Code: DA-21063
ICGH2021-01
Category: 8. 2 بیماریهای بدخیم مری

Diathermic Snare Macrobiopsy for Diagnosis of Bulky Primary Esophageal Lymphoma

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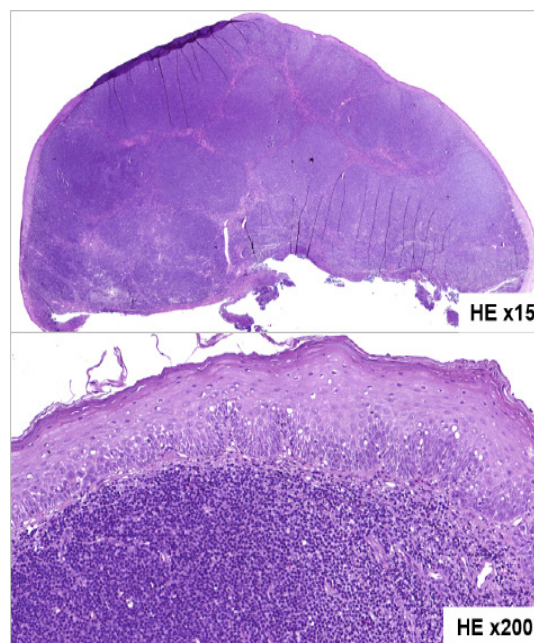
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Introduction: A 63-years-old male presented with a 12-month history of progressive dysphagia and Globus pharyngeus without any comorbidities. Upper endoscopy revealed a hardened elevated lesion in the distal esophagus located between 31 and 40 cm from incisors, covered by intact mucosa (Figure 1). Bite-on-bite conventional biopsies were inconclusive.

Case Report: The (18) F-FDG-PET/CT showed a solid hypercapturing lesion in the thoracic esophagus, measuring 12. 5 cm in the transverse plane (Figure 2). A hypoechoic and homogeneous lesion, inserted in the submucosal layer was seen at EUS. However, the results of fine-needle aspiration were inconclusive.

Lastly, macrobiopsy using a diathermy loop was performed. The procedure was followed by self-limited bleeding, controlled by argon plasma coagulation (Figure 3). Histology showed the characteristic formation of atypical and back-to-back arrangement of the lymphoid follicles, composed by small to medium cells proliferation of non-Hodgkin's lymphoma (Figure 4). The immunohistochemistry was positive for Bcl-2, Bcl-6, CD10, CD20, CD23, and Ki-67 (30%) and it was compatible with grade 2 follicular B-cell lymphoma.

The patient started treatment with chemotherapy (R-CHOP regimen) with the perspective of additional radiotherapy or surgery.

Discussion: Esophageal lymphoma is a rare disease and endoscopic biopsy with satisfactory results can be challenging. If methods as standard biopsy or EUS-FNA fail, a macrobiopsy snare can be performed for a conclusive diagnosis.
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Code: DA-21128
ICGH2021-02
Category: 13. 2 Molecular biology/genetics/pathology

Treatment with EGCG induced apoptosis by targeting cFLIP/Ku70 complex in gastric cancer cells

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Introduction: Cancer stem cells (CSCs) are the main cause for the initiation, spread, and development of resistance to treatments in tumors. Chemotherapy and radiotherapy, two common therapies for gastric cancer (GC), have

several side effects. Specific cancer molecular pathways, particularly in GC, can be targeted for effective treatments. In cancer cells, the apoptosis process is disturbed. Ku70 is an acetylation-capable non-histone protein that is cumulated in the cancer cell's cytoplasm and binds to antiapoptotic proteins like cFLIP. This binding stabilizes cFLIP and prevents apoptosis. The goal of this study was to use a natural histone deacetylase inhibitor called EGCG, the main component of green tea, to induce apoptosis in cancer cells by targeting cFLIP/Ku70 complex in GC stem cells.

Methods: First, we used AnnexinV-FITC to determine the proper dose (IC50) of EGCG that induced apoptosis. Cell cycle analysis was performed using flow cytometry technique to determine the phase of the cells after treatments and prove the induction of apoptosis in them. Two indirect immunofluorescence techniques, as well as isolation of nucleus and cell cytoplasm with sub-cellular fractionation technique and subsequently Western blotting technique, were used to analyze protein expression profile and the location of the cFLIP/ku70 complex before and after treatment. Finally, the expression of CyclinD1, P21, P53, and c-MYC genes that are implicated in the apoptosis and cell cycle pathways was examined using the qRT-PCR method.

Results: A concentration of 100µm EGCG was chosen as the proper concentration in these cells based on previous studies. G2/M arrest can be caused by 100µm EGCG treatment. Furthermore, EGCG reduced the expression of c-MYC and CyclinD1 genes, which are involved in the regulation of the cell cycle in the G2 / M phase, and induced the expression of apoptotic genes like P53 and P21. In the EGCG-treated group, the level of cFLIP protein in the cell's cytoplasm was reduced, and Ku70 protein was considerably translocated from the cytoplasm to the nucleus. Western blot analysis proved our hypothesis about protein expression level before and after treatment with 100mM EGCG. Finally, for a more detailed study of this phenomenon, by separating the core proteins from the cytoplasm using the subcellular fractionation technique and consequently western blot technique, we confirmed the reduction of cFLIP expression and the displacement of the Ku70 protein from the cytoplasm to the nucleus.

Conclusion: EGCG, which is a natural histone deacetylase inhibitor, induces dissociation of cFLIP/Ku70 complex. The existence of the cFLIP/Ku70 complex in cancer cell's cytoplasm is one of the main reasons for apoptosis

suppression. As a result, the application of EGCG could be a practical strategy for targeted molecular therapies for dissociation of this complex and induce apoptosis effectively.

Analysis of Competing Risks of Causes of Death in Cancer Patients from a high-risk area of gastrointestinal cancers in Northern Iran

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Introduction: Cancer-related causes of death (cancer CoD) are the main etiologies of death in cancer patients. Recent increase in survival rates of cancer patients resulted in higher risk of dying from causes other than cancer, called competing causes of death (competing CoD). We aim to characterize competing CoD among cancer patients from a high-risk area of gastrointestinal cancers in Golestan province, Northern Iran.

