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October 29-30, 2018 | San Francisco, USA

Poster Presentations

Z-score-based approach for differential diagnosis of malignant and benign liver neoplasms using transcriptional biomarkers

Mikhail S Chesnokov

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repatocellular carcinoma (HCC) is the most common and aggressive type of liver tumors. It is usually diagnosed at Hadvanced stages due to lack of clear symptoms and reliable biomarkers. HCC diagnosis is further complicated by high similarity between early HCC stages and benign liver neoplasms, especially hepatocellular adenoma. Efficient methods of HCC identification are required for establishing precise diagnosis and choosing optimal treatment strategy. Our group previously identified five genes (IQGAP3, RAB3B, GPC3, PRRX1 and CENPF) specifically overexpressed in HCC, but not in benign neoplasms or normal liver tissue. Present study evaluates the diagnostic efficiency of combinational indexes generated using expression levels of these genes and z-score approach. We examined paired samples of neoplastic and normal liver tissue collected from 50 HCC patients and 15 patients with hepatocellular adenoma or focal nodular hyperplasia. Gene expression levels were estimated using RT-qPCR, z-scores were calculated for single genes and all possible gene combinations. Z-scorebased indexes were statistically processed using cohort comparison tests and ROC analysis to evaluate their usefulness for discerning HCC samples from normal liver tissue and benign neoplasms. IQGAP3, GPC3, PRRX1 and CENPF were significantly (p<0.05) overexpressed in HCC samples, but not in benign neoplasms, when compared to non-tumor liver tissue. RAB3B expression was increased in benign cohort and further elevated in HCC cohort. The most efficient combinations for HCC tissue identification were RAB3B+IQGAP3+PRRX1 (if both neoplastic and non-tumor tissue samples were used, ROC AUC=0.973) and RAB3B+PRRX1+CENPF (if only neoplastic samples were processed, ROC AUC=0.961). Both combinations displayed sensitivity and specificity levels higher than 90%. In summary, RAB3B, IQGAP3, PRRX1 and CENPF are promising biomarkers for improving HCC diagnosis efficacy. Z-score calculation is a powerful tool for combining expression levels of multiple genes into one index that can be used as an efficient biomarker. Present study was funded by RFBR according to the research project № 18-315-00376.

Biography

Mikhail S Chesnokov has completed his PhD from N.N. Blokhin National Medical Research Center of Oncology, Moscow, Russian Federation. He worked as a research associate in Lab of Epithelial Tumor Progression Mechanisms, Institute of Carcinogenesis, studying molecular mechanisms of pancreatic and liver cancer progression. Over last several years he published a number of research papers and participated in numerous international conferences reporting novel regulators of pancreatic ductal adenocarcinoma development and putative biomarkers of hepatocellular carcinoma. He recently moved to The Hormel Institute, University of Minnesota, USA, to apply his experience and skills in the field of targeted anti-cancer therapy focused on eradication of stem-like cancer cells in ovarian tumors via necroptotic cell death induction. Mikhail's major areas of interest in regard to cancer research are regulatory mechanisms of malignant cell differentiation, diagnostic biomarkers for early cancer diagnosis and search for novel molecular targets that can be used for efficient anti-tumor therapy.

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Expression of IRE1 β is downregulated in azoxymethane/dextran sulfate sodium-induced mouse colonic tumor

Qiang Gao, Faliang Dai, Lei Gao, Shizhen Dong, Qingxia Xuan, Pan Chen and Yonggang Fan Beijing Rehabilitation Hospital of Capital Medical University, China

Inflammatory bowel disease (IBD) is a risk factor for the colon cancer. The endoplasmic reticulum (ER) stress is associated with IBD and cancer. We used azoxymethane (AOM) and dextran sulfate sodium (DSS)-induced mouse colonic tumor model to analyze the expressions of ER stress chaperone molecules. C57BL/6 female mice were given an intraperitoneal injection of AOM 1mg/ml (12mg/kg) on day one, a week later drunk 1.0% DSS for 7 days, and then normal drinking water for 14 days. The cycle of 7 day DSS plus 14-day water was repeated for two times. At the end of the study, the tumors were found in the distal colon. IL-6, IL-8, and TNF- α mRNA was significantly higher in mice of tumor group compared with that in mice of the control group; There was no significant difference in the expression of IRE1 α mRNA and protein between the two groups although XBP1s mRNA was increased; the expression levels of IRE1 β and MUC2 mRNA were significantly lower, only 42% and 30% of the control group. IRE1 β and MUC2 protein were mainly expressed in colonic epithelial cells, and their expression was decreased in the tumor group. The downregulation of IRE1 β and MUC2 might reduce the ability to resist inflammation, so as to promote the occurrence and development of the colonic tumor.

Biography

Qiang Gao has completed his PhD from Leiden University, The Netherlands, and postdoctoral studies from Wisconsin University School of Pharmacy, USA. He is a professor of gastroenterology in Beijing Rehabilitation Hospital of Capital Medical University, Beijing, China. He has published more than 30 papers in reputed journals and has been studying on inflammation and tumor of alimentary immunology for a decade more.

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Achalasia: A case report and review of clinical diagnosis, treatment, and outcomes

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A 58 years old man was admitted with the complaints of prolonged dysphagia and regurgitation of food and saliva. The patient had some weight loss but no anorexia. Barium swallow esophagus showed marked dilatation of the esophagus with regular tapering of its lower end. The patient was diagnosed as achalasia and advice for esophago-cardiomyotomy operation. Literature was reviewed to compare currently available therapies for achalasia and it is recommended that the patient should undergo laparoscopic myotomy and partial fundoplication (to prevent free reflux of gastric acid into the esophagus) for better remission. Other treatment modalities such as Botulinum toxin injection and pneumatic dilation can offer dysphagia control, but they are temporary and reversible measures. The objective of this case report is to review the currently available treatment modalities for the management of achalasia.

Biography

Edwin Villas Berenguer is a graduate of the University of San Carlos in Cebu City with a Bachelor degree in Pharmacology and a licensed pharmacist on the year 2002. He pursued his doctoral studies in Doña Remedios Trinidad Romualdez Medical Foundation in Tacloban City and graduated on 2008. He had his Internship to the hospital owned by the latter school in the year 2009. He took and passed the Physicians licensure examination on the following year. He practiced at Bethany Hospital Tacloban city, Don Emilio del Valle Memorial Hospital Ubay Bohol, Garcia Memorial Hospital Talibon Bohol, Southern Philippines Medical Center Davao City, and Eversley Child Sanitarium and General Hospital Cebu City. Currently, he is serving as a resident physician under internal medicine at Cebu City Medical Center.

