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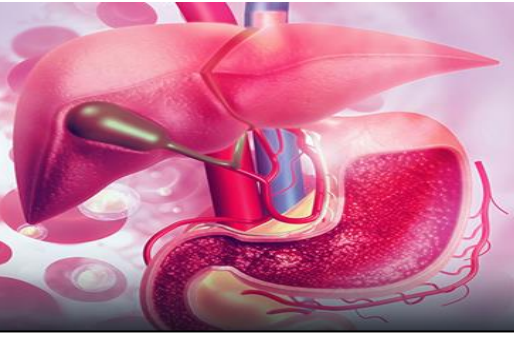

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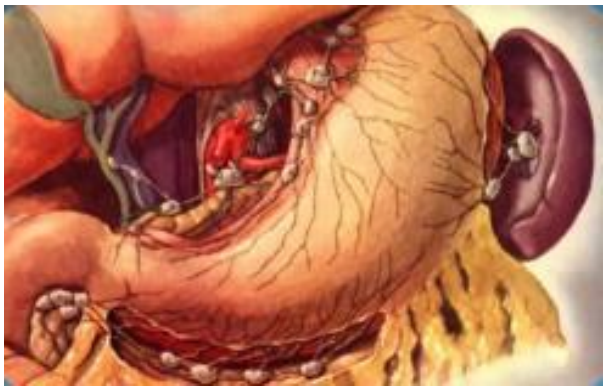
To assess the Safety and Efficacy of laparoscopic digestive tract nutrition reconstruction combined with conversion therapy for patients with unresectable and obstructive gastric cancer

INTRODUCTION



GASTRIC CANCER

Gastric cancer is often diagnosed at an unresectable advanced stage and has a poor prediction. Gastric obstruction is a common complication in gastric cancer patients and has various clinical presentations like nausea and vomiting, depriving them of further anticancer therapy [1]. According to a recent global estimate, gastric cancer ranks third among all cancer-related deaths and is the fifth most prevalent cancer to be diagnosed globally [2]. The restoration of enteral nutrition with palliative methods, including gastrojejunostomy (GJ), gastrostomy(GT), and jejunostomy (JT) is recommended by the National Comprehensive Cancer Network (NCCN)guidelines [1]. The aim of the study was to estimate the safety and efficacy of laparoscopic digestive tract nutrition reconstruction (LDTNR) combined with conversion therapy for patients with unresectable and obstructive gastric cancer [1].

METHOD

A retrospective study was conducted on all 70 patients of unresectable gastric cancer. 37 patients received LDTNR therapy and 33 patients received chemotherapy. Laparoscopic gastrojejunostomy(LGJ), Laparoscopic gastrostomy, Laparoscopic jejunostomy was conducted in gastric pyloric cancer patients, gastric cardia cancer patients and diffuse – type cancer patients respectively. All patients administered the epirubicin+oxaliplatin+capecitabine regimen as conversion therapy. The Gastric outlet obstruction scoring system(GOOSS) was used to LDTNR and Non-LDTNR group. The total score of the Nutrition Risk Screening was measured, the efficacy of chemotherapy was assessed according to RECIST 1.1 criteria. The Prognosis Nutrition Index (PNI) and Neutrophil-Lymphocyte ratio (NLR) were used to evaluate the inflammatory and immune status. Quality of life were evaluated by Spitzer QOL Index. The software used for statistical analysis in this study was SPSS Statistics 23.0. In LDTNR group 16 patients performed Conversion Surgery. Survival analysis made by the Kaplan-Meier method and log rank test. Kruskal-Wallis H test, t-test was used for continuous variables.

