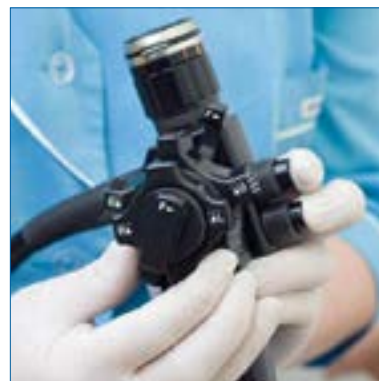

Scientific Tracks & Abstracts

October 30, 2017

Gastroenterology 2017



Joint conference on

World Gastroenterological &

World Congress on

Gastroenterology and Endoscopy

October 30-31, 2017 | Toronto, Canada

Glutathione species and metabolomics prints in subjects with liver disease as biological markers for the detection of hepatocellular carcinoma

Juan Sanabria^{1,2}

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Background: The incidence of liver disease is increasing in USA. Animal models had shown glutathione species in plasma reflects liver glutathione state and it could be a surrogate for the detection of hepa-tocellular carcinoma (HCC).

Methods: The present study aimed to translate methods to the human and to explore the role of glutathione/metabolic prints in the progression of liver dysfunction and in the detection of HCC. Treated plasma from healthy subjects (n = 20), patients with liver disease (ESLD, n = 99) and patients after transplantation (LTx, n = 7) were analyzed by GC- or LC/MS. Glutathione labeling profile was measured by isotopomer analyzes of 2H₂O enriched plasma. Principal Component Analyzes (PCA) were used to determined metabolic prints.

Results: There was a significant difference in glutathione/metabolic profiles from patients with ESLD vs healthy subjects and patients after LTx. Similar significant differences were noted on patients with ESLD when stratified by the MELD score. PCA analyses showed myristic acid, citric


acid, succinic acid, L-methionine, D-threitol, fumaric acid, pipercolic acid, isoleucine, hydroxy-butyrate and glycolic, steric and hexanoic acids were discriminative metabolites for ESLD-HCC+ vs ESLD-HCC- subject status.

Conclusions: Glutathione species and metabolic prints defined liver disease severity and may serve as surrogate for the detection of HCC in patients with established cirrhosis.

Speaker Biography

Juan Sanabria is a Professor of Surgery at Marshall University where he is the Vice-Chair of the Department and the Scientific Director of the Comprehensive Cancer Center. He is as well Professor of Nutrition and Preventive Medicine at Case WR University and he is part of the Metabolomic Core Facility. He has a broad background in liver pathophysiology, with specific training and expertise in metabolic disturbances and signatures of the liver in health and disease including non-alcoholic fatty liver disease and its inflammatory component non-alcoholic steatohepatitis (NASH), cirrhosis and HCC. At present our groups has developed interventions that prevents and reverse NASH and cirrhosis, main risk factors for HCC. In addition, he has explored the significance of liver disease globally, nationally and subnational by my ongoing collaboration with the global burden of disease group.

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 Notes:

Gastrointestinal cancers incidence in East Azerbaijan: 12 Year's time trend analysis of East Azerbaijan cancer registry data (2004-2015)

Roya Dolatkah, Mohammad Hossein Somi, Sepideh Sepahi and Mina Belalzadeh
Tabriz University of Medical Sciences, Iran

Introduction: Results from GLOBOCAN 2012 showed that gastrointestinal cancers including stomach, colorectal, esophageal and liver cancers are the most common sites of cancer diagnosed worldwide. Previously Cancer Registry reports of East Azerbaijan indicated a high incidence of gastrointestinal cancers in this region, resulted in the establishment a survey on trend analysis during last decade in the state.

Material & Methods: Twelve years cancer registry data of East Azerbaijan were collected from different sources, and final data quality check was performed to achieve clean data. Age-standardized incidence rates were generated using the 2000 WHO standard population, for different cancers for each solar calendar year, from 1383 to 1394. The annual percent changes (APC) and average annual percent change (AAPC) of ASRs for Esophagus, Stomach, Small Intestine, Colorectal, Anus, Liver, Gallbladder, and pancreas were calculated with JointPoint 4.3.1.0 software.

Results: Time trends of different cancers in male and female showed in Figure. There was an observed increase in all types of cancers during this time so that ASR for colorectal cancer increased from 2.97 to 13.62 in female (APC=9.2%, $P<0.001$), and 2.32 to 17.82 in male (APC=9.7%, $P<0.001$).

The ASR for gastric cancer had a slightly increasing trend from 11.30 to 13.45 in female (APC= 1.2%, $P=0.6$), and 3.33 to 29.87 in male (APC=2.8%, $P=0.3$) during last 12 years. The trend analysis showed a decreasing pattern of ASR for esophageal cancer with an annual percent change of APC=-2% in females and APC=-1.2% for males.

Conclusion: According to the last results of EAPCR data GI cancers are the most common cancers in East Azerbaijan and significant increasing trends of ASR was observed for most of them. These findings demonstrate further population base epidemiologic interventions for screening and early detection of most common cancers in this region.