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Effects of white bean flour (Phaseolus vulgaris) on intestinal mucosa: Food safety assessment

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B ean (*Phaseolus vulgaris*) "in natura" supplementation has been indicated for fat burning, reduced appetite, and weight loss. However, there are reports of risks to health arising from its use. This study evaluated the food safety of white bean flour as a dietary supplement. Mice were divided into three experimental groups (n=10) and 0.5ml of white bean flour extract (WBFE) were orally administered daily at two concentrations: Group 1 (2.65g/kg), Group 2 (5.30g/kg) and control (PBS) for 14 days. Half of the animals were euthanized on day 14 to assess acute exposure and half on day 28 to assess lesion recovery. The small intestine was collected for histological analysis, dosage cytokines (TNF, IFN- γ , IL-12, IL-4, IL-6, IL-10 and MCP-1), and antioxidant enzymes (CAT, SOD, and MDA). The animals WBFE-treated groups had a decrease in body weight and glycemia in a dose-dependent manner. There was a reduction in the height of the intestinal villi and an increase in the depth of the crypts. Animals from group 2 (5.30g/kg WBFE) presented mononuclear inflammatory infiltrate in the intestinal mucosa and increased MCP-1 and NO. SOD, CAT, and MDA were higher in the treated groups, however, no difference in relation to control. Animals presented repair their intestinal mucosa, reestablishment of glycemia and the increase of weight gain in the absence of WBFE. The WBFE showed antinutritional and immunomodulatory effects, therefore, it is not safe as oral dietary supplementation at the dosages used.

Biography

Wendeo Ferreira da Silveira completes biological sciences course at Santa Marcelina University. He started at Universidade Federal de Viçosa–UFV in 2012. Ended PhD in 2018. He currently coordinates the immunochemistry and glycobiology laboratory of the same institution. It acts in the areas immunotherapy for experimental Chagas disease, protein-carbohydrate and protein-protein interaction in infections by intracellular pathogens, identification and characterization of new lectins, IgY microencapsulation for veterinary use, prospecting of biomolecules with antimicrobial and antiparasitic activity, glycobiology of venoms.

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My innovations for sure cure on diabetes

Pramod Stephen India

s we know that we have come here to discuss for diabetes cure and eradications. After the discovery of insulin in 1921 our A mind only focused around the Insulin and there is no results found to cure diabetes by insulin as yet complete. Insulin is the only remedy to control the sugar in the body but, it failed to cure diabetes and self-generating insulin by the pancreas. As per the World Health Organization (WHO), diabetes is a group of metabolic diseases characterized by hyperglycemia resulting from defects in insulin secretion, insulin action, or both. Through my personal research and reading some physiologies books name (1) International fourteen Edition, Review of Medical Physiology by William F Ganong San Francisco (2) Medical Physiology Fifth Edition by C.Gayton Philadelphia London (3) Human Physiology by Dr B Saha, and Dr C Saha Kolkata (4) Fundamentals on Biochemistry by Dr AC Deb Colkata and other books. I can say that we can cure and eradicate diabetes in two ways: (a) By chew Path (b) by filling deficiencies.

(a) By Chewing path: As we all know that diabetes is a metabolic disorder. I want to say that the metabolism process takes place only inside the body. In other words, we can say that it is chemical change take place inside the body because when we eat food then it changes the shape, color & chemical change at the time of digestion. When we take food and any substance in our mouth then it starts to mixes, dissolves and digests with the saliva. Our saliva contains many types of enzymes. Now I focus upon only 3 enzymes for diabetes (1) Amylase (2) Lipase (3) Trypsin. As I found in physiological books that salivary amylase and lipase as we know the beta cell of the pancreas secretes insulin. Insulin contains three types of enzymes:

- Amylase: Amylase converts all starch into maltose.
- Trypsin: Trypsin converts peptone into amino acids.
- Lipase: Lipase converts fat into glycerol and fatty acid.

Lingual lipase is same as pancreatic amylase and lipase and stomach also secrete gastric lipase and trypsin. It is clearly written in Human Physiology book By Dr S Saha that Insulin contains 3 enzymes (1) Amylase (2) Lipase and (3) Trypsin. Hence, I can say with full confidence that by chew method we can cure diabetes because I tried this method on many diabetic patients and they were cured and they did not require any medicine for 10 years. We must masticate food not less then 70 to 80 times and we must eat our food for 25 to 35 minutes because in our body some hormone takes 20 to 30 minutes to secrete. For example, we can take leptin hormone it takes 20 to 30 minutes to secrets this hormone is responsible to send a message to our brain that our stomach is filled or we are satisfied with the food. If we will eat our food faster then there will be no secretion of leptin hormone and no message will be come out to our brain then we will eat more food and saliva will not be mixed with food and as result, any kind of hormones will not function properly. We should not talk at the time of eating because by this process our saliva is disturbed and our metabolic process is also affected badly. We must chew the water and liquid and take meal timely. My method is fit for any kind of metabolic disorders.

(b) By filling the deficiencies: By researching on books and website, I found that some substances are also disturbing for insulin secretions:

- Borax: Borax stimulates the production of hormones and stabilizes estrogen consist of Insulin use and blood glucose control. Daily requirements of borax in human is 1 to 2mg
- Sulfur or cysteine: Sulphur is needed for insulin production, Insulin control carbohydrate metabolism but insufficient sulfur makes harder for the pancreas to produce enough insulin and makes cells able to absorb things from the blood contributing to blood sugar problems. A requirement of sulfur in human is 400 to 800mg per day.
- Chromium: Chromium helps to move blood sugar (glucose) from the bloodstreams into the cells to be used as energy and to turn fats carbohydrates and protein into energy. A daily requirement, of chromium, is 50 to 200 mcg.
- Bile Salt: Bile salt increases the function of the pancreas. I prepare a combination of this substance. It needs analysis, test, and clinical trials and considerations to develop the technology to cure diabetes.

Actinonin represses TRAP1-key molecule to counter resistance in non small cell lung cancer

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Statement of the problem: Lung cancer is the most widely prevalent type of cancer worldwide. Approximately 85% of such cases are of non-small cell lung carcinoma histology. The emergence of resistance against prescribed chemotherapy has posed additional trouble. Mitochondria play a critical role in the maintenance of cancer cell homeostasis. Researchers are now focusing on understanding the importance of this organelle in cancer progression and designing novel therapeutics against it. More than a decade ago, Actinonin, a peptidomimetic compound naturally produced by actinomycetes that inhibits human peptide deformylase was observed to have anti-cancerous properties. It has been shown to disrupt the mitochondrial permeability and compromise the cellular health via induction of apoptosis. On the other hand TRAP1, a cytoprotective mitochondrial chaperone has proven to be involved in poor prognosis of resistant cases. However, the effect of actinonin on the expression of TRAP1 has not been studied which might hold the key for apoptosis induction by actinonin.