Methods: Data on cancer incidence was obtained from the Golestan population-based cancer registry (GPCR) dataset. Data on causes of death was obtained from the Golestan death registry (GDR) dataset. Using a linkage method between the GPCR and GDR dataset, we prepared the study dataset including data on vital status and causes of death in our cancer patients. The proportions of cancer CoD and competing CoD were calculated. Data were analyzed using multivariate logistic regression.

Results: Overall, 4, 184 cancer patients died in the study population during 2004-2016, including 2, 488 men (59.

9%). Cause of death in 3, 455 cases was cancer and 729 cases (17. 4%) died due to competing CoD. Ischemic heart disease (40. 7%) was the most common competing CoD in our population. Higher survival rate was the strongest variable related to the competing CoD (adjusted OR=1. 91; 95%CI: 1. 61-2. 26). Residence area, age group and year of death were other indicators of competing CoD in our population.

Conclusion: Our results suggest high rates of competing CoD in our cancer patients. Competing CoD should be mentioned in cancer control planning both in clinical practice as well as in public health policy making.

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Code: DA-21136
ICGH2021-04
Category: 16.3 Gastrointestinal infections

Compare Characteristics of Mucosa-Associated adherent-invasive Escherichia coli isolated from Colorectal Cancer patients

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Introduction: Among the pathogenic bacteria AIEC (Adherent Invasive E.coli) pathovars have special attention in colorectal cancer. It was identified in 1999 by Boudeau. According to the WHO, 25% of cancers are caused by infections, which colorectal cancer being the second leading cause of death in 2018. AIEC is an effective pathogen in CRC.Ability to bind and invade the M epithelial follicle-associated (FAE) cells, the ability to survive and replicate within macrophages allow the bacterium to the formation of granulomas and malignancy . Therefore, we decided that by isolating, diagnosing AIEC pathovars and determine characteristics of them from CRC patients and compare with control.

Methods: 60 biopsy samples (30 from CRC, 30 from control) were taken. Samples lysed with Triton 100-X% to release intracellular E. coli isolates. The isolates confirmed by phenotypic and molecular methods. To distinguish AIEC pathovar, phenotypic tests; Adhesion assays, Invasion assays, Gentamicin protection assays, and survival and replication in macrophage.

Results: We analyzed 60 biopsies (30 CRC and 30

controls). We identified 19AIEC- isolates. Interestingly, their relative abundance was significantly higher in CRC patients (46.6%; 14/30) than in controls (16.6%; 5/30). The invasion level were 0.52 ± 0.15 and 1.68 ± 0.27 in control and CRC patients respectively. survival level were 47.55 ± 15.74 and 519.55 ± 130.82 in control and CRC patients respectively.

Conclusion: The studies indicated that Mucosa-Associated AIEC strains are more frequently in CRC than the control. These isolates from CRC patients showed higher invasiveness, and survival capability than those from control. One explanation of the high prevalence of AIEC in CRC could be that changes in the host mucosa receptor repertoire have an effect on the bacterial population associated with mucosa. Previous studies reported higher numbers of AIEC in CRC than controls. In conclusion, our study showed a high prevalence of AIEC in biopsies of colon cancers.

Send Date: 2021/10/02

Code: DA-21073
ICGH2021-05
Category: 8 .2. بیماریهای بدخیم مری

Methylome-wide profiling of esophageal squamous cell carcinoma identifies potential markers for early detection

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Introduction: Esophageal squamous cell carcinoma (ESCC) is one of the most aggressive and lethal forms of cancer, and is often diagnosed at later stages, resulting in high mortality rates. Aberrant DNA methylation (DNAme) is an epigenetic mechanism involved in many cancers, including ESCC, however critical DNA methylation events driving ESCC development are poorly understood. Here, we aimed to investigate tumor-specific DNAme in ESCC cases from nine high incidence countries spanning the Asian ESCC belt, Africa ESCC corridor and South America.

Methods: Infinium MethylationEPIC (HM850K) array was used on 108 tumor and 51 normal tissue adjacent to the tumor (NAT) for methylome analysis in the discovery phase. Replication of the selected targets was done on an independent set of 132 tumor and 36 NAT using targeted pyrosequencing.

Results: Methylome analysis comparing tumor and NAT identified 6, 796 differentially methylated positions (DMPs) and 866 DMRs with 30% Δβ difference. The majority of the identified DMPs and the DMRs were hypermethylated in tumors, particularly in the promoters and gene-body regions. The top three prioritized genes for replication, namely PAX9, SIM2 and THSD4 had similar methylation differences in discovery (PAX9: Δβ=0.41, P<1.83x10-300; SIM2: Δβ=0.40, P<1.83x10-300; THSD4: Δβ=0.39, P=1.33x10-112) and replication sets (PAX9: Δβ=0.20, P=0.0008; SIM2: Δβ=0.30, P=3.38x10-08; THSD4: Δβ=0.53, P=2.49x10-26).

Conclusion: Our study identified novel, robust and early tumor-specific DNAme events in ESCC tumors across several high incidence populations of the world. These identified aberrant DNAme could be potentially developed into ESCC biomarkers for early detection in minimally invasive samples.

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Code: DA-21071
ICGH2021-06
Category: 14.1 Malignant disease - epidemiology - screening and prevention

Oral health and risk of upper gastrointestinal cancers in a large prospective study from

a high-risk region: Golestan Cohort Study

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Introduction: Tooth loss and periodontal disease have previously been associated with several cancers, and poor oral health may be an important risk factor for upper gastrointestinal (i.e. esophageal and gastric) cancers in high-risk areas.

Methods: In this study, we assessed the relationship between oral health and upper gastrointestinal cancers using a large prospective study of more than 50, 000 adults (40-75 years old) living in Golestan Province in northeast of Iran, a high-incidence area for these cancers. Participants in Golestan Cohort Study were recruited from January 2004 to June 2008, and oral health was assessed in detail by trained interviewers. We used Cox proportional hazards regression models to estimate hazard ratios (HRs) and 95% confidence intervals (95% CIs) for the association between three different measures of oral health (the number of missing teeth, the sum of decayed, missing, and filled teeth (DMFT), and the frequency of tooth brushing) and incident esophageal and gastric cancers.

