastrointestinal illness such as acute inflammation, ulceration, abdominal distension, dysentery, diarrhea and lack of appetite. Parasite diseases in general can be transmitted naturally from one person to another i.e they are communicable diseases.

Statement Of Problem: The most vulnerable groups of peopleare pregnant women and often experience more severe infection due to their immune suppression during their pregnancy.

Protozoa and soil helminths transmits intestinal parasitic infection faeco-orally through contaminated sources. There are serious adverse outcomes associated with intestinal parasitic infection for both the mother and the unborn baby. A lot of recorded unexplained miscarriage are due to undiagnosed tropical diseases.

Intestinal parasite causes malnutrition or anemia posing as a great danger to the pregnant mother therefore making the pregnancy difficult.

Objective: The objective of this study was to determine the prevalence, detection and identification of intestinal parasite and it associated factors among pregnant women.

Methodology And Theoretical Orientation: All pregnant women attending the antenatal clinic for the first time were randomly selected and included. However, pregnant women undertaking antihelmintic drugs during the time of data collection were excluded. 0.5g of freshly passed stool sample were collected individually among pregnant in the health institution using clean plastic cups. The samples were processed for microscopic examination using formol ether concentration technique (FECT). The stoolcups were labelled by serial card numbers for proper data collection. The stool examination was done in the health institution laboratory. To ensure reliable data collection, specimen were further cross checked by principal investigators. To eliminateobserver been bias, stool samples/slides were randomly selected and examined independently with two experience laboratory professionals.

Biography

Dr Celine Ogunleye, is a born citizen of Nigeria and also a permanent residence holder in Ukraine, she completed her first degree in General Medicine/Physician Specialist from Sumy Medical University, Ukraine in 2018. She is presently living in Slovakia and also pursuing her Master Degree Course in Public Health from Liverpool John Moores University. Owing to the passion she had since she was a child to care for people because of how she witnessed doctor's responsibility and also been treated for 2 minor operations made her realize how medicine is not purely a solo or easy effort but with combination of hard work & determination. This gave her the zeal to be motivated to become a Medical Doctor & help to save life's in the society around her and not just that, to also make research studies and find solutions towards health care sector that will help & influence humanity.

3

ogunleye.omotola@gmail.com

Volume: 12

The impact of sarcopenia on surgical and oncological outcomes of elderly patients undergoing pancreatic surgery

Lucia Moletta

University of Padova, Italy

Pancreatic cancer is the disease with the highest mortality rates among all of the oncological pathologies; according to its high incidence and the difficulty in finding effective treatment strategies, it is expected to become the third cause of oncological death in the next decade in first world countries. Since pancreatic cancer is very often associated with cachexia, many studies are focusing on the relationship that nutritional status and muscle mass alterations may have with the survival rates of affected people. Aim of the Study

The study consists in preoperatively assess the nutritional status and the body composition of a group of patients with pancreatic cancer in order to outline the relationship of these two parameters with the surgical outcome and survival rate. Spefically, it aims to determine if myosteatosis and sarcopenia are independent prognostic factors of surgical outcome and survival rate in older people. Secondary objectives consist in: studying the relationship between risk factors and the pathology onset; studying the impact of comorbidities and surgical and clinical outcome; studying the nutritional status and the body composition alterations of people with pancreatic cancer.

Materials and Methods

97 patients with pancreatic cancer who underwent surgery between 2014 and 2022, either with curative or palliative results, were enrolled in the "Cancer-cachexia" study protocol. They were all preoperatively assessed for anthropometric measures, past and

recent medical history, nutritional and performance 5 status, biohumoral markers and for the conditions of myosteatosis and sarcopenia through the execution of a CT (computed tomography) scan. They were later divided into two subgroups depending on their age (< or > 70 years old) to compare the influence of myosteatosis and sarcopenia among non elderly and elderly people. Univariate and multivariate analyses were conducted.

Conclusion

From the results obtained in our study, the age of the patients does not seem to be related either to greater postoperative morbidity or to a decrease in the survival of patients undergoing surgery for pancreatic cancer. On the other hand, a role of myosteatosis in patient survival is shown, with a tendency to decrease it in patients with myosteatosis, although this result does not reach statistical significance.