Speaker Biography

Roya Dolatkah is an Assistant Professor of Molecular Epidemiology of Cancer and Academic Research Assistant of Hematology and Oncology Research Center at Tabriz University of Medical Sciences. She has graduated as MD, PhD Molecular Epidemiology of Cancer, and active academic research staff of Hematology and Oncology Research Center of Tabriz University of Medical Sciences with a great experience in research and collaboration in the field of clinical cancer researches. Recently she was awarded the IARC "50 for 50": Empowering Future Cancer Research Leaders Fellowship- Lyon, France-June 2016, National Distinguished Researcher Student in Iran, from Student Research National Committee of Research & Technology Vice-Chancellor of Iran, 2013 and Gifted& Talented Students of Tabriz University of Medical Sciences.

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 Notes:

Urinary lipocalin-2 as a potential marker for diagnosis of early hepatocellular carcinoma

Lamyaa Bakery Hamed Ata, Eman Abdel Sameea, Maha El Sabawy, Soha El Shenawy, Nabil Omar and Saleh Mahmoud
National Liver Institute, Menoufia University, Egypt

Background: Diagnosis of hepatocellular carcinoma (HCC) is particularly complex for nodules between 1 and 2 cm morphological criteria alone still pose problems for the differential diagnosis of high grade dysplastic nodules versus early HCC. Lipocalin-2 (Lcn2) is preferentially expressed in hepatocellular carcinoma.

Aim: To determine the possibility of using urinary lipocalin-2 as a potential marker for early detection of HCC.

Methods: A written informed consent was taken from the all patients included in our study. Diagnosis of HCC was done by characteristic vascular enhancement pattern detected by multislice triphasic spiral CT scan or MRI according to established diagnostic criteria. Serum samples were taken for assessment of liver tests, alfa fetoprotein level. Urinary lipocalin-2 levels were measured using ELISA in patients with HCC (n=40), patients with liver cirrhosis (n=40) and 40 healthy control subjects.

Result: The mean age of patients with HCC (59.53±7.90-years old) was significantly higher than those with cirrhosis or healthy controls (P<0.01). Males represented 75% (n=30) in the HCC group. The mean urinary lipocalin level was significantly higher in the HCC group (3661.43±3258.71 pg/


ml) and it was (238.46±152.89 pg/ ml) in the control group. Lipocalin-2 had a sensitivity of 95% and a specificity of 100% with area under the curve (AUC) of 0.950; P<0.001 at a cut-off value of 860 pg/ml for diagnosis of HCC. However, a-fetoprotein (AFP) had a sensitivity of 87.5% and a specificity of 81.1% at a cut-off value of 22 ng/ml. The sensitivity and specificity of adding AFP with lipocalin 2 at cutoff value 1003 pg/ml for diagnosis of HCC showed the same sensitivity and high specificity Hepatol Int (2017) 11 (Suppl 1):S1–S1093 S13123 (95%, 100%), respectively, with PPV, NPV was (100%), (94.9%), respectively. The area under the curve was (0.999) and accuracy was (97.4), it was statistically significant (P value=0.001) and CI= (1.0).

Conclusion: Urinary lipocalin 2 was more effective than AFP at detecting presence of early stages of HCC. Measuring both urinary lipocalin 2 and AFP in serum could be used as diagnostic markers for HCC.

Speaker Biography

Lamyaa Bakery Hamed Ata is an Assistant lecturer and Phd student of Hepatology and Gastroenterology at the National Liver Institute, Menoufiya University, Egypt. Her main areas of Research Interests and Expertise include Viral hepatitis, Portal Hypertension and its complications and treatment of Liver cancer and transplantation.

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 Notes:

Blood thinners and gastrointestinal endoscopies

Monjur Ahmed

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As the number of diagnostic and therapeutic gastrointestinal endoscopies is increasing, and there is an increase in number of patients taking blood thinners, we are seeing more and more patients on blood thinners. Gastrointestinal tract is the most common site of significant bleeding in patients on blood thinners. Thousands of people per day and millions of people per year are having gastrointestinal endoscopies in the United States and throughout the world. The various gastrointestinal endoscopic procedures performed are esophagogastroduodenoscopy, colonoscopy, endoscopic retrograde cholangiopancreatography (ERCP), flexible sigmoidoscopy, pouch/stoma endoscopy, enteroscopy (push, spiral, balloon assisted, *i.e.*, single balloon or double balloon), endoscopic ultrasound (EUS-mediastinal, pancreatic, rectal), capsule endoscopy and capsule colonoscopy. All these procedures have diagnostic and therapeutic potentials except capsule endoscopy and capsule colonoscopy in which neither any diagnostic biopsy nor any intervention can be done.

Blood thinners may potentiate the risk of bleeding during or after performing these procedures. In the last few years, new blood thinners have been introduced in the market. As safety is the most important concern before performing a procedure, endoscopists should be very familiar with the different blood thinners available in the market.

Speaker Biography

Monjur Ahmed has graduated from Dhaka Medical College, Dhaka, Bangladesh in 1983. Then went to United Kingdom for receiving post-graduate training and certification in Internal Medicine. After becoming the Member of Royal College of Physicians of the United Kingdom, he came to the United States. He did residency in Internal Medicine and fellowship in Gastroenterology at Catholic Medical Center of Brooklyn and Queens affiliated with Albert Einstein College of Medicine, New York. He also did gastrointestinal motility fellowship at Temple University Hospital, Philadelphia. He is currently working as Clinical Associate Professor of Medicine at Thomas Jefferson University. Clinical interests include blood thinners during endoscopy, eosinophilic esophagitis, gastroesophageal reflux disease and celiac disease.

