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13th International Conference on Clinical Gastroenterology & Hepatology

& 2nd International Conference on

Digestive Diseases

December 07-08, 2017 Madrid, Spain

Keynote Forum Day 1

Clinical Gastro 2017 & Digestive Diseases 2017

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Rani Kanthan

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Dysplasia in inflammatory bowel disease in 2017

espite increased general awareness, colorectal cancer (CRC) remains the second leading cause of cancer-related death in Canadian men and with a third of CRC patients dying from this disease. These are grim statistics given that this cancer is a well-studied malignancy with defined risk factors, a slow progression, and pre neoplastic lesions that can be detected and treated by colonoscopy. In this context, it is well-recognized that patients with long-standing inflammatory bowel disease (IBD) colitis have a 2.4-fold higher risk of developing colorectal cancer (CRC) than the general population. Surveillance colonoscopy is recommended to detect dysplasia, the precursor of CRC, in order to potentially prevent or cure CRC. Colonoscopy is the gold standard examination to screen for colorectal neoplasms in patients without IBD in whom it has relied on careful examination of the mucosa for 'polyps' "visible dysplasia" to interrupt the 'adenoma-carcinoma' sequence. In contrast, routine colonoscopy for surveillance of dysplasia in IBD has relied on extensive random biopsies to identify "invisible dysplasia" to interrupt the "inflammation-dysplasia-carcinoma sequence". Traditionally, dysplasia is classified microscopically as low-grade (LGD), high-grade (HGD), or indefinite dysplasia (IND). HGD is associated with a high risk of synchronous or metachronous CRC and is therefore generally considered an unambiguous indication for colectomy in a setting of IBD where the process is felt to be multifocal. Decision-making in case of flat LGD and IND, however, is not straightforward. Progression rates of flat LGD to HGD or CRC vary greatly in previous reports, ranging from no progression to 5-year progression rates of more than 50%. Additionally, dysplasia in the indefinite and low-grade categories in particular is associated with a poor inter observer agreement. The term DALM 'dysplasia associate lesion/mass' can be very confusing as it is not specific. A DALM can be a polyp, non-polypoid lesion or mass. Recently, the Scenic International Consensus [SCENIC] has developed two recommendations on a) how should dysplasia be described macroscopically; and b) how should the statement be implemented into practice. A subgroup of SCENIC panelists have developed a new set of terms to describe the macroscopic appearance of dysplasia using descriptive terms with a recommendation to abandon the term 'DALM". In this presentation, the new recommended classification for dysplasia in IBD will be shared that will result in the paradigm clinical shift from random biopsy techniques to targeted high definition chromoendoscopic biopsy techniques for the identification of "visible and invisible dysplasia" in IBD.

Biography

Rani Kanthan is a Consultant Anatomical Pathologist in the Dept. of Pathology and Laboratory Medicine at the University of Saskatchewan with a focused interest in Surgical Oncology including breast and gastrointestinal tract. She has published 120 peer reviewed manuscripts that are indexed in PubMed/Google scholar and serves as an Editorial Board Member in various journals. She is an active medical educator and continues to participate and present at various national and international meetings with more than 125 conference abstract presentations to her credit.

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Carmen Cuffari

The Johns Hopkins University, USA

Contrast enhanced ultrasound (CEUS): A new safe, bedside method of differentiating fibrotic from inflammatory ileal strictures in Crohn's Disease

Background: In patients with Crohn's disease (CD) complicated by ileal stricture, both acute inflammation and chronic fibrosis contribute to luminal narrowing and obstruction. The ability to differentiate between reversible inflammation that responds to medical therapy and a predominantly fibrotic stricture that requires surgical resection holds important clinical implications. CEUS is a non-invasive, inexpensive, radiation-free and fast modality that provides a functional assessment of ileal strictures.