RESULTS

The current study results showed that Baseline GOOSS was good in Non-LDTNR group than LDTNR group. Only in LDTNR group, the proportion of patients with nutritional risk and severe malnutrition reduced gradually and the proportion of patients with NLR<2.5, PNI >45 and spritzer quality of life index increased gradually. The median chemotherapy cycle of LDTNR patient group was higher than Non-LDTNR group. LDTNR therapy showed a complete response in 2 patients, partial response in 17 patients, 8 patients had a stable disease and 10

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patients had progressive disease that was significantly better than the response rate in Non-LDTNR group. The peritoneal metastasis showed negative in 8 patients, the No.16 lymph nodes decreased in 4 patients, the depth of tumour invasion decreased to T4a stage in 1 patient with pancreatic invasion and 3 patient showed a significant decrease in the liver metastasis in LDTNR group. 13 patients achieved R0 resection ,3 patients achieved R1 resection and 1 patient developed grade 3 anastomotic leakage in LDTNR group during conversion surgery. The one-year cumulative survival rates with or without LDTNR patients were 59.5% and 9.1% respectively (fig.1). The 3year cumulative survival rates with or without LDTNR patients were 29.7% and 0% respectively. LDTNR therapy and subsequent gastrectomy were associated with better long term prognosis and was identified by the Univariate and multivariate analysis.

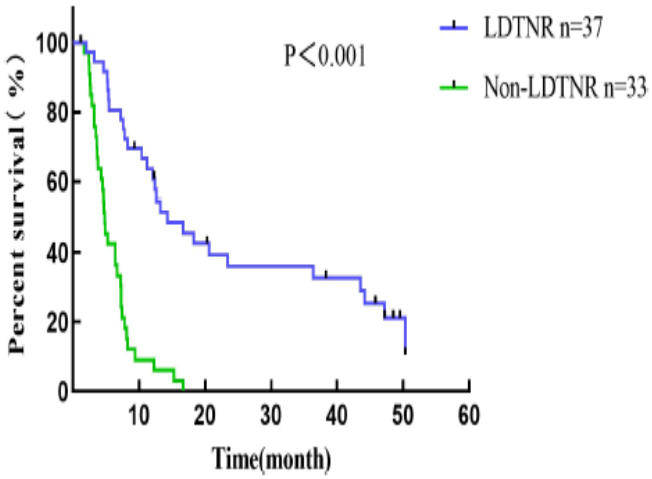

Figure 1-One year cumulative survival curve of all patients

DISCUSSION

This study analysed the role of LDTNR in improving the inflammatory nutritional immune status and survival time of patients with unresectable advanced gastric cancer with obstructive symptoms. Similar to this study Wang et.al. studies showed that LGJ combined with Multimodality therapy(MMT) was associated with superior nutritional status, higher rates of subsequent gastrectomy, and good prognosis and may improve the long-term survival of patients with Gastric outlet obstruction caused by Advanced gastric cancer [3,4].

CONCLUSION

The current study concludes that LDTNR results in superior nutritional and inflammatory immune status of patients with obstruction caused by gastric cancer and improves the safety, effectiveness and survival after conversion therapy and also improves the compliance with chemotherapy.

The LDTNR results in superior nutritional and inflammatory immune status of patients with obstruction caused by gastric cancer and improves the safety, effectiveness and survival after conversion therapy and also improves the compliance with chemotherapy.

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To evaluate the association of gastrointestinal disorder with the risk of incident cardiovascular disease.

INTRODUCTION

A gut-heart association has been suggested to describe an increased risk of cardiovascular disease (CVD) among individuals with gastrointestinal(GI) disease [1]. CVD was the leading cause of mortality globally and accounted for 27% of all deaths [2]. Some of the common GI disease such as reflux esophagitis, non-alcoholic fatty liver disease, gallstone disease and some bowel diseases were found to be positively associated with risk of CVD. The associations between other GI disease and the development of CVD remained unclear. The aim of this study was to evaluate the association between GI diseases and cardiovascular diseases.