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 Notes:

Acute obstruction of the oesophagus by an ingested foreign body as the first manifestation of early and severe radiation esophagitis

Alexandra Deduchova

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Introduction: Here we report a case of severe radiation-induced esophageal toxicity at an early stage after completion of radiation therapy.

Case Report: A 80-year old man was presented to the outpatient Department of Internal Medicine with the chief complaint of difficulty in swallowing solid food and liquids and pain in the mid chest for a period of 2 days. The patient's oncologic history was significant for locally advanced an oesophageal tumor. Endoscopic findings revealed semicircle cancer 25cm from the incisor teeth, which measured about 5cm, histologically poorly differentiated squamous cell carcinoma (radiological stage T3N1M0). The patient was treated with radiotherapy, with intensity modulated radiation with 6 megavoltage photon beams for cancer of oesophagus, oesophagus and lymph node with total dose 50, 4 Gy. Two weeks after completed radiotherapy we performed an urgent endoscopic evaluation of upper GIT because of acute dysphagia. Endoscopy revealed acute obstruction by an ingested foreign body (food) on the basis of radiation-induced esophagitis with stenosis in the mid part of oesophagus. Impacted food passed by gently pushing in stenotic lumen with using thin endoscope for nasal


endoscopy. Further treatment was conservative.

Conclusion: Acute esophageal injury manifest clinically as dysphagia, odynophagia and substernal discomfort. Symptoms and endoscopic findings are nonspecific, so histologic analysis is needed for a definitive diagnosis. Trials about effect of radioprotective chemical agents have had conflicting results and are limited by small patient number and radioprotective agents demonstrated significant side effects. We need additional studies to define better the predictors of radiotherapy-induced esophageal injury and further evaluation of efficacy potentially affective agents before its broad incorporation into clinical practice.

Speaker Biography

Alexandra Deduchova is a Gastroenterology Specialist graduated and working eight years in the field Gastroenterology and Internal Medicine in the Czech Republic. She is a Member in the Czech Society of the Gastroenterology and in the European Society of Gastroenterology and Endoscopy and she is one of the founders of the Section of Young Gastroenterologists in the Czech Republic. Her long-term aim is to continue acquiring the skills necessary for my function as a physician and as an endoscopic specialist, to publish new knowledge and to gain experience from my practice.

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 Notes:

The approach to unintentional weight loss and the yield of endoscopic investigation

Naim Abu-Freha¹, Lior Y², Shoher S¹, Novack V², Fich A¹, Rosenthal A¹ and Etzion O¹

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Background: Unintentional weight loss (UWL) is defined as a loss of 5–10% of body weight over a period of 6–12 months. Previous studies have shown that UWL is associated with mortality rates ranging between 9 and 38% in elderly adults. The differential diagnosis of the underlying diseases leading to UWL is broad and includes both malignant and benign gastrointestinal (GI) diseases, as well as endocrine, infectious, cardiopulmonary, and psychiatric disorders. GI disorders are commonly associated with UWL, with gastric and colon cancer, celiac disease, peptic ulcers, and inflammatory bowel diseases being the leading causes. The investigation of UWL includes medical history, physical examination, laboratory (CBC, chemistry, TSH), abdominal imaging and endoscopy. In the present study, our aim was to assess the yield of endoscopic evaluation in isolated unintentional weight loss (UWL) patients compared with patients with weight loss and additional symptoms or signs.

Patients & Methods: A retrospective review of all patients who underwent an endoscopic evaluation for the investigation of UWL at Soroka University Medical Center between 2006 and 2012. Data on clinical indication, endoscopic, and laboratory finding were retrieved. Severe inflammation, ulcers, achalasia, and neoplasias were considered clinically significant endoscopic findings (CSEF) that could explain weight loss. Detection rates of CSEF were compared between endoscopic studies for which UWL was the sole indication (group 1) and those performed for UWL and at least one other indication (group 2).

Results: During the study period, 1843 patients with UWL were evaluated with 2098 endoscopic procedures. Of these,

1540 underwent esophagogastroduodenoscopy (EGD) and 558 underwent colonoscopy. EGD was performed in 229 (14.8%) patients in group 1 (mean age: 60.9±16.4, 43.3% men), and in 1311 (85.2%) patients in group 2 (mean age: 60.5±18.5, 45% men). Pathological endoscopic findings were identified in 712 (46%) EGDs. Of these, 155 (10%) studies detected significant outcomes: six (3.9%) in group 1 and 149 (96.1%) in group 2. Of the 558 colonoscopies performed, 105 (18.8%) were performed in group 1 (mean age: 61.7±17.5, 43% men) and 453 (82.2%) in group 2 patients (mean age: 62.9±14.6, 49% men). Abnormal findings were found in 190 (33.8%) of the procedures. CSEF were found in 34 (6%) patients: two in group 1 and 32 in group 2.

Conclusion: UWL is a relative common complaint and should be investigated. The investigation should include medical history, physical examination, laboratory, imaging and endoscopy. The diagnostic yield of endoscopy for investigation of patients with UWL is non-negligible, and should be considered as part of its baseline evaluation, especially in older individuals and those who present with other gastrointestinal manifestations.