Results: During a median follow-up duration of 12 years until January 31, 2019, there were 342 and 354 incident cases of esophageal and gastric cancer, respectively. Excess tooth loss was significantly associated with the risk of esophageal cancer (HR = 1.61; 95% CI: 1.10, 2.37) but not gastric cancer (HR = 1.25; 95% CI: 0.85, 1.85). Daily tooth brushing was associated with decreased risk of developing both esophageal (HR = 0.75; 95% CI: 0.53, 1.05) and gastric (HR = 0.64; 95% CI: 0.45, 0.90) cancers. There was no significant association between DMFT and either upper gastrointestinal cancer.

Conclusion: These results suggest increased risk of

developing esophageal and gastric cancers among individuals with poor oral health, and those who do not have regular oral hygiene practices.

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کد: DA-21034

ICGH2021-07

گروه : ۲.۱۴ تشخیص بیماریهای بدخیم

بررسی ارزش تشخیصی تست خون مخفی در مدفوع (FIT)بر اساس نتایج حاصل از کولونوسکوپی طرح جامع غربالگری کانسر کولون در استان خراسان رضوی

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زمینه و هدف: سرطان کولورکتال سومین سرطان شایع در مردان و دومین در زنان است. یکی از روشهای غربالگری سرطان کلورکتال انجام تست خون مخفی در مدفوع (FOBT2) می باشد. هدف از این مطالعه بررسی درصد موارد فیت مثبت در استان خراسان رضوی و همچنین با مقایسه ی تطبیقی نتایج حاصل از کولونوسکوپی بیماران میباشد.

روش بررسی: مطالعه به صورت گذشته نگر با بررسی بیمارانی که تست FOBT-Iدر مراکز بهداشت در بازه زمانی مهر ۹۶ تا مهر ۹۹ مثبت بوده،انجام شد. بیماران با تست FITمثبت، تحت کولونوسکوپی تشخیصی قرار گرفته اند. یافته های حاصل از کولونوسکوپی و میزان بروز پولیپهای کولون و کانسر کولون ارزیابی شد . **نتایج :** در این مطالعه از میان ۸۱۸۵ بیمار ، ۷۹۵ بیمار با تستFITمثبت مورد ارزیابی قرار گرفتند. ۳۱۶ بیمار (۳۹.۷٪) مرد با میانگین سنی ۹.۵±۶۰.۳۵ سال بودند. در میان بیمارانی که کلونوسکوپی آنها در دسترس (۶۱۳ بیمار) بود، (۶.۶٪)۴۱ مورد کانسر کلورکتال، ۲۹(۴.۷٪) مورد پولیپ پیشرفته، (۱۴.۰۲٪)۸۶ مورد پولیپ و (۷۴.۵۵٪)۴۵۷ مورد نرمال گزارش شدند. در این مطالعه ارزش اخباری مثبت ۴ تست FIT برای ضایعات پاتولوژیک کلورکتال ۱۹.۶۲٪ تخمین زده شد. همچنین ارزش اخباری مثبت تستFIT برای ضایعات کنسر ۵.۱۵٪، برای ضایعات آدنوم پیشرفته ۳.۶۴٪ و برای ضایعات پولیپ ۱۰.۸۱٪ تخمین زده شد. نتایج نشان داد ارتباط معناداری میان افزایش سن و جنس مرد با بروز ضایعات کانسر و آدنومهای پیشرفته کلورکتال وجود دارد. (p.value<0.05)

نتیجه گیری:تستFITجهت غربالگری ضایعات کلورکتال ارزش اخباری ۱۹.۶۲٪دارد و ارزش اخباری تست برای کانسر ۵.۱۵٪ محاسبه شد و میتواند به عنوان تست غربالگری مناسبی جهت بررسی ضایعات بدخیم کلورکتال در مراحل اولیه باشد.

تاریخ ارسال ۲۰۲۱/۰۸/۰۵

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ICGH2021-08

Category: 13.7 سایر موارد

Prevalence of JCV, EBV, HPV, CMV and HSV Viruses in Iranian Patients with Gastrointestinal Cancers: A preliminary study

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Introduction: Gastrointestinal cancers are one of the most common cancers in humans and their pathogenesis is believed to be associated with different factors. Some viral infections are carcinogenic in nature and can cause gastrointestinal tract (GIT) neoplasms. However, there are insufficient evidences confirming this effect. Therefore, we aimed to investigate the relationship between Human Papillomavirus (HPV), Herpes Simplex virus (HSV), Epstein-Barr virus (EBV), Cytomegalovirus (CMV), John Cunningham Virus (JCV) and gastrointestinal cancer (GIT).

Methods: This case-control study was carried out at two educational centers of Qa'im Hospital and Imam Reza Hospital, Mashhad, Iran, from 2017 to 2018. Seventy-five patients with GIT cancers, including stomach (n=26), esophagus (n=27), and colorectal cancers (n=27), as the case group, and 81 subjects with gastrointestinal complaints that did not have GIT cancers as the control group, were enrolled. The Real Time-PCR was used to detect DNA of viruses. Data analysis was performed using SPSS 22 software.

Results: The results showed that the JCV expression among colorectal and esophageal cancer patients was more frequent than that among control subjects (40.74% versus 7.69%; Odds Ratio (OR) = 6.75, 18.52% versus 0%; OR = 10.23, respectively). The frequency of EBV in gastric cancer patients was also higher than that of the control group (15.38% versus 0%, OR = 10.82). Besides, HPV-DNA expression in gastric and colorectal cancer patients was higher than that among control patients (15.38%

versus 0%; OR =9.447, 22.22% versus 0%, OR =13.56 respectively).

Conclusion: Our data suggest that both JCV and HPV infections may be associated with colorectal and esophageal cancers risk, and EBV infection may be associated with an increased risk for gastric neoplasm.

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Code: DA-21067
ICGH2021-09
Category: 6.3 Malignant disease - management

Impact of polyposis phenotypes on the Survival Rate of Patients with colorectal cancer

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Introduction: Familial adenomatous polyposis (FAP) is an autosomal dominant disorder and is the second most common genetic Colorectal cancer (CRC) syndrome, accounting for less than 1% of all incidents CRC. CRC has been implicated as the most common cause of death in FAP patients, especially in those with coexisting CRC at initial diagnosis (FAP-CRC). The aim of this study was to compare the survival rate between Classic FAP and Attenuated FAP with coexisting CRC.