METHOD

A prospective cohort study was conducted on 340,862 individuals without baseline CVD. This study involved 15 gastrointestinal endpoints defined by the International Classification of Disease(ICD) codes. To define incident overall CVDs including coronary heart disease(CHD), cerebrovascular disease(CeVD), and peripheral artery disease(PAD) ICD codes were used. The diagnosis of diseases was established with the combination of the nationwide inpatient data, primary data, and cancer registries. Covariates was obtained from the baseline touch-screen questionnaires. Cox proportional hazards regression model and treating age as a time scale was used to determine the association between gastrointestinal disease and the risk of incident CVDs.

RESULTS

This study results showed that individuals with incident CVD had an unhealthier lifestyle and more baseline comorbidities and GI diseases than the individuals without incident CVD. There were 11 GI diseases associated with an increased risk of overall CVD out of 15. Hazard ratio (HR) ranged from 1.19, 1.65 and 1.74 for biliary disease, appendicitis and liver disease respectively. There were suggestive association ($p<0.02$) of ulcerative colitis, gastrointestinal cancer and crohn's disease and no association of Barrett's oesophagus with overall CVD risk. A greater risk of developing CVD was found to be associated with specific GI condition. The HR of CVD ranged from 1.19 and 1.40 for appendix disease and liver disease respectively. The association were stronger among women, individuals aged ≤60 years and those with body mass index ≥25 kg/m2. There were 5 and 7 gastrointestinal diseases associated with an increased risk of CeVD and PAD, respectively and 2 suggestive associations of cirrhosis and appendicitis with the risk of CeVD (fig-2). The associations for PAD were larger with the HR of 2.25 and 2.45 for the associations of cirrhosis and non-alcoholic fatty liver disease respectively. The associations between GI

Gastrointestinal disease	CHD	CeVD	PAD
Barrett's oesophagus	0.025	0.767	0.884
GERD	<0.001	<0.001	<0.001
Peptic ulcer	<0.001	0.001	<0.001
IBS	<0.001	0.001	0.045
NAFLD	<0.001	0.005	<0.001
Cancer	0.047	0.248	<0.001
Appendicitis	0.002	0.032	0.179
Biliary disease	<0.001	0.176	0.120

Figure 2-P-Value for the associations of gastrointestinal disease with incident CHD, CeVD, PAD

diseases and incident overall CVD risk remained stable in the sensitive analysis. GI cancer was associated with higher risk of CVD after including death as a competing risk event.

DISCUSSION

The current study showed that association between a GI diseases and increased risk of incident CVD and also the associations for liver diseases. Similar to this study Yoshitaka H et.al. study showed that Non- alcoholic fatty liver disease was associated with higher risk of incident CVD [3] and Targher G et.al. study also showed that Non-alcoholic fatty liver disease is associated with an increased risk of fatal and non-fatal CVD events [4]

CONCLUSION

This study concludes that the association of GI diseases with an increased risk of incident CVD (CHD and PAD) and also the association showed to be greater in women, younger individuals and overweight and obese participants.

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To determine the comorbidities, biomarkers and mortality in Irritable Bowel Syndrome patients

INTRODUCTION

One of the most common functional digestive disorders in worldwide is Irritable Bowel Syndrome (IBS). Rome lV criteria are the gold standard for IBS diagnosis according to which patients are detected if they suffer from frequent abdominal pain occurring at least once per week for the previous 3 months [1]. IBS is a gut disorder that affects almost 11% of the global population and negatively affects the quality of patients life [2]. Based on the patient's dominating symptoms, IBS is classified into 4 subgroups: IBS with diarrhoea (IBS-D), IBS with constipation (IBS-C), IBS-Mixed (IBS-M) with diarrhoea and constipation or unsubtyped (IBS-U).

The aim of this study was to determine the comorbidities and biomarkers for IBS patients and to find the effect of IBS on over-all and cause specific mortality [1].