Speaker Biography

Naim Abu-Freha received his MD from the Tuebingen University, Germany at 2005 before becoming resident at internal medicine and then completed his gastroenterology residency at the Soroka Medical Center at 2014. He received his master degree MHA from Ben-Gurion University, Beer-Sheva, Israel. He researched different topics in gastroenterology/Hepatology and different issues regarding the Bedouin Arab minority in southern Israel. He is one of the founders groups of the Arab Medical Associations in the Negev (AMAN) and the first Chairman of the Associations since 2015.

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 Notes:

Evaluating the combination of wire assisted cannulation and pure-cut sphincterotomy during therapeutic endoscopic retrograde cholangiopancreatography: A prospective case series study

Fawzi H Obide and Hussam A Maiteeg

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Introduction: Post Endoscopic retrograde cholangiopancreatography pancreatitis (PEP) is a well-known complication of endoscopic retrograde cholangiopancreatography (ERCP), ranging from biochemical rise of amylase to severe fatal necrotising pancreatitis. Since pancreatitis is a preventable complication, technical optimisation at pre, intra and post procedural levels should be carried out to reduce the risk. Trying to implement the best approach to lower the risk of pancreatitis, combination of wire assisted cannulation and pure-cut sphincterotomy technique were adopted, since each of these techniques is individually proven to be associated with lower risk of pancreatitis.

Methods: Prospective large case series study.

Results: Over two years period, therapeutic ERCP was performed for 311 patients (123 males and 188 females) for various indications, patient ages ranging from 26-97 (males) and 14-93 (female). PEP happened in 5 patients of the entire number of patients (1.6%). Only 1 of them was male (0.8%) while the other 4 patients were female 2.1%). Neither perforation nor significant bleeding that required blood transfusion or extension of hospitalisation has happened.

Discussion: On one hand, there is a lot of debate regarding

the effectiveness of wire assisted technique as a preventing measure in regards to PEP, on the other hand, few studies used pure-cut sphincterotomy as preventive measure of PEP. In both aspects as we notice, there is no clear cut-line which method is better or is more effective. So we tried to clarify or at least raise up a question, so further studies are needed to investigate in separate taking in account that in the current work both pancreatic stent and pharmacological prophylactic measures were not used.

Conclusion: Combination of wire assisted cannulation with pure-cut sphincterotomy technique appears to be safe, cost effective, with high success rate and low risk of PEP.

Speaker Biography

Fawzi H Obide is a consultant gastroenterologist in Misrata Centre of Gastroenterology and Hepatology and is a Lecturer in Misrata Faculty of Medicine - Misrata University. He received his training in Misrata Central Hospital and Tripoli Medical Centre governed by the Libyan Board of Medical Specialties. He is playing a very active role in the field in Libya. He is a trustee in the Libyan Society of Liver disease and in the Libyan Society of Gastrointestinal endoscopy. He is the founder and the head manager of Misrata Centre of Gastroenterology and Hepatology and is the founder of a medical company which provides high quality medical services in gastroenterology. He is also a member of the European Association of Study of Liver Disease (EASL) and the European Society of Gastrointestinal Endoscopy (ESGE)

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 Notes:

Management of Sigmoid Volvulus

Hama Younsa

Abdou Moumoni University, Niger

Objective: To report the results of treatment of sigmoid volvulus in the National Hospital of Niamey and to propose a therapeutic classification.

Patients & Methods: It was a retrospective, descriptive, and analytical study of 10 years, including all adult patients treated for sigmoid volvulus in the National Hospital of Niamey. An association between morbidity and mortality and the variables was investigated and the results were analyzed and interpreted according to the literature data to deliver a therapeutic classification.

Results: The series included 168 patients, whether 17.31% of intestinal obstruction and 2.64% of abdominal emergencies. They were 166 men and 2 women. The average age was 50.80 (± 15.52) years old. The average time before consultation was 4.18 (± 2.85) days. Abdominal pain was the most common symptom in all patients. Paraclinical diagnosis was essentially made by radiography of the abdomen without preparation. Ileosigmoid knot was found in 4.76% of patients. The necrosis rate was 22.02%. Sigmoid resection according to


Hartmann was performed in 68.45% followed by resection and then by immediate colo-colonic anastomosis (25.60%). Overall morbidity was 14.60%, and 7.15% of patients had died, including 5.95% after sigmoid resection according to Hartmann. The occurrence of complications was influenced by necrosis ($P = 0.04$) and a long time before consultation ($P = 0.04$). The mortality was influenced by sigmoid resection according to Hartmann ($P = 0.01$). The analysis of our results according to the literature data has allowed us to define four treatment groups of patients.

Conclusion: The determination of four groups of patients could help in the management of sigmoid volvulus.

Speaker Biography

Hama Younsa completed his graduation as Medical Doctor at Abdou Moumouni University of Niamey and specialized in general surgery. In 2014 he was nominated to the Faculty of Health Sciences at Abdou Moumouni University in Niamey as Assistant Clinical Director and later as Assistant Professor in 2016, a position he currently holds. At the Faculty of Health Sciences he was also nominated as Coordinator of the Bachelor's degree in Surgery.