Methods: This was a retrospective cohort FAP study conducted in northwest Iran. From 2006 to 2016, 51 FAP-CRC individuals were selected from among 4588 CRC patients. Survival rates were calculated by Kaplan-Meier method and compared with log rank test.

Results: The mean age at diagnosis of the primary CRC was 36 years (14 – 59) in the CFAP-CRC series versus 53.1 (30-70) years in AFAP- CRC group (P < 0.05). In CFAP_CRC group 76.5% had a left cancer location, vs. 64.7% in the AFAP cancer group. In the CFAP-CRC group 32.4% were end-stages cancer (TNM stage) vs. 17.6% in the AFAP-CRC group. The crude 5-years cumulative survival after the primary CRC was 46% in CFAP-CRC patients vs. 82% in AFAP-CRC patients (p = 0.01).

Conclusion: Our results show that overall survival of colorectal cancer in patients with AFAP is better than CFAP- CRC patients. This may be due to the different clinical pathological characteristics of neoplasia and to genetic alterations

Send Date: 2021/08/29

Code: DA-21122
ICGH2021-10
Category: ‫بیماریهای بدخیم مری‬ 2. 8

Evaluation of tissue levels of the Eight Trace Elements and Heavy Metals among Patients with Esophagus and Stomach Cancers; Comparison between Cancerous and Non-cancerous Tissues

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Introduction: The Environmental factors including trace elements and heavy metals may influence on the upper gastrointestinal (GI) cancers but there are a few tissue evaluations in the literature. To measure the tissue content of zinc (Zn), chromium (Cr), manganese (Mn), tin (Sn), copper (Cu), aluminum (Al), lead (Pb), and iron (Fe) in stomach and esophagus cancerous tissues compared to the adjacent healthy tissues.

Methods: In a cross-sectional study, these trace elements and heavy metals were evaluated among patients with gastric and esophageal cancers. During endoscopy, multiple samples were taken from cancerous lesions and the adjacent healthy tissues. We used the classic flame atomic absorption spectroscopy (FAAS) method.

Results: Fifty patients with the mean age of 53.92 ±1.24 years were enrolled in this study. Fifty-two percent of patients were male. Thirteen patients suffered from esophageal cancer and thirty–seven patients were afflicted with gastric cancer. Also, smoking history was reported in 23(46%) patients. There were significant differences in the median concentrations of Zn, Cr, Sn and, Cu (P< 0.05) between two groups. Although no significant change was shown in the tissue content in the esophageal samples, there were significant differences in the median concentrations of Zn, Cr and, Sn (P<0.05) in gastric tissues. Also, we revealed that gender influences the level of some trace elements.

Conclusion: The tissue contents of some elements were altered in gastric and esophageal cancers. This difference may reflect the underlying mechanism of cellular changing during the tumorigenesis or direct exposure of these elements. Coexisting of other risk factors needs further evaluations in larger cohort studies.

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Code: DA-21056
ICGH2021-11
Category: 4.5 تشخیص و پیگیری

Survey graphene quantum dots composite based Electrochemiluminescence Methods for Improvement the Detection of Carcinoembryonic Antigen in the Early Stages of Colorectal cancers

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Introduction: Carcinoembryonic antigen (CEA) is one of important tumor markers for diagnosis and monitoring of colorectal cancers (CRC) Elevated concentration of CEA from normal level could be a sign of CRC. However, in early stages of CRC, CEA concentration could not be differentiable from normal range by the available tools This review shows that fluorescent features, and physical-chemical properties of GQDs composites has been applied in ECLimmunosensors for determination of CEA in early stages of CRC.

Methods: Relevant studies in the electronic database were chosen by the medline library. Only papers published in revent English have included.

Results: Electrochemiluminescence (ECL) as a powerful analytical technique has chemiluminescence and electrochemical analysis advantages such as wide response range and high sensitivity. High specific interaction of antigen and antibody has made electrochemiluminescence immunosensors as most important sensors for the specific analysis of CEA. Graphen quantum dots (GQDs) with unique electro-optical properties and biocompatibility have great potential applications in ECL sensing. Immobilization of antibodies on GQDs/Au@Pt improves performance of ECL immunosensor for CEA detection in serum samples between 1.0 pg/mL to 10 ng/mLwith the excellent detection limit of 0.6 pg/mL. ECL intensity of hydrazide GQDs / gold nanoparticles (AuNPs) immunosensor is decreased as a result of elevating CEA concentration (detection limit= 0.01 ng/mL). Additionally, ultrasensitive sandwich-type ECL immunosensor based on poly (5-formylindole) graphene oxide/Au nanoparticle/graphene quantum dots has been exhibited broad linear range between 0.1 pg/mL to 10 ng/mL as well as low detection limit of 3.78 fg/mL for CEA detection.

Conclusion: In conclusion, ECL immunosensors and aptasensors based on graphene-quantom dots composites could increase detection capability of CEA in the early stages of CRC because of their broad linear ranges as well as higher detection of limits.

Send Date: 2021/08/22

Code: DA-21113
ICGH2021-12
Category: 14.1 Malignant disease - epidemiology - screening and prevention

Effect of Boswellia and its gum resin on induced oxidative stress by cadmium in colorectal cancer

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Introduction: Epidemiological researchers have demonstrated that colorectal cancer (CRC) is the third common cancer in the world, and it is the second leading cause of cancer mortality in developed countries. Heavy metals such as cadmium (Cd) have a prognostic role in cancers especially in CRC. Cd induces formation of reactive oxygen species (ROS), which in turn cause damage to DNA and interfere with cellular signaling. Natural components such as Frankincense resin have recently gained attention for their anti-cancer and chemopreventive properties. This review discusses the anti-carcinogenicity effects of Frankincense resin on Cd toxicity.

Methods: The electronic database between 2000-2021 were searched using the search terms "frankincense", "cadmium", "oxidative stress", and "colorectal cancer". Only articles published in English have been included. Combination treatments of frankincense with other herbal products were excluded.