Biography

Dr. Lucia Moletta graduated at the University of Padua Medical School in 2008, and finished his Residency in General Surgery (2015) at the same University. Since 2017, she had been working as research associate at the Department of Surgical, Oncological and Gastroenterological Sciences (DISCOG), Chirurgia Generale 1, University and Hospital of Padua. Her main interest lies in the oncologic diseases of the pancreas, as far as both the diagnosis and surgical treatment are concerned and in the oncologic diseases of the esophagus and stomach. She carries out research into new treatment methods for pancreatic cancer, minimally invasive pancreatic surgery, and new diagnostic and therapeutic approaches for pancreatic cysts, pancreatic carcinoma, esophageal and gastric tumors. She is member of several national and international scientific societies: the International Association of Pancreatology (IAP), the European Pancreatic Club (EPC), The Italian Association for the Study of the Pancreas (AISP), the Italian Association of Oncologic Surgery (SICO), the Italian Society for the Study of Esophageal Diseases (SISME). She is member of the Editorial Board for the journal "EC Gastroenterology and Digestive System". She has been a reviewer for the following journals: Journal of Clinical Medicine, Annals of Surgical Oncology, Gastroenterology Research and Practice and Cancers. She is Author and Co-Author of 44 papers dealing with oncologic surgery.

4

lucia.moletta@unipd.it

Volume: 12

Gene set-level meta-analysis of intrahepatic cholangiocarcinoma

Manisha Mandal

MGM Medical College, India

Catatement of the Problem: Intrahepatic cholangiocarcinoma (ICC) is the second most common liver cancer constituting J10% of all cholangiocarcinomas. ICC is fast growing treatment-refractory disease with poor prognosis. However, genetic mechanisms underlying ICC are still few and often limited to select genes. Therefore, the current study was carried out to gain detailed insight into the transcriptomic profile of ICC by RNA-Seq technology to identify new therapeutic opportunities. Methodology: For gene expression meta-analysis of ICC, the GEO RNA-seq data sets were fetched from GREIN (http:// www.ilincs.org/apps/grein/). A total of 3 datasets were selected to retrieve the associated metadata. The raw data counts were subjected to downstream statistical analysis (https://www.expressanalyst.ca/gene) for gene annotation, exclusion of features with > 50% missing values, and estimating them using feature-wise KNN method. A 25% filtering of both variance and relative abundance were applied followed by Log2 scale normalization. Limma was applied to compare ICC with normal cases, with p value <0.005. ComBat program was applied for adjusting data for batch effects. The validation of different datasets was achieved using Cochran's Q tests to incorporate heterogeneities across the study model. Findings: A total of 101 samples with 18435 matched features were compared between ICC and normal cases which yielded 173 (57 up and 116 down regulated) highly significant DEGs (p value=1.0E-16). A total of 16 KEGG pathways (p<0.05) were enriched related to caffeine metabolism (CYP1A2, NAT2, XDH), steroid biosynthesis (CYP1A2, CYP7A1, CYP1A1, SRD5A2, UGT1A4), chemical carcinogenesis (CYP1A2, NAT2, CYP1A1, UGT1A4, GSTA1), metabolic pathways, bile secretion (CYP7A1, SLC2A1, ABCC4, SLCO1B3), metabolism of drugs and xenobiotics by cytochrome P450, central carbon metabolism in cancer, etc. Liver-Type Glutaminase GLS2 and PKM (Pyruvate Kinase M1/2) were the most significantly up regulated and downregulated genes with fold change values 5.0858 and -5.584 respectively. Conclusion & Significance: Gene expression meta-analyses help in the identification of molecular signatures and functional enrichment correlated with phenotypic differences between ICC and normal individuals.

Biography

Manisha Mandal has her expertise in the field of molecular epidemiology of infectious and non-infectious diseases, data analysis using bioinformatic approaches towards drug development, disease modelling, next generation sequencing. She has published more than 70 research articles in her research field in different journals, one book, and presented several papers in different conferences.

debmanisha@rediffmail.com

Volume: 12

The HDAC Inhibitor, SAHA, Prevents Colonic Inflammation by Suppressing Pro-inflammatory Cytokines and Chemokines in DSS-induced Colitis

Noor Ali Mohmand (DVM, MSc, Ph.D.)