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 Notes:

Effects of sex hormones on the toxicity and healing of gastric ulcer in rats treated with *Eugenia punicifolia*, a medicinal plant from amazon region

Larissa Lucena Périco, Rodrigues, V P, Ohara R, Vilegas W, Rocha LRM, Santos C and Hiruma-Lima C A
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Introduction: *Eugenia punicifolia* (Kunth) DC. (Myrtaceae), popularly known as “pedra-ume-caá”, “pedra-ume”, “murta” or “muta”, is a shrub largely distributed in the Amazon region and Savanna biome. The leaves of this medicinal plant are popularly used as a natural therapeutic agent to treat inflammation, wounds and infections, among others diseases.

Aim: This study aims to evaluate the toxicity and the healing effect of the hydroalcoholic extract obtained from the leaves of *E. punicifolia* (HEEP).

Material & Methods: The evaluation of the healing of gastric ulcers induced by acetic acid in male and female (intact and ovariectomized) Wistar rats, were performed according to the method described by Okabe¹ modified by Konturek². HEEP (125 mg/kg - lower effective dose of previous assays, dose-response curve), lansoprazole (30 mg/kg) or vehicle (saline – 0.9% - 10 mL/kg) were administered for the determination of the healing effects of the 14-day subacute treatment. All treatments were done orally once a day beginning one day after surgery. One day after the last treatment, the rats were killed and the stomachs removed. The gastric lesions were evaluated by pachymeter (mm²). To evaluate subacute toxicity, body weight was recorded daily throughout the experimental period, and the macroscopic analyses and weight of vital organs were compared between the three groups. Furthermore, blood (serum) was collected for analysis of biochemical parameters, including glucose, urea, creatinine, -glutamyl transpeptidase, aspartate aminotransferase and alanine aminotransferase, were measured using an automated biochemical analyzer. The results were expressed as mean±standard error of the mean of the parameters obtained and statistical significance was determined by ANOVA followed by Dunnett’s test (minimum level of significance: $p < 0.05$).

Results & Discussion: In the model of acetic acid, the treatment with lansoprazole and HEEP were able to heal

significantly the gastric ulcer in male, intact females and ovariectomized females after 14 consecutive days (40.81% and 52.44% [male]; 84.21% and 85.22% [intact females]; 49.40% and 65.47% [ovariectomized females], respectively) of treatments when compared with control group (vehicle). Intact females when compared to males, showed a greater healing activity by treatment with HEEP (1.44x) or lansoprazole (1.84x) ($p < 0.01$). The comparison of this same parameter in ovariectomized females and male did not present significant difference. Moreover, after 14 days of treatment with HEEP, we did not observe any death, changes in the body and organ weights, and in biochemical parameters of serum in any of the groups.

Conclusion: The oral treatment with hydro alcoholic extract from *Eugenia punicifolia* leaves at dose of 125 mg/kg did not cause toxicity after 14 consecutive days. The healed effect of this extract against the highly damaging gastric agent (acetic acid) is effective in male, intact females and ovariectomized females rats and we can observe an interference of the female sex hormones in the healing of the gastric lesion, since lesion area of intact females was smaller than in males and ovariectomized females.

Speaker Biography

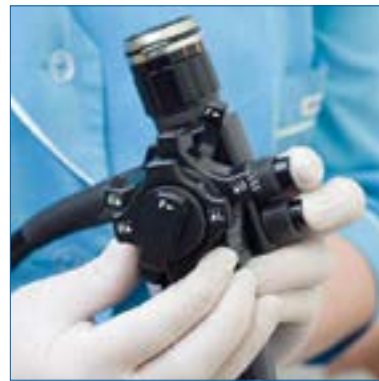
Larissa Lucena Périco possess a bachelor’s degree in Pharmacy from the Faculdades Adamantinenses Integradas (2010), a Master’s degree in Biological Sciences (Pharmacology) from the Institute of Biosciences of Botucatu at the São Paulo State University (UNESP) (2014). She is currently a doctoral student in Pharmacology and Biotechnology at Institute of Biosciences of Botucatu (UNESP), where she works on the following topics: Pharmacology of Natural Products, with an emphasis on medicinal plants with antiulcerogenic, anti-inflammatory, antinociceptive and antidiarrheal activity. Participates in the thematic project: “Standardized herbal medicines for the treatment of chronic diseases”. During the master’s degree she worked with animal models for gastroprotection. She currently works with animal models for the evaluation of hormonal effects on gastric ulcer healing. Her current project is titled: The role of the hydroalcoholic extract from the leaves of *Eugenia punicifolia* in experimental peptic ulcer disease: Characterization of anti-inflammatory, healing and antiapoptotic mechanisms of action.

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Joint conference on

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Long term result of BPD and DS

Simon Biron

Laval University, Canada

Plenary: What is BPD and DS?

Understand the surgical modification of the G.I. Tract


Patients characteristics. Operative mortality over periods.
Risk factors.

Long term survival VS other technique. Side effects. Degree
of satisfaction et al.

Speaker Biography

Simon Biron has completed his medical degree in 1972 from Laval University and completed his surgical residency training at McGill University in 1977. He has worked at Laval Hospital since 1978 and has served as the Head of the Department of General Surgery from 1993 to 2013. He has been a Clinical Professor of Surgery at the University of Laval since 1981 and served as the Head of Division of General surgery from 2002 to 2012. He has been involved in the writing of approximately 130 articles and 15 books or chapters. He has been an invited speaker to many conferences and has presented numerous posters. He is the principal investigator in N.O.T.E.S. He has been a practicing Bariatric Surgeon since 1981 and currently sits on the Executive of the ASMBS Canadian Chapter.