Results: Cadmium as a type I carcinogen increases the risk of cancers especially CRC. In vitro studies on CRC cell lines (RKO and HT-29 cell lines) showed that Cd induces

oxidative stress, inflammation and metastasis in CRC cell lines. Cd could represent its carcinogenicity by oxidative stress products such as ROS through destruction of antioxidant defense and DNA repair systems, impairment of protein activity, activation of lipid peroxidation, and chromosomal aberrations, and induction of apoptosis pathways. FRN is an aromatic resin with antioxidant, anti-inflammatory, anti-cancer, and anti-proliferative properties. In vitro studies showed that FRN could inhibit the growth of CRC cells. In addition, several clinical studies showed the anti-inflammatory and anti-tumor activities of FRN. FRN and Boswellia properties are related to their compositions such as boswellic acids, saponins, alkaloids, polyphenols, essential oils, and polysaccharides. FRN could reduce ROS, reactive nitrogen species (RNS), and membrane lipid peroxidation; and simultaneously could inhibit inflammation by inhibition of nuclear factor kappa-B (NFκB) which mediates production of inflammatory cytokines/chemokine's (Tumor necrosis factor α, Interferon-gamma, Interleukin 1(IL 1), IL 2, IL4, and IL6. Moreover, FRN can induce apoptosis by reduction of mitochondrial membrane potential, B-cell lymphoma 2 protein, BCL extra-large protein, inhibition of apoptotic protein, and activation of caspases 3, 8, and 9.

Conclusion: Antioxidant, anticancer, and anti-inflammatory properties of frankincense and Boswellia could be used in cancer chemoprevention in combination with conventional treatments.

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Code: DA-21110
ICGH2021-13
Category: 14.3 Management of malignant disease

Effects of Ziziphus Jujuba on induced oxidative stress by Lead in colorectal cancer

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Introduction: Colorectal cancer (CRC) rates increased dramatically significantly over the last few decades. Oxidative stress have been proposed as major factors in the pathogenesis of this cancer, which can cause by exposure to toxic heavy metals, such as lead (Pb). Recently gained attention to natural anti-oxidant fruits such as oleaster (Ziziphus Jujuba), for modulation of induced oxidative stress by Pb. This review aims to highlight the antioxidant and free radical scavenging properties of jujube fruit for the decrease of induced oxidative stress by Pb.

Methods: Ziziphus Jujuba Mill, lead, Pb, colorectal cancer were researched in electronic English databases (between 2000 and 2021) and relevant English published articles were included.

Results: Relevant studies showed that high level of Pb may exert diverse toxic effects on colorectal cells. Pb's toxicity could induce oxidative stress and alter antioxidant activities by inhibiting functional SH groups in antioxidant enzymes. Oxidative stress products could directly or indirectly increase lipid peroxidation, DNA and proteins damages, defects DNA repair, surpasses the antioxidant levels, alter regulations of genes, signal transduction and cell growth. In vitro and in vitvo studies have been reported that Pb can promote tumorigenesis, metastasis and angiogenesis (by inducing interleukin-8 expression); activate epidermal growth factor receptor and induces phosphorylation of downstream extracellular signal-regulated kinase (ERK)-1/2; and increase lipid peroxidation or decrease antioxidant defense mechanism. Nowadays, Ziziphus Jujuba is attended as a medicinal herb with antioxidant, anticancer, anti-inflammatory activities. In vitro and in vitvo studies have been showed that Jujube could reduce DNA damage and ROS production in Caco-2 cells and could reduce inflammation via reduction of tumor necrosis factor 1, interlukine 1b, and 6. These Jujuba properties are related to its compositions (Flavons, flavonoids, anthocyanins, polysaccharides, and phenolic acid). Jujuba's Polysaccharides, could reduce oxidative stress on colorectal cells and can be served as immune adjuvants to improve the immune responses. Polyphenols have antioxidant, anti-inflammatory, and anticancer properties. It was proposed that antioxidant activity of Jujube is related to the highest content of phenolics, flavonoids, and anthocyanins.

Conclusion: In conclusion, Jujuba could be used for modulation and reduction of induced oxidative stress, inflammation and carcinogenicity by Lead in cancer and colorectal cancer, in combination with established treatments.

Send Date: 2021/09/20

Code: DA-21115
ICGH2021-14
Category: 2.14 تشخیص بیماریهای بدخیم

Evaluation of the relative frequency of positive

fit test with colorectal cancer in patients referred to comprehensive health service centers in Mashhad in 2018-2019

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Introduction: One of the most common types of cancer in the world is colorectal cancer, it is the third most common cancer in both men and women. In this study, we investigated status of People regarding colorectal cancer using FIT test.

Methods: The present cross-sectional study carried out on the health assessment data of the population registered in the SINA system in 2018-2019, who entered the national program for the prevention and early detection of colorectal cancer during 2018 in the Mashhad. The demographic characteristics of the patients were recorded including FIT test results. Data were analyzed. A p-value less than 0.05 was considered statistically significant.

Results: A total of 140463 eligible individuals were screened for colorectal cancer using the FIT test, of which 8258 were positive (5.88%). Out of 7604 people (92%) who underwent colonoscopy and from those who underwent colonoscopy and in 145 people (1.9%) people were diagnosed with colon cancer.

These results indicated a positive effect of age, nationality (non-Iranians), on the fit test result, while having a hard job and physical activity, Reduce the chances of a positive test result. In addition, the results showed bleeding from the anus during the last month , constipation during the last month , abdominal pain and feeling of full anus after defecation in the last month , weight loss of more than 10% in the last month , individual history of colorectal cancer , history of inflammatory bowel disease , family history of colorectal cancer in First-degree relative , history of colorectal cancer in second-degree relative under 50 years of age , history of inherited diseases increase the chances of a positive fit test.

Conclusion: This study showed that a high percentage of high-risk individuals in Mashhad in 2018 -2019 were positive for FIT test and a remarkable number of them were diagnosed with CRC after colonoscopy. Considering that doing screening is the first step in early detection of colorectal cancer are highly recommended.

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Code: DA-21105
ICGH2021-15
Category: بیماریهای بدخیم 16 .1

prognostic factor in the three-year survival of patients with gastric cancer

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Introduction: Considering the lack of studies that prospectively assessed the post-diagnosis nutritional status in gastric cancer (GC), in the present study, we aimed to assess the prognostic factors of three-year survival of patients with GC.