Methods: CEUS was performed on 12 pediatric patients with CD complicated by ileal strictures. Contrast enhancement kinetics of the distal ileum were assessed, including wash-in slope, peak intensity, time to peak intensity and area under the curve. This quantifiable kinetics reflect the dynamic pattern of blood perfusion in the examined tissue. The same technique was also applied to healthy jejunal bowel, thus allowing each patient to act as their own internal control.

Results: CEUS of the distal ileum that revealed a narrowed lumen, thickened submucosa, decreased peristalsis as well as lower wash-in slope, time to peak, peak intensity and area under the curve as compared to jejunal kinetics would favor a fibrotic rather than inflammatory obstruction that was further verified at the time of surgery and by histology.

Summary: CEUS is a non-invasive, inexpensive, radiation-free and fast mode of imaging that provides a functional assessment of ileal strictures in patients with CD that may help guide the medical and surgical management of stricturing small bowel disease.

Biography

Carmen Cuffari is Associate Professor of Pediatrics at The Johns Hopkins University, USA and completed his MD from University of Ottawa. He was a Research Assistant for Dr. S Qadir at University of Ottawa.

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Triki Ismail

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Inflammatory bowel disease and pregnancy: Management and up-to date guidelines

Inflammatory bowel diseases (IBD) affect mainly young people who may have pregnancy will. Despite many studies and recommendations, patients and gastroenterologists still have bias ideas regarding risks and consequences of pregnancy in IBD patients. This may lead to voluntary infertility or bad observance, whereas a controlled disease and maintenance therapy are key points to minimize the risk of maternal or fetal complications. Except for methotrexate, most IBD medications do not have any side effects on the offspring. Disease flare has to be treated properly without delay and corticosteroids should be the first treatment to propose. Surgery should not be delayed if needed. Patient education and information should be promoted before and during all pregnancy. Here we present a review of the last studies regarding management of pregnancy in IBD according to the last European guidelines.

Biography

Triki Ismail is a Gastroenterologist and specialist in the management of IBD has his hospital and liberal experience to treat inflammatory bowel disease in all of these aspects. As he has done research work in this direction and he is also Member of several associations for patients.

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Selliah Kanthan

University of Saskatoon, Canada

Colorectal cancer screening: A Saskatoon Experience

Colorectal cancer is the third most common cancer in the world. Despite advanced diagnostics and therapeutics, colon Ccancer related mortality remains high amongst the general population. The primary cause attributed to this statistic is the high morbidity and mortality of colorectal cancer observed as this is often discovered as an advanced disease [Stage IV] at initial presentation when they are symptomatic. Early colorectal cancer is often asymptomatic and clinically silent. Therefore in this context, several screening strategies have been implemented in the past in an attempt to detect early colorectal cancer. Such modalities include fecal occult blood testing, flexible sigmoidoscopy, colonoscopy and barium enemas. Several of these techniques showed a benefit to the screened population with reduction of overall mortality and morbidity. However, when these methods have been introduced as larger population based screening programs the acceptance rate has been poor in particular respect to colonoscopy and barium enemas. The Fecal immunohistochemical test based screening program for the detection of early colorectal cancer has been introduced in several countries including Canada. In Canada the Medicare health care system provides universal coverage through a joint budget of the provincial and federal governments: the overseeing of the screening program is the responsibility of the Provincial Government. This program has been introduced in the Province of Saskatchewan 5 years ago. This talk will discuss our collective experience of this screening program with an emphasis of techniques, results and patient education strategies for improved outcomes.

Biography

Selliah Kanthan is a Professor in the Division of General Surgery at the University of Saskatchewan. He is a general surgery consultant with a focused interest in colorectal surgery. He has published more than 75 peer reviewed manuscripts that are indexed in PubMed /Google scholar and serves as an editorial board member in various journals. He is an active clinician teacher and continues to participate and present at various national and international meetings with more than 100 conference abstract presentations to his credit.