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 Notes:

World Gastroenterological &

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October 30-31, 2017 | Toronto, Canada

Bariatric Endoscopy

Lawrence B. Cohen

University of Toronto, Canada


Bariatric Endoscopy is emerging as an effective, well tolerated intervention within a multidisciplinary weight management program to achieve metabolic health and perhaps cosmetic goals. The spectrum of intragastric devices will be reviewed, along with long term safety and efficacy.

Speaker Biography

Lawrence B. Cohen is Director of and consultant in the Division of Gastroenterology and Chief of Medical Endoscopy at Sunnybrook Health Sciences Centre. He is an Associate Professor of Medicine at the University of Toronto. He is a consultant gastroenterologist for Cleveland Clinic Canada. Dr. Cohen received his Master of Science in Pharmacology (University of Toronto) 1976 and his Doctor of Medicine

from McMaster University in 1979. He completed his Internal Medicine Fellowship in 1984 (University of Toronto) and subspecialty training in Gastroenterology (University of Toronto) and Therapeutic Endoscopy in 1985 (Wellesley Hospital, Toronto). He is an active member of many medical associations, including the Canadian Association of Gastroenterology, Ontario Association of Gastroenterology, Canadian Medical Association, American College of Physicians and American Gastroenterology Association. He is a Fellow of the American College of Gastroenterology. He has received a number of awards including; the Award in Therapeutics from McMaster University; the Young Clinicians Teacher Award from Sunnybrook Health Sciences Centre; the Continuing Education award from the Boyd Academy, University of Toronto; and the Ambulatory Teaching Award, Sunnybrook Health Sciences Centre. Over the past twenty years, He has been well published in peer-reviewed publications and he has participated in numerous clinical trials in gastroenterology and hepatology.

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 Notes:

Phytotherapy-induced hepatocytotoxicity

Manuela Neuman, Yaacov Maor, Marius Braun, Ana Tobar, Ehud Melzer and Stephen Malnick
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Background & Aims: Herbal medicine is frequently integrated with conventional medicine. We report a case of severe-herbal-induced liver injury (HILI) due to Herbalife tea and protein-shake. We present both clinical and laboratory evidence implicating an immune response leading to a hypersensitivity reaction.

Methods: A 65 year old lady was hospitalized due to progressive jaundice and hepatocellular injury. 6 months previously she noted lassitude and disturbed liver enzymes were detected. Due to the appearance of deep jaundice she was hospitalized. On repeated history ingestion of Herbalife tea and protein-shake was noted. Liver biopsy revealed necrotizing granulomatous hepatitis, apoptotic cells. PAS diastase stain was showing cluster of foamy macrophages with ceroid pigment, characteristic of toxicity. Immunohistochemistry demonstrated and bile duct loss (attached). Discontinuation of the Herbalife, and treatment with both prednisone and urso-deoxycholic acid resulted in slow resolution of her complaints (the ALT decreased from 1096 U/L to 69U/L and the GGT decreased from 899 to 218 U/L, but relapsed on 10 mg daily of prednisone (ALT increased to 246). Retreatment with both prednisone and azathioprine resulted in remission (ALT 41 and GGT 49 U/L). A lymphocyte toxicity assay (LTA) was performed. LTA % toxicity was: protein alone 20; tea alone 44; protein+ tea 66. The proinflammatory cytokines and chemokine (x control) in serum were elevated as follow: TNF (tumor necrosis factor alpha) x40; IL1 (interleukin) 12; IL6-x1.2; IL13-x3; IL8-x5. Vascular endothelial growth factor was 5106 pg/mL (x46). Mitochondrial markers M30 and M65 revealed

a predominant level of necrosis process versus apoptosis. The severe HILI resulting from the protein and herbal tea is consistent with a cholestatic picture. This is the first report of the cytokine disturbances associated with HILI from the combination of tea and shake protein (Herbalife). Moreover this is a clear demonstration of hypersensitivity-induced lymphocyte death linked to the same product combination.

Conclusions: In susceptible individuals protein and herbal tea might produce a strong T1 response leading to HILI. This finding is consistent with the majority of reports of Herbalife toxicity in the literature being due to the combination of protein shake and tea consumption.

Speaker Biography

Manuela Neuman teaches clinical and experimental toxicology and pharmacology at the University of Toronto, Medical School, Canada. Dr. Neuman supervised several M.Sc., and Ph.D. theses as well as post-doc fellows and research projects for Medical Physicians. She is also in charge with Ph.D. international students (Cuba, Israel, Romania, France, Australia, South Africa) as well with Pharmacy and Medicine exchange M.Sc., international students from France and Medical fellows from Israel, Brazil, Cuba, Romania and Argentina. She is the founder of the In Vitro Drug Safety and Biotechnology. She is the head of In Vitro and of the biomarkers platforms at the University of Toronto. The role of micro quantitative liver function based upon mitochondrial activities; non-invasive biomarkers of fibrosis, inflammation and repair, immuno-pharmaco-genetics are subject of her research. She also explores biomarkers such as immuno-genomics and metabolomics as individual variation in personalized medicine approaches. Neuman studies the role of microbiota in the development of non-alcoholic liver disease as well as in severity of inflammation and its possible repair. This includes translational research that characterize, obesity, non-alcoholic fatty liver disease and non-alcoholic steatohepatitis. The recognition of the key role played by lipotoxicity in cellular injury and stimulation of the inflammatory responses leading to fibrogenesis is key for therapies.