Methods: In the present prospective study, all histologically confirmed GC patients who were admitted to the Imam Reza Hospital, Tabriz, Iran from September 2016 to October 2019 were included. All patients were followed up every 6 months for 3 years. The overall survival (OS) was calculated from the time of diagnosis to the date of death or last visit. Information regarding tumor–node–metastasis (TNM) classification was retrieved from clinical records, follow-up data, and endoscopic reports of each patient.

Results: In the present study, 302 patients with GC were included. The mean age of patients was 67.39 ± 12.04 years. The median OS was 11.00 (95% CI: 80.03, 13.96) months. 41.7% of patients were in the late stages of gastric cancer and 29.31% of patients get no treatment. Cox proportional hazard regression indicated that the TNM stage, and treatment status were significantly associated with the hazard of death in GC patients.

Conclusion: The result of the present prospective study indicated that the TNM stage, and treatment status were independently associated with survival rate in patients with GC.

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Code: DA-21134
ICGH2021-16
Category: بیماریهای بدخیم مری 2 .8

Evaluation of the sexual hormone effects in the

adenocarcinoma of esophagus in the men referred to Imam Khomeini Hospital Complex in Tehran

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Introduction: Esophageal adenocarcinoma is a malignant disease that usually affects the end of the esophagus and has certain risk factors such as reflux, smoking, and obesity. Esophageal adenocarcinoma is more common in men than women worldwide. Various hypotheses have been proposed regarding the role of sex hormones in cancer, including cell proliferation and differentiation, change of cellular metabolism, and inflammation and apoptosis. Therefore, in this study, the authors aimed to investigate the relationship between sex hormone levels and the incidence of esophageal adenocarcinoma

Methods: In the study, we recruited 50 male patients with esophageal adenocarcinoma (case group) and 50 healthy males (control group) that were matched considering age. And the associated factors for Barrett's esophageal were evaluated. Mean levels of sex hormones, were compared using blood sampling in patients in the two groups.

Results: The levels of free testosterone, estradiol, free testosterone to estradiol ratio, progesterone, prolactin, Luteinizing hormone (LH), Follicle-stimulating hormone (FSH) and, Dehydroepiandrosterone sulfate (DHEA-S) got measured. The difference between mean levels of free testosterone, estradiol, testosterone to estradiol ratio, LH, and FSH of the case group compare to the control group turned out to be significantly lower. Mean level of DHEA-S level didn't meaningfully differ in two groups

Conclusion: This study showed that the loss of estrogen and testosterone balance may has an affect on esophageal adenocarcinoma

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Code: DA-21050
ICGH2021-17
Category: 19. 3 Endoscopy - ERCP

Oral N-Acetyl cysteine versus rectal indomethacin for prevention of post ERCP pancreatitis: A Multicenter Multinational Randomized Controlled Trial

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Introduction: This multicenter multinational RCT designed to compare efficacy of suppository indomethacin and NAC for prevention of PEP.

Methods: During a 6 month period, all of the patients indicated for ERCP in 7 referral centers of 4 countries randomly assigned to receive either 1200 mg oral NAC (group A), indomethacin suppository 100mg (group B), 1200 mg oral NAC plus indomethacin suppository 100mg (group C) or placebo (group D) two hour before ERCP. The primary outcomes were the rate and severity of any PEP.

Results: a total of 432 patients included (average age 57. 3 y, 41. 4% male). The participants were originally citizens of 6 countries (60. 87% Caucasian). The patients were randomly allocated to receive either NAC (group A, 84 cases), rectal indomethacin (group B, 138 cases), NAC + rectal indomethacin (group C, 115 cases) or placebo (group D, 95 cases). The rate of bleeding and perforation after procedures was 3. 94% and 2. 54% respectively.
 The rate of PEP in groups A, B and C in comparison with D (placebo) were 10. 7%, 17. 4%, 7. 8% vs. 20% (P =

0. 08, 0. 614 & 0. 01 respectively). The NNT for NAC, indomethacin and NAC + indomethacin were 11, 38 and 8 respectively. 49. 18% of the PEP cases were mild with average duration of hospital stay 4. 5 days.

Conclusion: Oral NAC is more effective than rectal indomethacin when compared to placebo for prevention of PEP and the combination of NAC and Indomethacin had the lowest incidence of PEP and may have synergistic effect in preventing of PEP.

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Code: DA-21100
ICGH2021-18
Category: 13. 7 سایر موارد

Effects of Methamphetamine on the Histopathology of the Liver and Pancreas and their Enzymes in Adult Male Rats

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Introduction: Methamphetamine (METH) is a widely addictive and abused psychostimulant drug that affects organs of body. In this study, the effects of METH administration for 7, 14, and 28 days on the histological and functional changes of the liver and pancreas of adult male rats were investigated.

Methods: In this experimental study, 58 adult male Wistar rats were randomly divided into seven groups including control (received no treatment), vehicle (received saline for 7, 14, and 28 days), and METH (received METH with a dose of 5 ml/kg, IP for 7, 14 or 28 days).

Sampling from the liver and pancreas tissues was done after the above-mentioned times for each group, then, tissue samples were stained by H&E technique and evaluated for structural changes, as well as the evaluation of biochemical factors including SGPT, SGOT, and amylase enzymes. Data were analyzed by one-way ANOVA, using SPSS software version 20. Statistical significant level was considered at $P<0. 05$.

Results: In this study, METH caused a significant structural change in the liver and pancreas in the METH-treated groups compared with the control group. Functional changes depended on the length of treatment, with the 7-day treatment group having less damage than the 14- and 28-day periods.

Conclusion: According to the results of the present study, methamphetamine administration for 7, 14, and 28 days had adverse effects on the rats liver and pancreas structure and their enzymes (SGPT, SGOT, and amylase). Therefore, underlying mechanism need further investigation.

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Code: DA-21116
ICGH2021-19
Category: 13.7 سایر موارد

Hydatid cyst of the liver with portal thrombosis: A case report

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Introduction: Infection caused by Echinococcus can affect various organs of the body, especially the lungs and liver, which are more involved

Case Report: A 66-year-old woman with a 5-year history of hepatic hydatid cyst referred to the hospital with symptoms of new onset severe abdominal pain without abdominal tenderness and distension. evidence of acute liver failure observed. The results of Doppler ultrasound and triphasic computed tomography (CT) scan of the abdomen and pelvis showed right and left hepatic venous thrombosis with portal thrombosis associated with collateral arteries

around the spleen hill, as well as giant hydatid liver cysts. The patient received treatment with anticoagulant and Albendazole and candidate for liver transplantation

Discussion: Involvement in hydatid cyst disease affects various organs, and is asymptomatic in some cases, while non-specific symptomatic in other cases. Portal vein thrombosis is usually associated with portal cavernous transformation. Hepatic and portal vein thrombosis are among the rare complications of Echinococcus that have been reported in less than ten cases to date.