Associate Professor and Dean, Herat University, Afganistan

Inflammatory bowel disease (IBD) is an inflammatory disorder of the gastrointestinal tract that is caused by multiple factors, including dysfunction of the immune system and genetic and epigenetic alterations. Aberrant epigenetic regulation, especially histone acetylation, was found in biopsies from IBD patients and mouse models of colitis, suggesting that an epigenetic treatment approach may be useful for IBD therapy. Therefore, we investigated the effects of the histone deacetylase (HDAC) inhibitor, suberoylanilide hydroxamic acid (SAHA), in a mouse model of dextran sulfate sodium (DSS)-induced colitis. C57BL/6 mice were treated with 1.5% DSS for 5 days and/or SAHA (25 mg/kg BW/day) for 26 days. Levels of mRNA for the pro-inflammatory cytokines, interleukin (IL)-6 and tumor necrosis factor (TNF)- α , and the chemokines, Ccl2, were examined by qRT-PCR. CD11b, a marker of dendritic cells, macrophages, and monocytes, as well as Ccl2 expression, were examined by immunohistochemistry. IL-6, TNF- α , and Ccl2 gene expression peaked on day 5 in DSS-treated mouse colon, whereas SAHA treatment significantly decreased pro-inflammatory gene expression. Ccl2 protein expression resembled Ccl2 gene expression results. Moreover, localization of CD11b showed that migratory inflammatory cells were dramatically decreased by SAHA treatment compared to DSS-treated mouse colon. Thus, we conclude that the HDAC inhibitor, SAHA, attenuates inflammatory changes in DSS-induced colitis by suppressing local secretion of pro-inflammatory cytokines and chemokines and also by suppressing mobilization and accumulation of inflammatory cells.

Keywords: Inflammatory bowel disease, histone deacetylase inhibitor, dextran sodium sulfate, pro-inflammatory cytokines and chemokines

Biography

Noor Ali was born in a religious family of Herat in 1984. He got his elementary and secondary education at Jamoriat High School of Shindad District at Herat in 2001. He started his higher education by joining Department of Veternary at Agriculture Faculty of Herat University in 2002. Accomplishing his bachelor's degree successfully, he became a faculty member in 2006. Noor Ali Mohmmand earned and completed his master's degree from University of Karnataka in Bangalore India in 2010. Then he got his doctorate form University of Mezaki in Japan in 2018. He published more than 14 academic and research-based papers in different journals. he became acting dean of Veternary Faculty in 2018.

noor_ali_mohmand@med.miyazaki-u.ac.jp

Volume: 12

The HDAC Inhibitor, SAHA, Prevents Colonic Inflammation by Suppressing Pro-inflammatory Cytokines and Chemokines in DSS-induced Colitis

M.D. Rene A. Amadore Jr.

East Avenue Medical Center, Philippines

A³⁹-year-old woman presented with cushingoid features was worked up and diagnosed to have ACTH-independent Cushing's syndrome. Computed tomography of the whole abdomen revealed left adrenal mass. She was scheduled for elective laparoscopic left adrenalectomy, however, a few days prior to the procedure, the patient had hematochezia and was admitted earlier than scheduled. Colonoscopy done revealing multiple ulcers on terminal ileum to which biopsy and genexpert done revealing Mycobacterium tuberculosis infection. Patient underwent laparoscopic left adrenalectomy on the same admission which revealed adrenal adenoma on histopathology.

Keywords: Cushing's syndrome, Mycobacterium tuberculosis infection, Adrenal adenoma

Biography

Rene A. Amadore is working as a researcher in the Department of Internal Medicine from the East Avenue Medical Center in Philippines. He has published many reserach papaers in international journals. He is currently working as a professional researcher in the field of Internal Medicine. reneamadorejr@gmail.com

7

Volume: 12

The Efficacy of Ursodeoxycholic Acid in the Treatment of Non-alcoholic Steatohepatitis: A 15 year Systematic Review

Prof. Higinio T. Mappala

Jose Reyes Mem. Medical Center, Manila, Philippines

Non-alcoholic fatty liver disease (NAFLD) is one of the most common forms of chronic liver disease which may progress to non-alcoholic steatohepatitis (NASH).

Currently there are no therapeutic strategies for such disease. Only lifestyle modification through diet and exercise were proven to afford some benefit in patients with NAFLD. No pharmacologic agents have so far been approved for the treatment of NAFLD or NASH. Therefore, most clinical efforts have been directed at treating the components of metabolic syndrome, namely obesity, diabetes, hypertension and dyslipidemias. Other interventions are directed at specific pathways potentially involved in the pathogenesis of NAFLD, such as insulin resistance, oxidative stress, pro-inflammatory cytokines, apoptosis, bacterial overgrowth, and angiotensin pathway. However, since the FLINT study, the largest NASH study to date, no drug has ever come close to Obeticholic acid except Ursodeoxycholic acid (UDCA). This lecture aims to show the potential of Ursodeoxycholic Acid (UDCA) as a promising therapeutic option for NAFLD.

This is a 15-year Systematic Review of 1548 randomized controlled trials on the effects of Ursodeoxycholic Acid on Non-Alcoholic Fatty Liver Disease. (NAFLD).