METHODS

This is a phenome-wide association cohort study with 493,974 participants, including 20,603 self- reported physician diagnosed and 7656 participants of ICD-10 diagnosed IBS patients. ICD-10 codes were converted into 1835 PheCodes by phenome-wide association study (PheWAS) R package in order to analyse which disease and disorders of different origins related to IBS. The control group are the participants who answered "no" to the corresponding question in the digestive health questionnaire. The reference group were the participants without the specific ICD-10 code or PheCode in medical history. PheWAS analyses was repeated for IBS patients to fulfil the Rome IV criteria and 4 IBS subgroups. To discover the metabolomics data of IBS patients, nuclear magnetic resonance-based metabolomics profiling was conducted in a 105,348 participants in a randomly selected subgroup. All continuous variables were analysed by unpaired, two-tailed t test and all categorical variables were analysed by chi-square test and presented as total numbers, odds ratio(ORs). Log2, Bonferroni correction, exploratory binary logistic regression and Cox regression was performed to evaluate metabolites. Glycoprotein Acetyls(GlycA) per SD adjusted for age, gender, ethnicity and BMI. Competing risk analyses was conducted to determine mortality.

RESULTS

The results showed that 4.2% patients had previously diagnosed with IBS by physician and 1.6% participants had been diagnosed with ICD-10-IBS. Women had a significantly greater risk of IBS diagnosis than men in both IBS groups. In PheWAS analyses, patients with self-reported physician-diagnosed IBS had 260 considerably overrepresented PheCodes, patients with ICD-10 diagnosed IBS had 633, and there was 221 overlap(fig.3). Other than gastrointestinal disease, PheCodes most significantly connected with IBS patients were psychiatric, musculoskeletal and endocrine. PheCodes for somatodisorders such as post-traumatic stress disorder and obsessive compulsive disorder were significantly overrepresented in IBS patients. It has been found that common comorbidities include affective conditions including depression and anxiety disorder. There was a 95% significant increased risk of unspecified myalgia and myositis, cervical radiculitis, tension headache, sicca syndrome, raynaud's syndrome, neurological diseases, migraine, sleep disorders and genitourinary diagnoses like

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chronic interstitial cystitis, chronic pharyngitis and nasopharyngitis, obstructive chronic bronchitis and chronic interstitial cystitis. 633 PheCodes remained significant after Bonferroni correction and 239 significant PheCodes of self-reported IBS patients overlapped with the ICD-10 coded. Abnormal thyroid and behcet's syndrome are commonly associated disorders in ICD-10-IBS patients. Analysis of PheWAS in patients with Rome IV-IBS showed 340 Bonferroni significant PheCodes. The digestive, mental-health-related, endocrine and musculoskeletal associations in 3 subtypes-IBS-D, IBS-C and IBS-M was established by PheWAS analysis. The increased overall mortality was not associated by self-reported physician-diagnosed IBS patients and also the risk of death from cancer was decreased. Lastly found that GlycA is a potential biomarker in IBS patients and there was an increase in one standard deviation in GlycA that increased the risk of self-reported IBS/ICD-10 by 9% to 20% and also the risk of overall mortality in ICD-10-IBS patients by 28%.

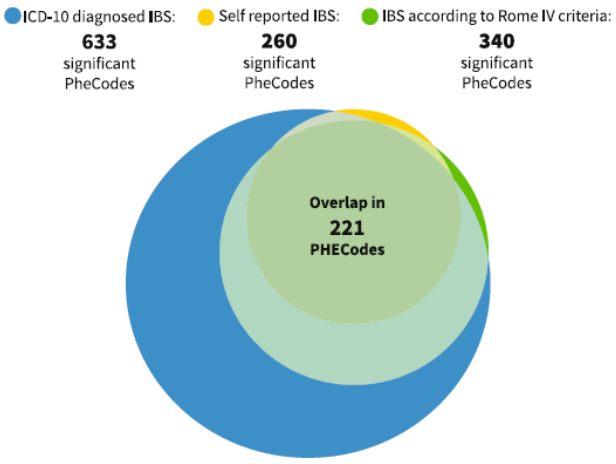

Figure 3-Venn diagram of overlap between Bonferroni significant PheCodes

DISCUSSION

The current study showed that morbidities and also the changes in serum metabolites in ICD-10 IBS patients and self -reported physician-diagnosed IBS patients. Similar to this study, Goodoory V.et.al study showed that psychological comorbidities are associated with IBS patients [3] and Bayrak study showed a significant increase rate of metabolic syndrome and depression, anxiety and fibromyalgia syndrome more common among IBS patients [4].