The extensive involvement of the liver due to hydatid cyst and invasion to the portal vein and port thrombosis are rare complications of hydatid cyst. Treatment should include the combination therapy of thrombosis with hydatid cyst through medical and surgical measures.

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Code: DA-21144
ICGH2021-20
Category: 7.13 Miscellaneous

Different manifestations of IgG4 related sclerosing cholangitis: Clinical myths and pearls.

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Introduction: IgG4-related sclerosing cholangitis is a rare inflammatory disease that characterized by elevated serum IgG4 levels, storiform fibrosis pattern of IgG4 positive plasma cell infiltration and dramatic response to corticosteroid administration. This poorly understood disease can cause both intra/extra hepatic biliary stenosis and thickening. In this regard, it can be misdiagnosed with other conditions including primary sclerosing cholangitis, and even cholangiocarcinoma

Methods: This retrospective cohort study designed to evaluate clinical manifestations, imaging findings and prognosis of IgG4-related sclerosing cholangitis in a tertiary referral center over two-year period. The diagnosis of IgG4-related sclerosing cholangitis was made based on Japanese criteria 2012. 18 patients with definite, probable and possible diagnosis of IgG4-related sclerosing cholangitis between January 2018 to August 2020 were included and followed for one year.

Results: Among total, 12 (66.7%) of them were male.

The mean age at diagnosis was 44.61±15.18 years (range 21 to 67). The most frequent complaints were abdominal pain, icter, itching and weight loss seen in 10 (55.6%), 10 (55.6%), 9 (50%) and 5 (27.8%) of patients, respectively. Two patients presented with bowel obstruction symptoms. One of them referred with cholangitis symptoms and one misdiagnosed with post-cholecystectomy bile duct stricture. Extra hepatic bile ducts were involved in all patients and two patients had intrahepatic bile duct involvement simultaneously based on magnetic resonance cholangiopancreatography (MRCP) findings. Furthermore, half of patients had normal pancreas pattern. IgG4 level was elevated in 11 patients (61.1%) and the mean serum IgG4 concentration and CRP level were 159.55±176.16 mg/L and 23.14±27 mg/L, respectively.

Conclusion: This series presented to point out gastroenterologists to be aware of diagnosis of IgG4 related sclerosing cholangitis considering various presentations even in the presence of normal IgG4 level.

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کد: DA-۲۱۱۳۷
ICGH2021-21
گروه : ۹. ۴ پانکراتیت

Endoscopic biliary and duodenal metallic stent replacement for advance pancreatic cancer and GOO.

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زمینه و هدف: کانسـر پانکراس در مراحل پیشـرفته میتواند موجب انسـداد در قسـمتهای مختلف روده ها اعم از دئودنوم روده کوچک یا کولون شـود. در ایـن بین درگیـری دئودنوم در تومورهـای پری امپولاری زیاد دیده میشـوند. فرمهای شـدید درگیری تومـورال در دئودنوم میتواند موجب انسـداد خروجی معده شـود. مشـاهده بیمار با ایکتر انسدادی و انسـداد خروجی معده چالش بزرگی اسـت که متخصصیـن گوارش با آن مواجهه دارند. روشـهای قدیمی تر درمان در این بیماران عمل جراحی هپاتوژژونوسـتومی و گاستروژژونوسـتومی بوده اسـت. اما امروزه میتوان باتعبیه اسـتنت های فلـزی در مجاری صفراوی و دئودنوم بطور همزمان یا با فاصله از طریق دئودنوسـکوپ یا اندوسـونوگرافی تعـدادی از ایـن بیمـاران را جراحی های سـنگین و غیر ضـروری نجات داد

روش بررسی: از اسفند ۹۹ تابه حال تعداد ۵ بیمار باایکتر انسدادی وانسداد شدید خروجی معده (GOO) بـه مرکـز میلاد ارجـاع شـدند. یک بیمـار با تشـخیص قطعـی ادنوکارسـینومای پانکراس ارجاع شـده بود. دو بیمار بعد از بسـتری با تابلوی انسـداد خروجی معده و ایکتر انسدادی و توده سـر پانکراس بررسی شدند. دو بیمار با بیوپسـی دئودنوم و دو بیمار با EUS–FNA به تشـخیص رسـیدند. ابتدا تصمیم گرفته شد بیماران ERCP شـوندو اسـتنت فلزی بیلیاردی جهت درنـاژ مطمئن فیکـس گـردد. در همه بیمـاران تحت فلئوروسـکوپی تنگی تومورال دئودنوم در ۳-۱ جلسه دیلاته شدند تا امکان انجام ERCP فراهم گردد. سپس ERCP انجام شد و استنت فلزی صفراوی متناسب تعبیه شد. در یکی از بیماران

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در همان جلسه و در بقیه بیماران در همان بستری بعد از اطمینان از درناژ صفراوی و افت بیلیروبین تحت گاید فلئوروسکوپی استنت دئودنال تعبیه گردید. **نتیجه گیری** : در این تجربه موفقیت تکنیکال ۱۰۰٪ و موفقیت کلنیکال هم ۱۰۰٪ بوده است. ایکتر کاهش یافت یا بر طرف شد. بیماران وزن گرفتند و ترخیص شدند و تا به حال نیاز به بستری مجدد نداشتند. یکی از بیماران در زمان بستری هم ARF داشت هنوز تحت دیالیز مزمن میباشد. در یکی از بیماران به علت در دسترس نبودن استنت دئودنال بلند ناچاراً از استنت دوم هم استفاده شد. به نظر میرسد در بیماران با کانسر پیشرفته پانکراس و GOO همزمان تعبیه همزمان و یا بدنبال هم استنت های فلزی برای برقراری درناژ مطمئن صفرا و بر طرف کردنGOO میتواند اقدام انتخابی اول باشد. این روش در مراکز رفرال و توسط افراد با تجربه توصیه میشود.

