15th International Conference on

Digestive Disorders and Gastroenterology

July 11-12, 2018 Sydney, Australia

Scientific Tracks & Abstracts

Jianjun Du et.al., J Gastrointest Dig Syst 2018, Volume 8
DOI: 10.4172/2161-069X-C2-067

A long-term surgical outcome of self-pulling and holding purse-string suture technique for intra-corporeal circular-stapled esophagojejunostomy

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Background: Classic esophagojejunostomy using a circular stapler is the most commonly performed standard reconstruction procedure in open surgery, than this technique should be the preferred method of esophagojejunostomy in laparoscopic surgery. In circular stapling method, the most difficult steps are placing the purse-string suture and anvil which limit its widespread applications. To address this problem, we introduced a novel self-pulling and holding technique to place the purse-string suture for intra-corporeal circular-stapled esophagojejunostomy in laparoscopic surgery.

Methods: Creation of the purse-string suture was performed by hand with assistance of constant self-pulling and holding of the uncut right esophagus on the transected esophageal end after subtotal circumferential transection (90%) of the distal esophagus. A needle insertion from the serosal side or the mucosal side of the esophageal lumen was chosen to avoid placing a backhand stitch in addition to the easy needle insertion from the mucosal side on the posterior esophageal wall. Five-year follow-up for the patients underwent the procedure was completed.

Results: Between June 2009 and December 2012, 52 patients with gastric cancer underwent consecutive laparoscopic total gastrectomy using the procedure for intra-corporeal circular-stapled esophagojejunostomy. The mean (±SD) operating time was 297.1±53.0 minutes and the time of the purse-string suture and anvil placement was 18.3±6.1 minutes. There were three major postoperative complications: one for anastomotic bleeding, two for ileus. During five-year follow-up periods, there were no instances of postoperative anastomosis-related complications observed except for one with stenosis.

Conclusions: We believe that this method is feasible and reliable to create the purse-string suture for intra-corporeal circular-stapled esophagojejunostomy by a long-term follow-up.

Biography

Jianjun Du has completed his MD at the age of 24 years from the Fourth Military Medical University, PhD from the Fourth Military Medical University and postdoctoral studies from Zhejiang University. He is vice director of general surgery, Huashan Hospital. He has published more than 10 papers in reputed journals and has been serving as a reviewer of repute.

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Sinta Chaira Maulanisa et.al., J Gastrointest Dig Syst 2018, Volume 8
DOI: 10.4172/2161-069X-C2-067

Preconditioning and hypothermia as a protective effect for liver reperfusion injury due to femoral artery ligation on *Oryctolagus cuniculus*

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Introduction: Ischemia-reperfusion injury (IRI) causes damage to cells that are remote from the ischemic organ. Protective strategies have been developed for protection of organs from ischemia reperfusion injury, which are ischemic pre-conditioning (IPC) and hyportemia. IPC has been proven to decrease tissue injuries through resistance mechanisms towards ischemia and lower energy requirements. Meanwhile, hypothermia detained the rate of cell deaths. This research aims to evaluate the protective effects of IPC and hypothermia towards morphological changes of liver tissues and the increase of malondialdehyde (MDA) level as a response to oxidative stress.

Methods: This experimental study using 24 Oryctolagus cuniculus, consist of four groups of animal, three control animals and 21 experimental animals. The IRI group underwent femoral artery ligation under anesthesia for four hours to induce ischemia. Afterwards, the ligation was released. The IPC group underwent repeated ligations of right communal femoral artery for two minutes and three minutes of release in two cycles. Afterwards, the arteries were ligated for four hours. The hypothermia group underwent ischemia and wrapping of right lower extremities using ice, with temperature around 31-33 . Liver histopathology and MDA assessment was conducted.