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Meredith Kenneth

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Minimally Invasive Approaches to Gastrointestinal Surgery

Background: Traditionally, the majority of gastrointestinal surgery particularly for malignancies are performed via open approaches. Longer length of hospitalizations, increased wound complications, and prolonged recovery are associated with these techniques. Unfortunately, the level of complexity, increased length of operation, and prolonged learning curve of the operating surgeon precludes wide spread adoption of minimally invasive techniques to gastrointestinal surgery. We sought to examine the impact of minimally invasive techniques including robotics on GI surgery.

Methods: Minimally invasive and robotic techniques are described and compared to conventional open techniques based upon current available literature. Utilizing a prospectively maintained esophageal and pancreatic database we identified patients that underwent robotic esophagectomy, pancreatic resection, colon resection and liver resection. Patient characteristics and survival were compared with Mann-Whitney U, Pearson's Chi-square, and the Kaplan-Meier method. Multivariable analysis (MVA) was developed to identify predictors of survival.

Results: There were 118 patients who underwent robotic pancreatic surgery; 42 distal pancreatectomies, 65 whipples, 4 total pancreatectomies, 6 pancreatic enucleations, and 1 robotic cyst gastrostomy. Demographics were median age of 70 (24-94), majority were males, 70 (59.3%), and the median BMI was 27.5 (16.8-40.2). 30 day mortality was 1 and 90 day mortality was 0. Major complications (Clavien-Dindo Grade 3-5) were seen in 21 cases (17.8%). The incidence of major complications significantly decreased between case 1 (20%) to case 60 (5.2%) and then steadily increased and stabilized between 5.2% and 7% from case 16 to 118. Similarly, operative time and overall complications decreased as case volume increased. We identified 203 patients (166 (81.8%) male: 37 (18.2%)female) with a median age of 67.2 (30-90) years who underwent robotic-assisted esophagogastrectomy for malignant esophageal disease. One-hundred sixty six were adenocarcinoma, 26 were squamous cell carcinoma and 11 were other. R0 resections was performed in 202 (99.5%) of patients. The median lymph node harvest was 18 (6-63). Neoadjuvant chemoradiation was administered to 157 (77.4 %) patients. A significant reduction in operative times (p < 0.005) following completion of 20 procedures was identified (514±106 min vs. 415± 91 min compared to subsequent 80 cases and further reduced with the subsequent 100 cases 397±71.9 min) p < 0.001. Complications decreased after the initial learning curve of 29 cases, p=0.04.

Conclusions: Minimally Invasive and robotic techniques offer several advantages over conventional open approaches to gastrointestinal surgery. However, longer learning curves mandate a strict regimented program with appropriate mentorship and proctorship. Once learning curve has been surpassed, length of operation and post-operative morbidity will be substantially decreased.

Biography

Meredith is a Professor of Surgery at Florida State University College of Medicine and serves as Medical Director of Gastrointestinal Oncology at the Sarasota Memorial Institute for Cancer Care. He is a Surgical Oncologist with a focus on foregut malignancies. His clinical interests include minimally invasive approaches to resection of gastrointestinal malignancies including robotics. He has lectured and taught surgeons across the world about his robotic approaches and has pioneered robotic approaches to resections. He has published extensively and given over 200 presentations at the local, regional, national and international meetings.

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Wancai Yang^{1,2}

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Malignant transformation of chronic colitis

Previous studies have shown that chronic colitis is strongly associated with colorectal cancer formation. However, the mechanisms of colitis development and its malignant transformation are not clear. Using a unique mouse model, we have demonstrated that the mice with targeted disruption of the intestinal mucin gene Muc2 spontaneously develop chronic inflammation at colon and rectum at early age. In the aged mice, Muc2-/- mice develop colonic and rectal adenocarcinoma accompanying severe inflammation. To determine the mechanisms, we conducted miRNA array on the colonic epithelial cells and identified differential expression of miRNAs. The targets of the miRNAs were characterized and their functions were investigated. More studies from the Muc2-/- mice showed disorder of gut microbiota. The disorder of gut microbiota could result in genetic mutations, epigenetic alterations, and activation of oncogenic signaling, in colorectal epithelial cells, leading to colitis development, promoting malignant transformation and mediating colorectal cancer metastasis.