Methodology & Theoretical Orientation: The IC_{50} of actinonin for non-small cell lung carcinoma cell line H520 was calculated using MTT assay after 24hours of actinonin's treatment. The IC_{50} dose was used to treat the cells and mRNA expression was analyzed for TRAP1, Caspase 8, HIF-1 α , Vimentin, and N-Cadherin by real-time PCR. The apoptosis in H520 cells at 24hours of actinonin treatment was analyzed using AnnexinV/PI staining.

Findings: The mRNA expression at 24 hours exposure of H520 cells to actinonin, induced nearly four fold downregulation of TRAP1 expression and a two-fold decrease in Caspase 8 expression. AnnexinV/PI staining confirmed cells in early and late apoptosis with no necrosis upon 24 hours actinonin treatment.

Conclusion & Significance: This study supports that actinonin can be utilized against lung cancer cases and other cancer types in which *TRAP1* gene's higher expression causes resistance against prescribed chemotherapy.

Biography

Priyanca Ahlawat is a research student in the Post Graduate Institute of Medical Education and Research, Chandigarh, India. Her research interests includes molecular biology and mitochondrial biology of non small cell lung cancer and nanotechnology based delivery systems against cancer.

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Evaluation of HER2 expression in gastric and gastroesophageal junction adenocarcinoma and its correlation with relevant clinicopathological parameters

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Gastric and gastro esophageal junction adenocarcinoma(GEJ) is one of the most common malignant tumors and a major cause of cancer death worldwide, especially in developing countries.

Overexpression of c-erbB-2/neu (HER2) oncogene has been linked to clinical outcomes in several solid tumors, such as breast cancer. However, its association with the prognosis of the disease and survival in gastric adenocarcinoma remains unclear.

Aims and Objectives: To investigate the frequency of HER2 expression in gastric and gastroesophageal junction adenocarcinoma and its association with various clinicopathological parameters and survival.

Materials and Methods: We included 60 prospective cases of both biopsies and resected specimen at Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India. HER2 expression was detected using immunohistochemistry(IHC). Expression of c-erbB-2/neu was further correlated with different clinicopathological parameters. The rate of survival was calculated by Kaplan Meier method (Log rank test) and Cox regression analysis using SPSS 20 software.

Results: Out of the 60 patients studied 47 were male and 13were female. We found 21(35%) positivity(scor 2+ and 3+) for HER2 expression in gastric adenocarcinoma. Our results showed no significant association between c-erbB-2/neu expression and gender, age, tumor location, degree of differentiation and lympho-vascular invasion (P>0.005). Patients with HER2 overexpression tumors (score 2+ or 3+) had significantly shorter mean event free survival times than those with HER2 negative expression (score 0 or 1+) tumors (mean survival time, 39.3vs 22.9 months, respectively; P = 0.001 on the log rank test). On Cox regression survival analysis, HER2 overexpression remained an independent prognostic factor (hazard ratio, 0.53; P = 0.003).

Conclusion: Developing new molecular target therapy against HER2 may be one possible strategy for the treatment of gastric and gastro esophageal junction adenocarcinoma patients. These results should encourage further investigation of treatments using new molecular targeting agents against HER2 protein to improve the survival of patients.

Biography

Nisha Raj, PhD scholar (ICMR-JRF) from Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India. Her research interest focuses on cancer biology specifically in the field of biomarkers and its therapeutic role on human tissue. She has done both graduation and postgraduation in Biotechnology. She has two manuscript published, as:

- Nisha Raj PhD1, Divya Verma PhD2, Ashok Kumar MCh3, Praveer Rai DM4, Ram Nawal Rao MD*5 "Prognostic significance of membrane associated Human Epidermal Growth Factor Receptor2 in Gastric Adenocarcinomas".
- Divya Verma1, Nisha Raj1, Pallavi Prasad1, Rangnath Mishra2, Amit Agarwal1 and Ram Nawal Rao1* "Pathological findings using cell blocks can successfully be used in place of tissue biopsies in diagnosing HER2 positive tumors in Breast Cancer".

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FIT vs Colonoscopy: Using social determinants to optimize colorectal cancer screening in a urban underserved population

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Statement of problem or question: Will improved shared decision making around FIT or colonoscopy screening based on social determinants improve colorectal cancer (CRC) screening completion rates in underserved populations?

Objectives of program/intervention: To compare screening completion rates of FIT vs colonoscopy in an urban underserved population To improve CRC screening completion rates

Description of program/intervention: A retrospective analysis reviewed baseline colon cancer screening rates in resident clinic patients seen between January and February 2017. The intervention was to encourage residents to discuss the pros and cons of FIT and colonoscopy for CRC screening allowing patients to choose their preferred modality. A prospective cohort study reviewed charts from September 1 to Dec 31st 2017 to assess completion of screening. Primary endpoint: overall CRC screening rate.

Measures of success: Overall CRC screening rates pre and post intervention were assessed. A subgroup analysis of FIT and colonoscopy completion rates was performed pre and post intervention.

Findings to date: The study population consisted largely of Afro-Caribbean patients, 50 years and older with average risk factors at a resident clinic in an urban safety net institution. Of the 52 patients reviewed in the baseline analysis, 9 (17%) FIT and 43 (71%) colonoscopies were ordered, with completion rates of 78% and 26% respectively, and an overall rate of 34%.

Post-intervention, 42 patients agreed to screening between October and December 2017. Of these 42 patients, 30 chose FIT (71%) and 12 favored colonoscopies (29%). Due to the short follow up period, no colonoscopies were completed, however, 73% of FIT testing was still able to be performed. The overall post-intervention completion rate was 52%.

	Pre Orders	Pre Completion	Post Orders	Post Completion
FIT	9 (17%)	78%	30 (71%)	73%
Colonoscopy	43(83%)	26%	12 (29%)	0%
Totals	52	34%	42	52%
FIT	9 (17%)	78%	30 (71%)	73%

Key lessons for determination: Although colorectal cancer (CRC) is the third most common cancer among men and women and is projected to cause more than 50,000 deaths in 2017, only 62.6% of adults 50 years and older were screened. Access, insurance/immigration status, education, and ethnicity impact cancer screening. Urban underserved populations are disproportionately affected by these barriers.

Subjects who chose FIT testing were more likely to complete testing compared to those who chose colonoscopy. While colonoscopy is often offered as a first line for CRC screening, it may not be ideal for patient populations that have more socioeconomic barriers. The U.S. Preventive Services Task Force Guidelines consider both modalities equally valid for CRC screening. This study demonstrates that improving shared decision-making between patients and providers can decrease barriers to screening, and improve CRC completion rates.