Results: On histo-morphological assessment, there were histo-morphologic changes on ischemia group compared IPC and hypothermia ($p<0.05$).The degree of histo-morphological damage in the IPC group was lower than for the reperfusion ischemia reperfusion group ($p=0.015$). MDA levels of IPC group and hypothermia groups were lower than in the ischemic reperfusion groups ($p=0.002$).

Conclusion: Ischemic reperfusion condition causes histo-morphological changes and oxidative stress on liver cells. IPC and hypothermia have protective effects from ischemia-reperfusion injuries. The protective effects of IPC were better than hypothermia.

Biography

Sinta Chaira Maulanisa is a General Surgery Resident at dr. Cipto Mangunkusumo National Central General Hospital, Jakarta-Indonesia. She has completed her Graduation as a Medical Doctor from University of Indonesia. She has done some research about ischemia reperfusion injury. She was worked in rural area of west java Indonesia as an internship doctor in 2010-2011.

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Abhishak C Gupta, J Gastrointest Dig Syst 2018, Volume 8
DOI: 10.4172/2161-069X-C2-067

Cysteinylation of albumin leads to reduced antioxidant activity in non-alcoholic fatty liver disease patients

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Backgrounds & Aim: Oxidative stress is postulated to play an important role in liver disease progression. The degree of oxidized cysteine (Cys) 34 in Human Serum Albumin (HSA) is correlated with oxidative stress related to pathological conditions and modulates its physiological function. Present study aim is to develop a noninvasive diagnostic marker for Non-Alcoholic Fatty Liver Disease (NAFLD) by studying the differential modification pattern of albumin and antioxidant activity in NAFLD patients.

Patients & Methods: We analyzed purified plasma albumin from 46 biopsy-proven NAFLD patients and 21 matched healthy blood donors. The albumin modifications were analyzed by liquid chromatography coupled with electrospray ionization time-of-flight mass spectrometer (ESI-TOF/MS). Relative % abundance of unmodified (intact) and modified isoforms of albumin was compared between NAFLD and controls. In vitro ROS generation and antioxidant activity was measured by Mean Fluorescence Intensity (MFI) of Dihydrorhodamine (DHR) by flow cytometry in presence of purified albumin of controls and NALFD patients.

Results: Three most prominent isoforms of albumin were observed in the de-convoluted ESI spectrum with molecular masses of 66,438±2.8, 66,559±4.8 and 66,603±6 Da in controls and NAFLD patients represents intact, cysteinylated and glycated isoforms of albumin respectively. Unmodified albumin was the predominant peak with 100% relative abundance in healthy subjects in perfect agreement with calculated theoretical mass (66,438 Da, 542 aa). In contrast, the relative abundance of modified form with addition of +119 Da (cysteinylation) of albumin was predominant (100%) in NAFLD patients. Cysteinylated isoform of albumin (cys-Alb) was significantly higher in NAFLD patients than controls [100% v/s 52% ($p<0.01$)]. Although NAFLD showed 100% relative abundance of cys-Alb isoform further fatty liver and NASH patients differ on the basis of unmodified albumin isoforms [82% vs. 60% ($p<0.05$)] suggesting varied oxidative stress. Circular dichroism (CD) spectrum showed clear structural alterations in purified albumin from NAFLD patients as compared to purified albumin from controls. Further, purified albumin antioxidant activity was measured by removal of ROS productions in vitro. Significant differences were observed in mean fluorescence intensity of DHR in presence of purified albumin from controls and patients (51.5±5.8% vs. 60.3±13.8%, $p<0.001$) suggest reduced antioxidant activity of albumin in NAFLD patients. Three most prominent isoforms of albumin were observed in de-convoluted ESI spectrum with molecular masses of 66,438±2.8, 66,559±4.8 and 66,603±6 Da in controls and NAFLD patients represents intact, cysteinylated and glycated isoforms of albumin, respectively. Intact peak with 100% relative abundance in healthy subjects in perfect agreement with calculated theoretical mass (66,438 Da, 542 aa). In contrast, the relative abundance of modified form with addition of +119Da (cysteinylation) of albumin was predominant (100%) in NAFLD patients. Cysteinylated isoform of albumin (cys-Alb) was significantly higher in NAFLD patients than controls [100% v/s 52%, $p<0.01$].