Biography

Wancai Yang is the Dean of the Institute of Precision Medicine and School of Basic Medical Sciences, Jining Medical University, China, and a Professor of Pathology, University of Illinois at Chicago, USA. He is also an Adjunct Professor of Biological Sciences, University of Texas, El Paso, USA. He obtained his MD degree and was trained as a Pathologist from China and received Postdoctoral training on Cancer Biology from Rockefeller University and Albert Einstein Cancer Center, US, and was promoted as Assistant Professor. In 2006, he moved to the Department of Pathology, UIC. He was serving grant reviewer for the National Institutes of Health (USA) and the National Nature Science Foundation of China. His research focuses on: the determination of mechanisms of gastrointestinal carcinogenesis, identification of biomarkers for cancer detection and patient selection for chemotherapy, implication of precision medicine in cancers. He has published more than 80 peer-reviewed articles and has brought important impact in clinical significance.

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Afaf El Ansary

King Saud University, Saudi Arabia

Translational study to understand the role of gut microbiome and gut-brain axis in modeling neurological disorders to evaluate recent treatment options: Special reference to autism

Translational medicine concentrates on the interface between experimental basic science on animal models of chronic diseases and clinical medicine. It aims to "translate" knowledge and mechanisms clarified by basic research into new approaches for early diagnosis and the treatment of different diseases. Translation in the reverse direction is also highly pertinent, namely the translation of clinical observations into novel research and treatment strategies. The gastrointestinal microbiota has been linked to several important neurological diseases such as Alzheimer's, Parkinson's, and neurodevelopmental disorders including autism spectrum disorders (ASD). Exposures to environmental toxins are now thought to contribute to the development of these diseases. Progress in understanding and treating brain diseases will require translational research efforts to transfer knowledge through successive fields of research from basic scientific discovery to public health impact. With special reference to autism, a developmentally abnormal gut microbiota may in turn affect both the gut-brain axis and brain development and contribute to the etiology of this disorder. Propionic acid (PA) found as a metabolic product of propionibacteria has been reported to mimic/ mediate the neurotoxic effects of autism. Results from animal studies may guide investigations on human populations toward identifying environmental contaminants that produce or drugs that protect from neurotoxicity. Propionic acid (PA) either orally administered or biologically induced in clindamycin or ampicillin-treated rat pups will be used to induce persistent autistic features and to ascertain the role of overgrowth of propionic acid producing bacteria in inducing autistic features in rodent models. In intoxicated rats, a panel of biomarkers were investigated and compared to healthy untreated rat pups. These biomarkers were selected to measure DNA damage, glutamate excitotoxicity, oxidative stress, neurochemistry, mitochondrial dysfunction, and neuroinflammation as signaling pathways closely related to brain diseases. The selection of these markers was based on our clinical data obtained from patients and recorded high specificity and sensitivity when analyzed using Receiver Operating Characteristics (ROC) and excellent predictive values using predictiveness curves. Modeling of neurological disorders in general, can help in testing the protective or therapeutic efficacy of many selected supplements as beta lactam, bee pollen, prebiotic, probiotic, and other natural products as treatment options that are effective in restoring the normal healthy gut microbiota.

Biography

Afaf El Ansary is a Biochemist, graduated from Biochemistry Department, Ain Shams University, Egypt in 1974. She worked in the National Research Centre, Egypt from 1976-2000, from 2001-2015. She works as a Teaching Staff Member in Biochemistry Department, King Saud University, KSA. Since 2016, she is working as Senior Scientist in the central laboratory, KSU. She was recognized by the Marquis Who's Who in science and engineering, 8th edition, 2005-2006. She is Member in number of national and international societies and she is recorded as reviewer and Editorial Board Member in many international journals. In recent years she focused on the screening of biochemical markers related to autism with special attention to the role of gut-brain axis and she got more than 100 published papers in high impact factor journals related to this research interest. She is Member in Predictive, Preventive and Personalized Medicine Society (Moscow).

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