Biography

Gordon Taylor Moffat has his experience in Life Sciences with an Honors in Biology with training in Radiology. His passion for science and interest in microbiology lead him to pursue and obtain a Doctor of Medicine. Currently he is working at the State University of New York Brooklyn Health Sciences Center in Internal Medicine and the forthcoming Medicine Chief Resident. His professional interests include: Medical Oncology, Hospice and Palliative Medicine, and Geriatric Medicine. He is currently working on research projects at Memorial Sloan Kettering Cancer Center in Manhattan, New York that are expected to be published. He is also a candidate for the Alpha Omega Alpha Honor Medical Society Postgraduate Fellowship Award.

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A new family of Cu(II) photoactive complexes: Enhanced DNA intercalation and fragmentation

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C tatement of the Problem: Treatment of aggressive and not accessible tumors, such as glioblastoma multiforme, is based on Othe synergistic result of surgical operation, radiotherapy and chemotherapy. However, these techniques come not only with serious side effects, but also with marginal improvement of the patient's life expectancy.1 Photodynamic Therapy (PDT) has emerged as an attractive alternative to conventional cancer treatment. It induces destruction of cancer cells upon irradiation of specific photoactive compounds called photosensitizers (PS), usually by generating the highly reactive single-state oxygen 102.2-4 Transition metal complexes have been utilized in PDT exactly because they can promote such photochemical transformations, exhibit strong absorption in the UV-Vis region of the electromagnetic spectrum, and relatively long emission lifetimes of their triplet metal-to-ligand charge transfer state (3MLCT).5-6 The present study reports the synthesis of three novel Cu(II)-based complexes, bearing bidentate bipyridine-type ligands able to intercalate to the DNA strand and cleave it upon irradiation, resulting in apoptosis of the treated cells. Methodology & Theoretical Orientation: Three novel Cu(II)based complexes were synthesized and characterized using mass spectroscopy, FT-IR and UV-Vis. The binding constants of these complexes with DNA were determined (before and after irradiation) by calculating the concentration of the complex at 50% quenching of DNA-bound ethidium bromide emission intensity. Agarose gel electrophoresis helped visualize the ability of these complexes to bind and cleave DNA upon irradiation. Findings: These novel complexes show high affinity for DNA, (calculated binding constants were one order of magnitude lower than that of ethidium bromide). When incubated in the dark, complexation with DNA resulted in only a small amount of fragmentation, which was substantially enhanced after irradiation, especially when the concentration of the complexes was increased to 200µM or higher. As a result, these complexes could potentially be used as photosensitizers in PDT.

Biography

Theodoros Mikroulis is a chemist working at the interface of Organic and Medicinal Chemistry for the development of drugs and other biologically-related compounds against various diseases. He graduated from the Department of Chemistry of the National and Kapodistrian University of Athens and obtained a M.Sc. degree in Medicinal and Biological Chemistry at the University of Edinburgh. He is currently working towards his PhD on the synthesis of photoactive compounds that can potentially be used as anticancer agents, in the research group of Professor Georgios C. Vougioukalakis in the National and Kapodistrian University of Athens.

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Prevention and treatment Hepatitis B virus in kidney transplantation: A multi-centric research

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Background and Purposes: Hepatitis B virus (HBV) infection is associated with significantly decreased outcomes of kidney transplantation (KT) due to HBV reactivation and hepatitis B diseased, a fatal complication; and also to activate acute rejection. Finding out the prevalence of HBV infection among patients (pts) after kidney transplant (KT) and evaluate the outcome of Entecavir regimens on this group pts is the purposes of the study.

Materials and Method: Patients (pts): All of the pts were been a post-operative follow-up (FU) in 7 centers of the country (performed KTx in or outside the country). The pts agree to participate voluntarily in the study. Group I: Retrospective study and analysis of the disease: on HBV infection; HBV disease on recipient patients (pts) draw back the consequences and experience. Group II: Prospective descriptive and case-control analysis: prospective solutions to prevent and treat HBV on pts. Performed 2 years (2013-2015), Sample size: 1000 cases.

Results: Group I: A retrospective study on HBV infection, 1026 pts of seven centers. The average age was 40.77±11.85 years old. Male patients: 68.32%. 671/1026 pts (65.11%) were performed the KTx in Vietnam, others pts were performed from the foreign countries (34.89%). Live-donor kidney: 796/1026 pts (77.58%); deceased-donor kidney: 230/1026 pts (22.42%). The frequency of HBV with HBsAg (+) is 77/1026 pts, (7.50%); circulating antibody HBsAb:339/704 cases (48.15%); Vaccination: 282/704 cases (40.05%); Stabilized HBV infection: 205/704 cases (29.11%). Reactivation of HBV happens 100% in status HBsAg(+) and HBV DNA (-) after kidney transplantation. Group II: There were 807 pts had participated the FU with sufficient data, Research shows that patients with pre-history of HBV infection have a significantly "non-HBV infection" cumulative incidence compared to those without baseline HBV infection (p=0.0000, Log Rank [Mantel Cox]). This shows that when a kidneys recipient who has been infected with HBV, there is a risk of reactivation. There was no statistically significant difference in the rate of hepatitis B outbreak (ALT>200 UI/ml) between HBV-infected kidney transplant and HBV-free kidney transplant. HBV infection after kidney transplant is low 0.26%. There was 30/807 with HBV DNA (+) were indicated to use Entecavir during at least 6 months for evaluation.

Results: 18/30 pts (60%) were full response, 3/30 (10%) were partial response, 4/30 pts (13.33%) inadequate response, 1/30 pts (3.84%) were recurrence, and 4/30 pts (13.33%) were drug resistance. There was no adverse drug event noted during treatment.

Conclusion: HBV frequency in the kidney transplant community was 7.50% of pts in Vietnam. Kidney recipients who have been infected with HBV, there is a risk of reactivation. HBV infection after kidney transplant is low 0.26%. Entecavir was a full response in 60.00% of pts and safe for post-transplant patients with HBV infection, 13.13% of pts were Entecavir resistance.

Biography

Tran Xuan Truong has completed his PhD at the age of 25 years (1989) and postdoctoral studies at Ho Chi Minh Medical University. He is the Chief of Department of General Medicine 9B1, Cho Ray Hospital, Vietnam from 2016 until now. His medical specialty is General Internal Medicine. In nearly 30 years on the internal medical field, he had experiences in malaria, infectious diseases and hepatitis, especially hepatitis B and C on kidney transplantation. He has participated more than 15 researches about malaria and hepatitis in kidney transplantation. He had made some reports in ISN or CAST conferences. He is a member of the Vietnam Association for the Study of Liver Disease (VASLD), Vietnam Uro-Nephrology Association (VUNA) and member of the International Society of Nephrology (ISN).

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e-Posters

GG genotype of the PNPLA3 RS738409 polymorphisms is associated with NASH in Uzbek population

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Aim: The purpose of our research is to investigate the association between a polymorphic variant of PNPLA3 gene (rs738409) and susceptibility to non-alcoholic fatty liver disease (NAFLD) in Uzbekistan.