Ursodeoxycholic Acid may yet prove to be a targeted treatment for Non-Alcoholic Fatty Liver Disease.

Keywords: Cushing's syndrome, Mycobacterium tuberculosis infection, Adrenal adenoma

Biography

Professor Higinio T. Mappala is a Full-time Medical Specialist IV and Administrator at the Jose Reyes Memorial Medical Center, Manila, Philippines, A Board-certified Internist, Gastroenterologist, Endoscopist, Clinical Nutritionist and Clinical Toxicologist; has served as a University Professor and Dean of 2 Medical Schools; a highly-regarded Researcher, with more than 70 scientific papers, and more than 30 international publications. A former Board Director of the Philippine Societies of Gastroenterology and Digestive Endoscopy; Editorial Board member, American Journal of Biomedical Science and Reearch; Online Research rater of McMaster, Canada and Online Dynamed Research peer-reviewer; a Young Investigator's Awardee at the World Congress and Asia-Pacific Congress of Gastroenterology; A nominee as one of the Top 100 Leading Physicians 2018, Cambridge Biographical Institute. He is a focused lecturer on NAFLD in local and international conventions for 20 years, with 51 invites as Keynote Speaker in International Conventions this year and 34 advanced invites for 2020.

genemapmd@yahoo.com

Volume: 12

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

Orestis Ioannidis

Aristotle University of Thessaloniki, Greece

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.

Biography

loannidis 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.

telonakos@hotmail.com

Volume: 12

View of the Non-Alcoholic Fatty Liver in Non-Obese Patients from MAFLD Perspective

Michel González Sánchez

Family Medicine Specialist, MINSAP, Cuba

B ackground: A novel concept consensus by an international panel of experts recommended a change in name for NAFLD to metabolic (dysfunction) associated fatty liver disease (MAFLD). The new definition is a landmark in hepatology bringing a new way of thinking about diseases of the liver that are associated with fat deposition and metabolic dysfunction Importantly, this "MAFLD definition" avoid the dichotomous view of NAFL and NASH, since it is based in "positive" criterion (evidence of hepatic steatosis) instead of "negative" criterion hard to exclude. Lean NAFLD is defined as hepatic steatosis with a BMI < 25 kg/m2 in non-Asian people or BMI < 23 kg/m2 in Asians. At present, it is not possible to define a phenotype of Metabolic Healthy Obesity (MHO) due to the lack of consensus. This disparity is due to the difference in defining metabolic health found by some authors when studying the phenotypes of subjects with unhealthy metabolic weight. We generally associate the development of NAFLD Patients with Obesity, but in opposition to this, lean patients can also develop this disease, especially when we find visceral obesity associated with a strong genetic predisposition and an altered and unhealthy diet pattern. Here is the importance of addressing important concepts such as metabolic unhealthy normal weight, MUHO, MHO, as well as the interrelationship that all of them have with the distribution of body fat. For this reason, for the sake of understanding and finding a clinical-pathophysiological relationship of the disease, I try to follow a route which helps me to better understand said relationship of importance in the study of Metabolic Association of Fatty Liver. It is essential to start from the term MAFLD which follows 2 routes, one in obese patients and the other in non-obese patients.

Keywords: MAFLD; Lean NAFLD; Lean MAFLD; Non obese NAFLD; MHNW and MONW; Metabolic Health and Metabolic Healthy Obese.

Biography

Michel González Sánchez, 1st Degree Specialist in Family Medicine, Master in Bioethics from the "San Vicente Martir" University of Valencia, Diploma in Internal Medicine, Member of the Global Liver Institute and the American Liver Foundation, United European Gastroenterology Associate Medical, Santa Clara, Villa Clara, Cuba.

michel91gz@gmail.com

Volume: 12

Role of probiotics and prebiotics in the management of gastrointestinal disorders from SARS-CoV-2 and bacterial secondary infections

Prof. Shyamapada Mandal

University of Gour Banga, India

The COVID-19, caused with the infection of SARS-CoV-2, has been a pandemic since December 2019. The virus, SARS-CoV-2, primarily infects lungs, and also causes dysbiosis of the gut microbiota, leading to the disruption of immune homeostasis (by invading gut epithelium using angiotensin-converting enzyme 2), thereby facilitating bacterial secondary infections causing gastrointestinal disorders. These events lead to a condition called blood-brain-barrier (BBB) dysfunction, which causes inflammation of the brain, and leads to severe and/or prolonged COVID-19. Prebiotics (including those derived from plant sources) —the components that enhance the viability and functionality of probiotics (in the gut),— act synbiotically thereby restoring the gut homeostasis and the BBB functionality as well, through gut-microbiota-brain axis. Thus, COVID-19 and the associated bacterial secondary infections causing gastrointestinal disorders might be prevented with probiotics as well as prebiotics supplementations.