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 Notes:

The challenge of primary gastric lymphoma treatment

Marcelo Mester

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Statement of the Problem: Primary gastric lymphomas (PGL) are heterogeneous. PGL include high grade diffuse large B-cell lymphomas (DLBCL) and the more indolent marginal zone lymphomas (MZL). Gastric MZL are MALT (mucosa associated lymphoid tissue) lymphomas, which may be *Helicobacter pylori* (Hp) infection-related. Thus, many controversies remain surrounding the optimal PGL treatment: primary surgery (S), chemotherapy (CT), radiotherapy (RT), or their combinations, and simple Hp-eradication for the MALTs.

Methodology & Theoretical Orientation: Review of our experience over a 25 yr-period, and a discussion on the various PGL treatment strategies.

Findings: From 1979-2008, 61 records of PGL patients with a median follow-up time of 67.5 mo included high (77%) or low (23%) grades, stages Ie (45.9%), IIe1 (14.8%), IIe2 (8.2%), IIIe (18%), IVe (13.1%) (Musshoff). Rx were S (20%), S+C (34%), C (37%), C+S (8%) (after 2004 mostly chemo). Rx-failures, and a 8.9% mortality were all under chemo, and before 2004; there was no 30-day surgical mortality. This pattern changed after 2008 when most PGL were treated by primary chemo; mortality was below 3%. Most world centers also shifted to primary chemo (Rituximab-CHOP) after 2004, with surgery becoming salvage therapy (or of chemo-induced


complications). Hp(+)-MALTs were treated by Hp eradication; resistant or Hp(-) MALTs were treated by surgery or radiation. Recently a prospective randomized multicentric phase III study with 401 patients having Hp eradication-resistant or recurrent gastric MALTs, and other non-gastric MZL, showed better results by chlorambucil+rituximab compared to each drug alone, suggesting other avenues for these tumors. An international MALT prognostic index (MALT-IPI) was also generated.

Conclusion & Significance: PGL survival remains associated with stage, grade, and Rx. Organ conservation is key however optimal chemo regimens with adequate dose-intensity as well as Hp-control are paramount for this endeavor.

Speaker Biography

Marcelo Mester is a Research-Fellow in Surgical Oncology at the Massachusetts General Hospital, Harvard Medical School. He is an Assistant-Professor of Gastrointestinal Surgery, Hospital das Clínicas, University of São Paulo Medical School. He is a founding Member of the International Gastric Cancer Association (IGCA, 1995) and the Brazilian Association of Gastric Cancer (ABCG) where he is currently a Board Member. He has studied gastrointestinal lymphomas for many years and has presented Brazilian data on the issue. He was three times awarded best paper in international congresses, all of them with gastric lymphoma data.

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Methylation markers in colorectal cancer: Current updates and future prospective

Ahmed Khamas Alhumairi

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Colorectal cancer (CRC) is the third most commonly diagnosed cancer in males and the second in females and the fourth most common cause of death worldwide with a major impact on societies across the globe. Effective prevention methods that include early diagnostic tests through screening programs are necessary to reduce cancer incidence and mortality. Both genetic and epigenetic alterations can cooperate in CRC initiation and progression. DNA methylation, histone modifications, and microRNA expression are epigenetic alterations in cancer. Aberrant DNA methylation changes, that are both stable and inheritable, occur early in carcinogenesis, thus it could be used as a noninvasive biomarkers for early detection and prognosis of cancers. In addition, methylation biomarkers can help in predicting response or resistance to chemotherapy. Reversibility of DNA methylation is another feature that was used to discover epigenetic drugs currently in use for the treatment of patients with hematological malignancies. However, the use of methylation biomarkers in CRC is still inadequate due to certain factors such as our incomplete knowledge about patterns of DNA methylation, methods of detection, specimens type (tissue, stool, and blood), and cancer heterogeneity. Therefore, we are still in

need for further randomised clinical trials and large-scale investigations, especially in different populations in order to identify specific, sensitive, and cost effective methylation biomarkers for CRC. The aim of this presentation is to discuss the recent findings in the field of methylation biomarkers in CRC and to delineate future challenges for the field.

Speaker Biography

Ahmed Khamas Alhumairi received his MBChB (2004) in Medicine from University of Baghdad and Ph.D. from Tokyo Medical and Dental University, TMDU, in Medical Science (2012). He recently joined Ibn-Alhaytham Medical Center, Ibra, Oman as a GP and was the head of continuing medical education at the Garmyan Health Directorate, Sulaimaniya, Iraq. Prior to joining the doctoral course in 2008, he was a research student at TMDU (2007-2008). His areas of research interest include epigenetics and its role in cancer development, discovery of tumor suppressor genes inactivated by methylation, methylation control of renewal and differentiation in cancer stem cells, methylation silenced miRNA genes and how it can represent a novel target for epigenetic drugs in cancer. He is a member of the American Association of Cancer Research (AACR) and Cancer Epigenetics Society (CES).