Materials and Methods: In this case-control study, 73 patients a mean age of 55.1 diagnosed with NAFLD (48 patients with simple steatosis and 25 patients with non-alcoholic steatohepatitis (NASH)) and the age, gender and ethnically matched controls (n=37) were recruited. The diagnosis of NAFLD was verified on the basis of anamnesis, clinical and laboratory tests, and liver ultrasound. Genomic DNA was isolated and SNP genotyping was performed by using the polymerase chain reaction with specific primers followed by restriction fragment length polymorphism analysis.

Result: Our result showed significant association between GG genotype of the PNPLA3 rs738409 polymorphisms and NAFLD (p=0.03,OR = 2.99; 95% CI 1.21–7.42 for the additive model, Cochran-Armitage trend test; p=0.02,OR = 2.99; 95% CI 1.21–7.42 for the recessive model, Pearson's χ^2 test). Genotype frequencies of PNPLA3 rs738409 polymorphisms in a subset of patients with simple steatosis and NASH compare to the control group. Comparative analysis of resulting genotypes showed a slight increase of CG and GG genotypes among patient with simple steatosis, then among subjects of the control group, but this did not reach statistical significance. However, statistical analysis of genotype distribution between patients with NASH and controls showed a significant association between GG genotype and NASH assuming an additive model (p<0,0001, Cochran-Armitage trend test) and recessive model (p<0,0001, Pearson's χ^2 test).

Conclusion: The present study, we confirm the association of PNPLA3 rs738409 GG genotype with susceptibility to NAFLD. After stratification into the two main subtypes of NAFLD, the risk genotype GG was found to be significantly associated with susceptibility to NASH. We also found that the GG genotype is not associated with simple steatosis in Uzbek population.

Biography

Guzal Sobirova has been working in the RSSPCTR since the 2002 year. Since 2005 until current time Dr. Sobirova has been holding the position of Chief of Balneology Department. She is also Senior Scientific Researcher of Gastroenterology Department. She involves in the educational process for clinical residents and masters of Tashkent Medical Academy. She possesses 198 scientific works. She regularly takes part in Scientific Practical Conferences and widely introduces and applies gained knowledge in the departments of our Center and other patient care clinic of the Republic of Uzbekistan. Now focus of her interest is a genetic predisposition to gastroenterological disease with propose of the organization of effective preventive measures and medical interventions.

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KRAS G-quadruplex stabilisation by porphyrin based compounds: A powerful tool against pancreatic cancer

Rudradip Pattanayak

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KRAS, a frequently mutated proto-oncogene is accountable for almost every type of cancer which can form a G-quadruplex structure in the promoter region. G-quadruplex structures are one of the most important drug targets for modern targeted cancer therapy for their unique structure and specificity. Several synthetic porphyrin-based compounds have been screened as potential KRAS-promoter/G-quadruplex stabilizing ligands, using molecular modeling and docking studies. Two novel porphyrins: Porphyrin-1(Cobalt containing) and Porphyrin-2 (Palladium containing) evidenced high affinity towards KRAS-promoter/G-quadruplex. *In silico* results were further validated *in vitro*, using techniques like fluorescence and CD spectroscopy. As KRAS mutation is prevalent in pancreatic cancer, the efficacy of these ligands against human pancreatic ductal carcinoma cell line PANC-1 and MiaPaCa-2 were examined. Both Porphyrin-1 and Porphyrin-2 exhibited significant cytotoxicity towards both cell lines, accompanied by the induction of apoptosis, inhibition to colony forming abilities and migratory properties of cancer cells. These two porphyrin compounds to be very much effective against mice solid tumor model but with significant low toxicity against normal swiss albino mice. Interestingly the expression of KRAS protein in porphyrin-based ligands with G-quadruplex. DNA at the promoter region of KRAS might be responsible to inhibit the proliferation of pancreatic cancer cells which may have significant implication in cancer research.

Biography

Rudradip Pattanayak has completed his Master's degree from the Department of Biochemistry, University of Calcutta, India. He is the final year student of PhD under the guidance of Prof Maitree Bhattacharyya in the Department of Biochemistry, University of Calcutta in collaboration with Jagadis Bose National Science Talent Search, India. He has published 7 research papers in reputed journals. He is currently working on G-quadruplex mediated regulation of oncogenes.

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A novel effective drug target for treating endocrine therapy resistant breast cancer

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S LC6A14 is a unique amino acid transporter; it transports only positive and neutral amino acids (18 of the 20 amino acids). The importance behind studying this transporter is that SLC6A14 is expressed at high levels in malignant tissues, specifically in estrogen receptor positive (ER+) breast cancer. The up-regulation of SLC6A14 protein in malignant cells is associated with the increased need for essential amino acids to maintain the accelerated cell growth. Glutamine and arginine are the most important amino acids for tumor cells because both are essential for proteins and nucleotides biosynthesis. Here, we demonstrate the relationship between the expression levels of the transporter and ER protein in endocrine sensitive and resistant breast cancer cell lines. Our data shows that which is conflicting with previous studies showing a significant correlation between SLC6A14 protein expression levels and ER protein in regular breast cancer cell lines. Suggesting that resistant breast cancer cells have a different pathway to regulate the transporter expression levels. Moreover, knocking down of SLC6A14 protein by siRNA led to a dramatic death rate (approximately 65%) in resistant breast cancer cells, confirming the importance of the transporter to this type of breast cancer. Consequently, *in vitro* treatment of ER-positive breast cancer cell lines series LCC1 (sensitive), LCC2 (Tamoxifen-resistant), and LCC9 (Faslodex-resistant; Tamoxifen-resistant) with α -methyl tryptophan (α MT), a selective substrate of SLC6A14 that can block the transporter, induces cell death by autophagy and apoptosis. Prolonged treatment stops the autophagosomal lysis process and induces apoptosis. Our study highlights SLC6A14 transporter as an effective drug target that can lead to new strategies for the treatment of endocrine therapy-resistant breast cancers.

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Prevalence of diabetes mellitus and its associated factors among HIV patients Harar Town, Harari Regional State in eastern Ethiopia

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Statement of problem: The introduction of antiretroviral therapy saves and improves millions of HIV patients. However, there is a problem of the different associated chronic metabolic syndrome. Diabetes mellitus is increasing in incidence among people living with HIV. There are pocket studies conducted on some parts of the Ethiopia which indicates the magnitude of the problem is increasing among HIV patients but not conclusive. Therefore this study was aimed to determine the prevalence of Diabetes mellitus and its associated factors among HIV patients attending antiretroviral therapy clinics in Harar town, eastern Ethiopia.