Biography

Shyamapada Mandal is Professor and Head of the Department of Zoology, and Dean (Science), University of Gour Banga, India. He is working on infectious diseases, probiotics, and genomics and bioinformatics research. He did pre-PhD, PhD, and post-PhD research under the guidance of Professor Nishith Kumar Pal at the Calcutta School of Tropical Medicine, India. He has published 118 articles with eight book chapters. He is life member of IAMM and IASR, India, and fellow member of SASS, India. Eight national academic and research awards have been conferred to him. He has guided 52 post graduate students; supervised three MPhil and three PhD students, and supervising 7 PhD and one MPhil students. Professor Mandal is among the world's top 2% scientists as per the survey of the Stanford University, published in PLOS (Public Library of Science) Biology (October, 2020). He is featured in the top 2% world scientists list for second consecutive time as published by the Stanford University-Elsevier BV (October, 2021).

samtropmed@gmail.com

Volume: 12

Peptic Ulcer Disease

Osei Frank Kofi

V.N Karazin Medical National University, Ghana

Peptic ulcer occurs when there is an erosion in the lining of the digestive tract. Or we can say it occurs when there is a breech in the lining of the alimentary canal. The cause of peptic ulcer disease occurs as a results of the imbalance of the defensive and offensive mechanisms with regards to the gastroduodenal mucosa. Many say the cause is usually H.Pylori infection as concluded in 1994 and/or excess use of non-steroidal inflammatory anti-inflammatory agents. Symptoms usually depends on the location of occurrence of the ulcer Generally, there is epigastric pain, heartburn, nausea, vomiting. Investigations done to confirm include upper G.I endoscopy, X-ray With barium, blood grouping Complications include perforation, penetration, malignancy, outlet obstruction. Management will include lifestyle modification, pharmacological treatment and surgery.

Biography

Osei Frank Kofi is a permanent residency holder in Ghana. He is pursuing his MBBS in the V.N Karazin Medical National University, Ghana. oseifrank16@gmail.com

Gastroenterology Conference 2022

12

Volume: 12

Gluten Degradation by the Gut Microbiota of Ulcerative Colitis Patients

Emma Olivia Schultz Harringer

University of California San Francisco, USA

Background: Several studies have reported improved disease symptomology in ulcerative colitis (UC) patients consuming a gluten free diet. This observation coupled with diversity depletion in the gut microbiota of UC patients led us to hypothesize that UC-associated enteric microbes differentially metabolize dietary gluten to produce immunogenic products that promote inflammation.

Methods: Gluten concentration in stool was determined using gluten-specific ELISA, and gluten intake was assessed by food frequency survey in UC (n=12) and healthy controls (HC; n=13). Gluten-metabolizing bacteria were isolated on minimal media supplemented with 1% gluten from UC and HC and identified by 16S rRNA profiling. Cell-free culture media from gluten metabolizing gut bacterial isolates was assessed for immunogenicity in vitro using HT29 colonocytes.

Results: Compared to HC, UC patients didn't consume gluten differently (Mann-Whitney; p > 0.10) and exhibited equivalent levels of gluten in their feces (Mann-Whitney; p=0.163). The profile of gluten-degrading bacteria isolated from UC stool was distinct (Chi-square; p = <0.0001). Compared with Enterococcus isolates, products of gluten degradation by Bacillus strains induced higher IL8 and lower occludin (Mann-Whitney; p=0.002 and p=0.059 respectively) gene expression in colonocytes irrespective of whether they originated from UC or healthy gut.

Conclusion: Members of HC and UC microbiota exhibit gluten-degrading ability, metabolites of which influence genes involved in inflammation and barrier function in enteric colonocyte cultures. Preliminary findings of this study warrant further investigations into the mechanisms by which gut microbiota contribute to UC pathogenesis through gluten degradation.

Biography

Emma Harringer has completed her Medical Degree at the age of 27 years from University of Southern Denmark and her predoctoral fellowship from University of California San Francisco, supported by the Lundbeck Foundations DARE programme.

She is starting her medical carreer at Hvidovre Hospital as a gastrointestinal surgeon this November and are hoping to join your International Conference on Gastroenterology and Liver next summer.

emma.harringer@gmail.com