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Development and validation of risk assessment tool for colorectal cancer screening in North West of Iran

Roya Dolatkah, Mohammad Hossein Somi, Saeed Dastgiri and Mohammad Asghari Jafarabadi
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Background & Aim: Although the early diagnosis of colorectal cancer reduces the associated death burden, administration of screening programs is not a common practice even in developed countries. Previous studies showed the lack of national screening programs for CRC in Iran with little information available on the screening strategies for cancer, in general. The main aim of our study is to develop and validate a simple, practical and efficient tool to improve CRC risk assessment by identifying the high and moderate risk of the disease.

Material & Methods: We used the NCCN (National Comprehensive Cancer Network) guidelines, because of full details about colorectal cancer risk assessments. The original risk assessment tool was translated from English into Persian. The back-translation method was performed, as the preferred method to measure. For the content validity, we performed a scientific panel of judges, comprised 5 medical oncologists, 3 gastroenterologists, and 2 epidemiologists. The proportion of experts who were in agreement with item relevance calculated as a quantitative measure of content validity, the CVI. The questionnaires were collected and content validity ratio (CVR) was calculated for each item. The questionnaire was assessed for face validity by 15 individuals to assess its acceptable and understandable for them.

Results: The experts evaluated every item and rated them


for understandability, distinctiveness, appropriateness to the domain of content, and relatedness to Iranian population. Based on expert's opinion about necessity and completeness of each item, the acceptable CVR was between 1 and 0.40. Afterward, CVI was calculated to be 1 to 0.70. Moreover, the means of CVR and CVI were 0.62 and 0.93 respectively for whole the questionnaire items. Changes were made according to expert's recommendations, and final revised questionnaire assessed for face validity. Based on participant's comments, a few items needed to some modifications and expansion.

Discussion: The development of an executive plan to identify the most appropriate screening method and the best age group for screening and a specific risk assessment tool is the main priority in Iran.

Speaker Biography

Roya Dolatkah is an Assistant Professor of Molecular Epidemiology of Cancer and Academic Research Assistant of Hematology and Oncology Research Center at Tabriz University of Medical Sciences. She has graduated as MD, PhD Molecular Epidemiology of Cancer, and active academic research staff of Hematology and Oncology Research Center of Tabriz University of Medical Sciences with a great experience in research and collaboration in the field of clinical cancer researches. Recently she was awarded the IARC "50 for 50": Empowering Future Cancer Research Leaders Fellowship. Lyon, France-June 2016, National Distinguished Researcher Student in Iran, from Student Research National Committee of Research & Technology Vice-Chancellor of Iran, 2013 and Gifted & Talented Students of Tabriz University of Medical Sciences

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Update in genetic colorectal cancer syndrome

Naim Abu Freha

Soroka University Medical Center, Israel

Introduction: Colorectal cancer is the third common cancer in the world. About 3-5% of the patients are carrier of genetic syndrome with high risk of colorectal cancer (CRC) and others malignancy. 20-30% of the patients with new diagnosed colorectal cancer had a family history of colorectal cancer. The most common hereditary syndrome is Lynch Syndrome (HNPCC hereditary non-polyposis colorectal cancer). Other syndromes with increased number of polyps include Familial adenomatous polyposis (FAP), attenuated FAP and MUTYH associated Polyposis (MAP).

Genetics: lynch syndrome is characterized by a germline mutation at a defective DNA mismatch repair (MMR) genes, with a high level of microsatellite instability. The most common genes involved in the syndrome are MLH1, MSH2, MSH6, PMS2 and EpCAM. FAP caused by APC gene defects and MAP caused by a defect in the MUTYH gene. Lynch syndrome and FAP are inherited autosomal dominant, while MAP inherited autosomal recessive. Diagnosis is made by genetic investigation, founder mutation and gene sequencing.

Cancer risk: Mutation carrier of the different types of the syndromes has increased risk of colonic and extra-colonic neoplasm. The lifetime CRC risk is estimated to be 50-80% in HNPCC and about 100% in FAP. The risk of the malignancy

development is depending on mutation and gene.


Clinical setting: Amsterdam criteria and revised Bethesda criteria were developed to identify persons and families with high risk form Lynch syndrome. Patients with FAP are characterized by thousands of polyps and MAP patients by 10-100 of polyps.

Universal screening for lynch syndrome: should patients with colorectal cancer or endometrial cancer undergo screening by immunohistochemistry (IHC) or microsatellite instability (MSI) for lynch syndrome? Yes, several recommendations include the universal screening for all diagnosed patients under age 70 years. The Surveillance recommendation and treatment with aspirin or cox2 will be discussed. All the above points will be updated and discussed during the lecture.

Speaker Biography

Naim Abu-Freha received his MD from the Tuebingen University, Germany at 2005 before becoming resident at internal medicine and then completed his gastroenterology residency at the Soroka Medical Center at 2014. He received his master degree MHA from Ben-Gurion University, Beer-Sheva, Israel. He researched different topics in gastroenterology/Hepatology and different issues regarding the Bedouin Arab minority in southern Israel. He is one of the founders groups of the Arab Medical Associations in the Negev (AMAN) and the first Chairman of the Associations since 2015.

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