Methodology: A cross-sectional study was conducted among 424 HIV patients in selected health institutions delivering antiretroviral therapy in Harar town from March 10 up to April 20, 2017. Data were collected using a structured questionnaire and measuring blood pressure. In addition, patients fasted and their blood was collected for blood glucose and other supportive chemistry tests. Data were entered and analyzed using SPSS statistical software version 16.

Findings: The prevalence of diabetes mellitus in this study is 6.6%. Age less than 40 years (AOR = 3.17; 95% CI: 1.12-9.23), duration on antiretroviral therapy for more than 5 years (AOR: 2.49; 95% CI:2.43-7.71), presence of hypertension (AOR = 19.46; 95% CI:7.25-52.17), Low density lipoprotein > 130 mg/dl (AOR : 6.30, 95% CI: 2.83-7.49) ,cholesterol > 200 mg/dl (AOR: 8.56; 95% CI: 3.83-19.12); triglycerides > 150 mg/dl (AOR : 12.514.72, 95% CI: 5.53-28.5) were found to be factors associated with prevalence of diabetes mellitus.

Conclusion: The magnitude of diabetes mellitus among all HIV-infected patents was higher in this study compared to other studies conducted in Ethiopia. Therefore, creating awareness and continues mentoring of HIV patients about chronic diseases like diabetes mellitus and hypertension and other supportive clinical chemistry profile are required for improving the quality of life of HIV patients.

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Hormonal abnormalities in chronic hepatitis C patients

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Trials have been performed on changes in hormonal profiles in alcohol-related chronic liver disease. In this presentation, we I will present our findings on hormonal changes in patients with HCV-related chronic liver diseases. The study group included 30 patients with chronic liver disease secondary to hepatitis C infection. Additionally, a control group was formed. We investigated serum levels of follicle-stimulating hormone (FSH), luteinizing hormone (LH), total testosterone (T.TES), Free-testosterone (F.TES), Estradiol (E2), Androstenedione (AND), Dehydroepiandrosterone (DHEA), Progesterone (PPOGES), Prolactin (PRL), and sex hormone binding protein (SHGB), which were measured by radioimmunoassay and chemiluminescent immunoassay methods. Serum F.TES levels in patients with HCV-related chronic liver diseases were found to be significantly lower than in the control group (p=0.002). Serum fT3 and fT4 levels in patients with HCV-related cirrhosis were found to be lower than those in the control group (p=0.04, p=0.02, respectively). Serum PROGES levels were higher in the both in patients HCV-related chronic liver diseases and with HCV-related cirrhosis compared to the control group (p=0.01, p=0.04 respectively). It was concluded that the patients suffering from HCV-related chronic liver disease present a degree of hormonal imbalance that will be discussed in the presentation.

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Characterizing CXCR3 in inflammatory bowel disease: Small molecule inhibition of CXCR3 attenuates experimental model of Crohn's disease

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Inflammatory bowel disease (IBD) is a group of disorders characterized by idiopathic chronic inflammation of the intestine. Though IBD affects millions of individuals in the US and is responsible for billions of health care dollars, there is very limited treatment and no cure for the disease. Previous investigators have implicated the importance of the chemokine receptor CXCR3 in the propagation of IBD, as evidenced by the increased expression of its ligands in diseased tissue. Our work aims to discover the expression profile of CXCR3 and its ligands CXCL9, CXCL10, and CXCL11 and whether a small molecule inhibitor of CXCR3, AM487, can attenuate the murine model of Crohn's disease, a subset of IBD. Mice were treated with the CXCR3 small molecule inhibitor AM487 in order to evaluate the expression profile of CXCR3 and its ligands and the cytokine phenotype of the cells expressing CXCR3. CXCR3 is expressed preferentially by inflammatory T cells in the gut, and these CXCR3+ T cells, and its ligands are significantly increased in disease, at the site of inflammation. The small molecule inhibitor AM487 is capable of attenuating the severity of disease in the murine model of Crohn's disease. CXCR3+ T cells play an important role in potentiating inflammation in the gut. A better understanding of its expression profile will allow for more specific and effective methods of treating Crohn's disease. We show that small molecule inhibition of CXCR3 is capable of mitigating disease severity in our model of IBD.

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Variations in the urgent surgical treatment of obstructive rectosigmoid cancer

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Colorectal carcinoma is the most common malignant gastrointestinal tumor. It is believed that nearly 60% of mechanical bowel obstruction takes place due to colorectal tumors, 20% by diverticulosis and nearly 5% of intestinal obstruction is due to colonic volvulus. Despite the significant progress made in the field of screening, prevention and early diagnosis of colorectal cancer, the fact is that 20% of patients with colorectal carcinoma experience intestinal obstruction as a first symptom. Even though a large number of patients are being treated for this disease worldwide, there are still some disputes regarding the urgent surgical treatment of obstructive carcinoma of the left colon and rectum. We wanted to share our experience in the urgent treatment of this pathology. The patients with obstructive carcinoma of the rectum and sigmoid colon were treated with two different operating techniques: loop colostomy and Hartmann's procedure. One-hundred and twenty patients from two University Hospitals (University Hospital Bezanijska Kosa and Emergency Center for Surgery of the Clinical Center of Serbia) were followed up. This study was designed as a stratified randomized trial with four stratums according to age and ASA score (older/younger than 60 years and ASA score <>3). Each of the four groups was then divided into two sub-groups according to the operating technique: loop colostomy or Hartmann's procedure.

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Log odds of positive lymph nodes stratification: What is the prognostic role in colorectal cancer patients

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N odal status is an important prognostic factor for patients with CRC without distant synchronous metastasis. The aim of the study was to assess the prognostic value of LODDS in predicting the survival outcome of CRC in patients with radical resection. We enrolled 323 consecutive patients with primary CRC that underwent curative resection. LODDS values were calculated by empirical logistic formula, log(pnod + 0.5)/(tnod – pnod + 0.5). It was defined as the log of the ratio between the number of positive nodes and the number of negative nodes. The patients were divided into three groups: LODDS0 (\leq -1.36), LODDS1 (> -1.36 \leq -0.53) and LODDS2 (> -0.53). The 1- and 3-year OS was 90.8 and 78.5%, respectively, for all 323 CRC patients enrolled. Age, TNM staging, pT and pN stage, tumor grade, microvascular and perineural invasion, Lymph Node Ratio (LNR) and LODDS were all statistically significantly correlated with overall survival. In a multivariate analysis with the Cox proportional hazard method, LODDS proved to be an independent prognostic factor of 3-year OS, while the pN stage and lymph node ratio demonstrated no statistical significance. ROC analyses showed that LODDS predicted OS better than LNR. The data of this study, in according to literature, showed that LODDS tumor staging system has a superior prognostic relevance compared to pN stage and LNR, and proving to be an accurate clinical tool to stratify and to predict survival of CRC patients.