Conclusion: Our results clearly showed that sustained oxidative stress and reduced antioxidant activity is reflected by high levels of cysteinylated albumin in NAFLD patients and might be useful plasma marker for oxidative damage in NAFLD/NASH.

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Ali Ahmad Shahin, J Gastrointest Dig Syst 2018, Volume 8
DOI: 10.4172/2161-069X-C2-067

The modern approach to pharmacotherapy

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The presentation is devoted to modern approaches to the use of drugs, pancreatic enzymes in pediatric practice, in particular, in exocrine pancreatic insufficiency and cystic fibrosis. The issues of dosing of enzyme preparations, reasons for inefficiency and limitations to application are considered. The results of the questionnaire on the awareness of medical and pharmaceutical workers regarding preparations containing pancreatin were analyzed. In the presence of clinical and laboratory-instrumental signs of exocrine pancreatic insufficiency, the appointment of enzyme preparations is indicated. What in fact are the main requirements in the application of enzyme preparations? The reasons for ineffective therapy with enzyme preparations and contraindications to the administration of pancreatic enzyme preparations, correction of secondary/relative exocrine insufficiency includes the dose correction and therapy of the underlying disease which indicates for substitution therapy with preparations of pancreatic enzymes.

Biography

Ali Ahmad Shahin has completed his PhD from Ukrainian Medical Stomatological Academy (UMSA) and Postdoctoral studies at the same university. Currently he is working in the Department of Internal Medicine, Gastroenterologist in Poltava hospital.

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Joydeep Aoun et.al., J Gastrointest Dig Syst 2018, Volume 8
DOI: 10.4172/2161-069X-C2-067

Luminal K+ channels blocker: A superior therapeutic intervention over zinc in secretory diarrhea

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Trans-epithelial secretion and absorption of fluid and electrolytes across the intestinal epithelium is necessary for maintaining intestinal homeostasis. During secretory diarrhea this homeostasis has been altered, secretion is predominating over the absorption from the intestine. Massive loss of fluid into the intestinal lumen is driven by the active transport of ions, predominately Na+, K+ and Cl-. Oral Rehydration Solution (ORS) is used to replace fluid losses and promote intestinal fluid absorption has been the primary therapy for infectious diarrheas. An effective electrogenic secretion of Cl- is only possible if luminal potassium channels KCa3.1 (KCNN4c) is activated. Thus potassium channel has gotten attention in respect to secretory diarrhea. Recently we have identified TRAM-34 an inhibitor of luminal potassium channel KCNN4c is very effective against secretory diarrhea caused by Cholera Toxin (CT) or Ace of V. cholerae, heat Stable enterotoxin (STa) of Entero Toxigenic E. coli [ETEC], NSP4 enterotoxin of rotavirus that stimulates in vivo second messenger mediated Cl- and fluid secretion. In vitro experiments with mouse intestinal tissue in using chamber showed that luminal addition of TRAM-34 significantly abolished cAMP-stimulated short-circuit current (Isc), a reflector of active Cl- secretion. Whereas luminal addition of zinc did not have any effect on cAMP stimulated Cl- secretion but serosal addition of zinc causes immediate decrease of cAMP stimulated Cl- secretion in mouse tissue as well as human colonic T84 cell monolayers. In vivo mouse ileal loops experiment together with electrophysiological data suggests that mucosal addition of TRAM-34 dose dependently inhibit experimental diarrhea whereas zinc shows its activity when applied from serosal side. Moreover luminal application of TRAM-34 is equally effective against accessory cholera enterotoxin (Ace), heat-stable (STa) enterotoxin and NSP4 stimulated diarrhea. Thus a common K+ channel is to be involved in these enterotoxins stimulated Cl- secretion, which is inhibited by TRAM-34. Moreover toxicity study was performed in rabbit that shows TRAM-34 has minimal toxicity with the concentration ≈ 100 greater than used to block Cl- secretion. Thus TRAM-34 seems to be very effective and useful adjunct therapy than zinc along with ORS in secretory diarrhea.