CONCLUSION

The current study concludes that patient with irritable bowel syndrome have a higher risk of several different comorbidities and also concludes that GlycA is increased in patient with irritable bowel syndrome

Patient with irritable bowel syndrome have a higher risk of several different comorbidities and also GlycA is increased in patient with irritable bowel syndrome

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A CASE OF A GIANT CHYLOLYMPHATIC CYSTS IN RETROPERITONIUM

INTRODUCTION

Chylolymphatic cysts are very uncommon variants of mesenteric cysts and it account for 7.3% of all abdominal cysts and was first reported in 1842 by Rokitansky. Mesenteric cysts are uncommon intra-abdominal lesions with an incident rate of 1:100 000 and 1:20 000 in adults and pediatric admissions respectively [1]. Chylolymphatic cysts has various clinical presentation, it may be asymptomatic and may present with abdominal distension or it may be associated with complications such as intestinal obstruction, volvulus, infection, rupture of the cyst and urinary and biliary tract obstruction [2]. This case report aimed to present a case of a giant chylolymphatic cyst in retroperitoneum with uncommon presenting symptoms and etiology.

CASE REPORT

A 46 years old male patient complaints with mild abdominal pain and intermittent claudication in his right leg from the last 2 months. The pain was generalised, frequent and did not relieve on medication. Five years ago he was diagnosed simple abdominal cyst led by abdominal pain, and urinary urgency and hesitancy. His surgical history involved retroperitoneal cystectomy, herniorrhaphy and a cleft palate repair. The patient was not on any medication, no history of weight loss or change in bowel movement and his temperature was normal and smoking history was 22 pack-year. Vital signs and blood tests were normal. On physical examination of abdomen there was a palpable mass in his right flank. Abdominal ultrasound and Computerized tomography reported a large fluid filled cystic lesion measuring 17×11×10 cm in the retroperitoneum adjoining the lower half of the right kidney, extending to the pelvis and compressing the inferior venacava. Surgical examination shown that cyst is surrounded by several adhesions and was partially separated from the right ureter and iliac vein and artery. The cyst was surgically excised and the histopathological examination found the cystic wall composed of fibrous connective tissue and lined by one layer of flat cell, with mild lymphocytic infiltrate and congested blood vessels confirms the diagnosis of chylolymphatic cyst. After one year follow up, the patient was recovered with no recurrence observed.

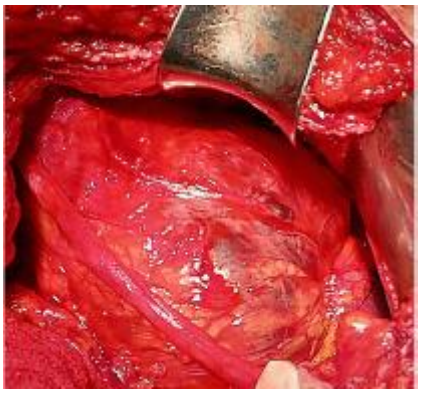

Fig 1-The intraoperative view of the cyst

DISCUSSION

In this case study, a male patient developed a chylolymphatic cyst in retroperitoneum which was confirmed by US and a CT scan. Complete excision of these cysts is the treatment of choice and partial excision through an open laparotomy was the proper choice of management. Similar to this Arora.S. et.al study shown that Chylolymphatic cyst should be considered in the differential diagnosis of cystic intraabdominal masses. Ultrasonography and computed tomography suggest the diagnosis [3].

CONCLUSION

The current study reports that despite its rarity, chylolymphatic cyst diagnosis should be taken into consideration whenever an abdominal mass is noticed, regardless of the patient's age and gender.

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