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Wrong entry: Gastro-splenic fistula formation in gastric tuberculosis presenting with massive hematemesis

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Massive hematemesis often presents from bleeding peptic ulcer disease, varices or on a lesser extent, from malignancies. When interventions were stretched to cover these causes of bleeding, other etiologies need to be considered. We report a case of massive hematemesis due to Gastric Tuberculosis presenting with Gastrosplenic fistula. The patient is a 62-year-old male who presented with 6 months history of recurrent dull abdominal pain and an acute episode of hematemesis. The patient underwent EGD and showed a large ulcer with raised edge starting at the CEJ. The patient was referred to Surgery service due to recurrent hematemesis and underwent Exploratory Laparotomy which revealed a large ulcer seemingly involving the splenic hilum, with the congested spleen. Histopathologic diagnosis showed chronic granulomatous inflammation consistent with tuberculosis. Anti-Kochs treatment was started, the patient improved upon discharge. Gastroduodenal tuberculosis is rare and gastrosplenic fistula resulting from tuberculosis is even rarer. There are no specific signs or symptoms and no characteristic endoscopic findings. It is our recommendation that among patients with a similar presentation who come from areas endemic for tuberculosis, every effort should be made to confirm the diagnosis.

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Hepatitis C eradication: A promise unfulfilled

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epatitis non-A, non-B (Hepatitis C) was recognized as a unique form of Viral Hepatitis in the late 1970s. It took 2 decades for Lits full clinical characteristics, biochemical manifestations as well as its chronicity to be fully defined. Not until the introduction of interferon therapy in 1998-9 was any efficiency achieved. The development of direct-acting antiviral agents utilized to inhibit viral replication therapeutic efficacy increased most recently to 95-100%. The success led to the projection that hepatitis c could be eliminated by 2020 with a reduction in cirrhosis and hepatocellular carcinoma thru 2030. Unfortunately, multiple obstacles prevent this favourable outcome and consist of the following: a lack of knowledge by physicians that the disease is a serious and importantly that it is treatable; the failure to identify asymptomatic patients and those with non-hepatic manifestations of the disease; the cost of drug therapy is prohibitive for individuals with no insurance and contributes to third-party payers withholding therapy except for those with advanced disease; the failure to identify and treat individuals in the following groups: men having sex with men, incarcerated individuals, those that utilize drugs and participate in needle exchange and opioid replacement programs, those that are co-infected with HIV and hepatitis C; C; co-infected with hepatitis B and C; and those in long-term institutions for the mentally disabled and psychiatric patients.

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Prevalence and associated factors of cervical cancer screening among somali women in an urban settlement in Kenya

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Background: In Kenya, cervical cancer is ranked as the most frequent cancer among women with about 4,802 new cases being diagnosed and approximately 2,451 lives lost to it. Screening by Pap smear facilitates early detection, prompt treatment and consequently reduces mortality from cervical cancer. Though cervical screening services exist in Kenya, there is still high mortality rate due to cervical cancer.

Objective: To determine prevalence and associated factors of cervical cancer screening among Somali women in Eastleigh, Nairobi, Kenya.

Materials and Methods: A cross-sectional study was conducted among 104 women selected by multi-stage sampling approach. The data was collected using pretested semi-structured questionnaire. Chi-square test (p<0.001) and odds ratio with corresponding 95% confidence interval were used to determine the association between screening and independent variables. Multivariate analysis was performed to determine predictors of cervical cancer screening.

Results: The study revealed that only 32.7% of the women had Pap smear test. Multiple logistic regression revealed the following factors as independent predictors of Pap smear test: awareness on the use of Pap smear test (AOR=4.48; 95% CI:1.16-17.29; p=0.03), perceived susceptibility to cervical cancer (AOR=18.41; 95% CI: 4.88-69.43; p <0.001) and no perceived embarrassment of Pap smear test (AOR=12.02; 95% CI: 2.75- 52.48; p=0.001).

Conclusion: Based on our findings special emphasis should be directed at increasing awareness and perception about cervical screening as well as susceptibility of cervical cancer at all primary health care points through a welldesigned health education programme.

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Management of the malignant colorectal lesion, utilizing monoclonal antibodies derived from tumor oncofetal proteins which result in improved survival via an effective ADCC response

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In general it is believed that colorectal carcinoma is induced via a field effect where a virus such as the polyoma, enters the normal Lappearing mucosal glands to initiate changes that indicate that genotypic changes have taken place while the phenotypic appearance appears normal. As one focus grows to a recognizable malignancy, the other foci are suppressed and lay dormant. Once genetic transformation has occurred at the site of primary transformation, the other sites will remain in a dormant state. When resecting the primary lesion it is essential that the dormant or premalignant foci be included. Failure to encompass these additional sites will result in anastomotic recurrence. While we have been led to believe that that major cause of bowel malignancies were due to the initiation of a polypoid growth that went through a process of changes from the adenomatous polyp to the adenocarcinoma, it is now recognized that this effect takes place in less than 5% of the clinical cases again, the majority of bowel malignancies are the result of a diffuse viral presence initiating the resulting field effect. The host immune system seems to tolerate the presence of the resulting malignant lesion as the latter continues to progress to that point that metastasis will eventually occur. Speculation as to mechanisms involved suggest that while foreign invaders such as bacteria and viruses express a threshold level of immunogen that can be identified by the host immune system, that the malignant growth, while containing immunogenic protein, express it at levels far below what is required for recognition by the hosts immunocytes. Thus progression of the malignant state continues. While polypoid lesions were considered as responsible for the initiation of the malignant transformation leading to bowel cancer, more recently it has been shown that E. Coli production of a mutation in cellulose structure results in the development of a sheath around clustered bowel cells representing the initiation of a polypoid growth. At this point the sheath begins to entrap carcinogenic bacteria that allow the gradual transformation of a the earliest polypoid growth to the malignant adenomatous polypoid which then progresses to the final invasive version. This is obviously a different mechanism from that resulting in a mutated field effect and the major cause of resulting bowel malignancies. Antigen preparation for use in clinical trials was started in the 1970's where with FDA supervision, pooled allogeneic tumor proteins were prepared. 20-30 operative specimens were used in preparing cell suspensions which were then sonicated to release surface membrane antigen. The suspension was passed over a Sephadex G-200 column to further separate those proteins in solution by MW. The cell suspension was then tested in patients by skin testing for DHR, three specific antigens were defined. mAbs were produced against them for purification and mass spec to develop a recombinant antigen. The antigens found for several GI malignancies examined were post-translational modifications of oncofetal proteins present, but in subtherapeutic levels of approximately 10-20 ugms per entire lesion wherein semipurified form, 500 ugms was needed to elicit a clinical response. In colon cancer, the 3 antigens that were defined were post-translational modifications of the oncofetal proteins A33, MUC5ac and CEAcam. The mechanisms of activity of these antigens after inducing an antibody response, occurred via ADCC (antibody dependent cell cytotoxicity) and not a cell mediated CD8 response. Enhanced survival was defined in patients (colon cancer, pancreas cancer) with recurrent metastatic lesions having failed all known therapeutic agents who were then given the therapeutic mAb. Marked improvement in survival was noted after patients having failed all therapeutic modalities received the therapeutic monoclonal.