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Vikas Leelavati Balasaheb Jadhav, J Gastrointest Dig Syst 2018, Volume 8
DOI: 10.4172/2161-069X-C2-067

Trans-abdominal sonography of the gall bladder and its hepatic and peritoneal perforations

Vikas Leelavati Balasaheb Jadhav
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Trans-abdominal sonography of the gall bladder can reveal hepatic and extra hepatic and peritoneal perforations of the gall bladder, whether it is impending perforations, frank perforations, sealed perforations, concealed perforations and its complications. It can also demonstrate adhesions in the gall bladder fossa at the right upper quadrant. All these cases are compared and proved with gold standards like laparoscopic and open surgery and endoscopy. Some extra efforts taken during all routine or emergent ultrasonography examinations can be an effective non-invasive method to diagnose primarily hitherto unsuspected gall bladder impending perforations, frank perforations, sealed perforations, concealed perforations and its complications, so should be the investigation of choice.

Biography

Vikas Leelavati BalaSaheb Jadhav has completed Post-Graduation in Radiology in 1994. He has a 23 Years of experience in the field of Gastro-Intestinal Tract Ultrasound and Diagnostic as well Therapeutic Interventional Sonography. He is the Pioneer of Gastro-Intestinal Tract Sonography, especially Gastro-Duodenal Sonography. He has delivered many Guest Lectures in Indian as well International Conferences in nearly 27 countries as an Invited Guest Faculty, since March 2000. He is a Consultant Radiologist and the Specialist in Conventional as well Unconventional Gastro-Intestinal Tract Ultrasound and Diagnostic as well Therapeutic Interventional Sonologist in Pune, India.

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Manuel Khelvin G Torres et.al., J Gastrointest Dig Syst 2018, Volume 8
DOI: 10.4172/2161-069X-C2-067

A scoring scale for predicting intra-hospital mortality in patients with liver cirrhosis

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Objective: The aim of this study is to determine the predictors of intra-hospital mortality in patients with liver cirrhosis and to identify significant risk factors and devise a scoring system to prognosticate patients with liver cirrhosis.

Methods: A retrospective study was conducted involving 196 patients diagnosed with liver cirrhosis admitted in Jose R Reyes Memorial Medical Center during January 2011 to January 2014. Charts were reviewed and data such as age, sex, presence of bleeding or encephalopathy and blood parameters were gathered. Predictive factors were identified by univariate and multivariate analysis and were used to generate the scoring system. A receiver operating curve was used to generate the best cut-off score to predict mortality.

Results: A univariate analysis revealed the female gender, cirrhosis with Child Pugh class C, hepatic encephalopathy and creatinine has significance in predicting mortality among patients. Multivariate analysis objectified three independent predictors of mortality: Female gender, presence of hepatic encephalopathy and increased creatinine values, when 1 and 0 were used for the presence and absence of each factor, respectively, using a cut-off score of >1.08, based on the ROC.

Conclusion: Based on the independent predictors identified, a scoring system was designated to each of the significant variables and based on the ROC curve, a cut-off score of >1.08 with sensitivity of 84% and specificity of 67%, will predict intra-hospital mortality.

Biography

Manuel Khelvin G Torres has completed his Medical studies at the Far Eastern University, Nicanor Reyes Medical Foundation and has completed his training in Internal Medicine in Jose R Reyes Memorial Medical Center and has subsequently became a Diplomate. He is currently doing his own private practice in the field of Medicine and research.

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