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Improving cancer patients satisfaction by introducing a video based intervention in a Tertiary Care Hospital in Karachi, Pakistan

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Introduction: The burden of cancer is escalating worldwide and affecting an individual's wellbeing. Chemotherapy is one of the treatments of choice worldwide to combat cancer. Patient satisfaction is one of the core components in the treatment of cancer, However, the complex nature of chemotherapeutic agents and process of treatment may result in multiple physiological and psychological stressors such as side effects of chemotherapy, anxiety related to the treatment process. In addition, if the patient and their caregivers (family) are unaware of these side effects pose an additional stress which may result in dissatisfaction and noncompliance with the treatment. Therefore it is important to educate patient/families. Therefore, the purpose of this pilot project was to provide patients/ families awareness regarding the process of treatment and subsequently to improve their satisfaction level.

Methods: A case-control design was employed for this study. A total of 30 cancer patients, that is 15 as cases and 15 as controls were recruited from the daycare oncology department of a private tertiary care hospital. Patients planned for their first chemotherapy cycle selected in both the groups. The participants in the control group were given the standardized education material (information brochure); whereas, for cases, a video-based educational material was developed and used. A self-developed questionnaire was used to assess the patient satisfaction level regarding the chemotherapy process before and after the standardized and video-based educational intervention. Independent T-test was used to analyze the data.

Results: The study revealed significant results for the intervention group. The overall mean score of patient satisfaction level for the cases was 18.80; whereas, in controls, it was 11.93. The patient satisfaction level related to the awareness of the chemotherapy process via video-based intervention was significantly (p-value <0.000) higher among cases compared to the control group.

Conclusion: This study indicates video-based intervention as an effective mode to assist patient go through chemotherapy process. This intervention can play a crucial role in reducing treatment-related stressors and enhance patients satisfaction level.

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The potential role of gut microbiota in pancreatic disease: A systematic review

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Background: Several studies have suggested a link between microbiota imbalance and some gastrointestinal, inflammatory and neoplastic diseases. However, the role in pancreatic diseases remains unclear. To evaluate the available evidence for pancreatic diseases, we undertook a systematic review.

Methods: OVID Medline (1946 to 2017), EMBASE (1980 to 2017) and the Cochrane Central Register of Controlled Trials (CENTRAL Issue 3, 2017) were searched for studies on microbiota in pancreatic disease. We also searched the reference lists of retrieved papers and conference proceedings. We excluded animal studies, reviews, and case reports.

Results: A total of 2,833 articles were retrieved. After screening and applying the exclusion criteria, 10 studies were included. Three studies showed lower levels of *Bifidobacterium* or *Lactobacillus* and higher levels of *Enterobacteriaceae* in chronic pancreatitis. Two of these studies were uncontrolled, and the third (controlled) study which compared patients with endocrine and exocrine insufficiency, reported that Bacteroidetes levels were lower in those patients without diabetes, while Bifidobacteria levels were higher in those without exocrine insufficiency. Only one study investigated acute pancreatitis, showing higher levels of Enterococcus and lower levels of *Bifidobacterium* versus healthy participants. There was an overall association between pancreatic cancer and lower levels of *Neisseria elongate*, *Streptococcus* mitis and higher levels of *Porphyromonas gingivalis* and *Granulicatella adiacens*.

Conclusions: Current evidence suggests a possible link between microbiota imbalance and pancreatic cancer. Regarding acute and chronic pancreatitis, data are scarce, dysbiosis appears to be present in both conditions. However, further investigation is required to confirm these findings and to explore therapeutic possibilities.

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Association of glycated hemoglobin and body mass index with chronic kidney disease among type 2 diabetic patients in North-eastern Thailand

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Background: The prevalence of chronic kidney disease (CKD) amidst Thai adult type 2 diabetes mellitus (T2DM) patients is quite high. Uncontrolled DM and obesity can play a role to initiate this renal vascular complication. Glycated hemoglobin (HbA1c) a well-known valid biomarker to estimate glycemic control. However, it is not clear whether HbA1c and body mass index (BMI) with other conventional indicators can act as a reliable determinant to predict CKD.

Methods: A diabetic registry was used to collect 4042 participants from a large district hospital in the Northeast of Thailand. CKD was reported as estimated glomerular filtration rate; eGFR<60 ml/min/1.73m2. Using STATA, multiple logistic regression analysis was performed to report adjusted odds ratio.

Results: More than one-fifth of T2DM patients (887, 21.9%), were found with CKD. The majority of the participants were in the poor glycemic state (82%), and 43% of them were overweight. HbA1c was found not to be a reliable indicator for CKD. Age, hypertension, microalbuminuria, and triglyceride were considered to be the implied risk factors besides HbA1c in this study. Also, BMI is seemed to decrease in the course of developing CKD.

Conclusion: It appears to the presence or lack of generally accepted indicators for detecting CKD in T2DM patients. The lower values of HbA1c and BMI for high-risk CKD patients might be explained by the fact that CKD patients usually develop anemia and their nutritional status can declines. Both the contemporary guidelines of HbA1c and BMI need to be modified in consideration of CKD patients.

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Momordica charantia mitigates hepatic injury following adjuvant treatment with antiretroviral drugs in diabetic and non-diabetic animal models

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Health of mankind and calls for urgent attention. *Momordica charantia* (*M. charantia*) is a medicinal plant, used in Ayurveda for treating various diseases, including diabetes mellitus. This study investigated the possible protective effect of *M. charantia* against HAART and streptozotocin STZ induced hepatoxicity. 78 adult male Sprague Dawley rats were divided into two groups (non-diabetic and diabetic) and treated according to protocols. Diabetes was induced with streptozotocin (STZ) by intraperitoneal injection (45 mg/kg body weight). The animals were euthanized on the tenth week with livers removed for examination and blood obtained via cardiac puncture and centrifuged to collect the serums. Blood glucose levels (BGL) were consistently and significantly raised in all groups not receiving the adjuvant *M. charantia* (p<0.05). Treatment with *M. charantia* reverses the increase in BGL to near normal. Markers of liver injury assayed showed a significant increase (p<0.05) in AST, ALP and ALT levels in diabetic groups not receiving *M. charantia* significantly restored liver enzymes elevations to near normal comparable to control. Histopathological observations ranged from severe hepatocellular distortions, necrosis and massive fibrosis following treatment of HAART in diabetic groups. *M. charantia* did not show any sign of hepatotoxicity as judged from the histological and biochemical observations.

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