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ICGH2021-22
Category: 4 .9 پانکراتیت

Evaluation of therapeutic role of Endoscopic retrograde cholangiopancreatography (ERCP) in patients with chronic pancreatitis and pancreatic duct stone

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Introduction: Endoscopic retrograde cholangiopancreatography (ERCP) has known as one of modality of choice for treatment of pancreatic duct (PD) stone in patients with chronic pancreatitis (CP). Although ERCP has recommended for radiolucent PD stones smaller than 5 millimeters, the management differs case by case due to PD variations and stone characteristics. This study aims to assess ERCP findings and its effects on pain improvement and quality of life in CP patients with PD stone.

Methods: In this retrospective cohort study, 47 patients with definite diagnosis of chronic pancreatitis were enrolled. Patients with history of any other pancreatic/ biliary disorders were excluded. All patients undertaken endoscopic ultrasonography (EUS) before ERCP to confirm PD stone. ERCP findings including strictures, skipped lesions and type of procedures were recorded by an expert gastroenterologist for each patient. In addition, all patients assessed for pain (using visual analog scale) and quality of life (using short form-12 questionnaire) during six months follow up. All statistical analysis was performed using SPSS version 20.

Results: The mean age was 49.28±16.39 years and most of the patients were male 25 (54.3%). All patients had complaints of abdominal pain on admission, 9 (19.6%) of them had icter and 5 (10.6%) presented with cholangitis. 18 (39.1%) of them had history of recent weight loss. Pain significantly decreased six months after ERCP (3.91±1.47) compared to pain on admission (7.87±1.31) based on visual analog scale (P≤0.05). Furthermore, quality of life significantly improved after ERCP (27.4±5.91 vs 32.8±5.12) (P≤0.05).

Conclusion: The results of this study showed ERCP as a safe and effective therapeutic approach for PD stone associated with pain and quality of life improvement. However, further study is needed to compare ERCP outcomes versus surgery in management patients with PD stone.

Send Date: 2021/10/02

Code: DA-21147
ICGH2021-23
Category: 13.7 سایر موارد

cholangiocarcinoma predictive factors in primary sclerosing cholangitis patients who underwent liver transplantation in Abu Ali Sina transplant hospital between 2016-2021

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Introduction: Cholangiocarcinoma (CCA) is a malignancy of biliary system which occurs due to hyperplasia of bile ducts epithelial cells and also it is the most common malignancy in patients with primary sclerosing cholangitis (PSC) and carries a high rate of mortality. Although the pathogenesis of CCA in PSC is largely unknown, inflammation-driven carcinogenesis concomitant with various genetic and epigenetic abnormalities are underlying factors. The majority of CCA cases develop from a dominant stricture (DS), which is defined as a stricture with a diameter < 1.5 mm in the common bile duct or < 1.0 mm in the hepatic duct. In PSC patients presenting with an abrupt aggravation of jaundice, pain, fatigue, pruritus, weight loss, or worsening liver biochemistries, CCA should be suspected and evaluated utilizing a variety of diagnostic modalities. However, early recognition of CCA in PSC remains a major challenge.Herein, we have survey the effectiveness rate of present treatments and the effect of early diagnosis of CCA in patient's prognosis.

Methods: in this study we gathered the information of 450 liver transplant patient with definite diagnose of PSC with/ without CCA from Abu Ali Sina Hospital (the largest center

of hepatobiliary surgery in the south of Iran) between 2016-2021. The logistic regression method was used to identify the factors associated with CCA.

Results: We reviewed 450 transplanted cases of PSC. Amongst these, cholangiocarcinoma was 18.2% (n =82). Significant risk factors in univariate analysis included Carbohydrate antigen 19-9 (CA 19.9), Hilar lymph node in CT Scan & MRCP, Stricture in CT scan & MRCP, mass in CT scan & MRCP, and age of PSC diagnosis, taking medication (azaram, sulfasalazine, mesalazine, ursoflor). In our study azaram medicine proved to have a remarkable protective effect among PSC patients against cholangiocarcinoma. Multiple logistic regression analysis showed that factors of CA 19-9(OR: 4.888 ; 95% CI:1.816-13.157), Hilar lymph node in CT Scan & MRCP (OR: 2.652 ; 95% CI:1.406-5.004), Stricture in CT scan (OR: 5.153 ; 95% CI:1.634-16.244) and Mass in CT scan & MRCP (OR: 2.565 ; 95% CI:1.328-4.953) are important predictors of cholangiocarcinoma.

Conclusion: Several risk factors for CCA have been identified. Due to the late diagnosis of cholangiocarcinoma by regular examining of PSC patients and considering clinical trials and combining CT scan and MRCP reports, people at higher risk of this cancer can be identified.

Send Date: 2021/10/03

Code: DA-21041
ICGH2021-24
Category: 15. 5 Functional gastrointestinal disorders (clinical - management)

The efficacy of an herbal medicine on the relief of symptoms in patients with irritable bowel syndrome constipation predominant (IBS-C): a pilot study

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Introduction: According to Rome IV criteria, irritable bowel syndrome (IBS) is the most common functional bowel disorder with recurrent abdominal pain associating with defecation or a change in bowel habit. Several studies reported the efficacy of herbal medicines in improving IBS symptoms. This pilot study evaluated the efficacy of the herbal medicine of Melissa officinalis (Badranjbooyeh), Pimpinella anisum (Anisun); and Rosa damascene (Gole Sorkh) on symptoms severity score of patients with irritable bowel syndrome, constipation predominant (IBS-C).

Methods: This double-blind randomized pilot controlled clinical trial, with parallel groups allocation ratio of 1:1, was conducted in a referral clinic of Afzalipour Hospital affiliated with Kerman University of Medical Sciences in Kerman, southeastern Iran.

A total of 40 patients with IBS-C (diagnosed based on the Rome IV criteria) were included in this study. The patients with complications during the intervention, pregnancy or lactation, a history of allergy to herbal drugs, and severe organic or psychiatric disorders were excluded.

The participants received one capsule containing 500 mg of herbal Aqueous extract or placebo (Corn starch) three times a day for 4 weeks. IBS Symptoms Severity Scale (IBS-SSS) were assessed via standard questionnaire.

Results: A total 20 participants in each group completed the study, and their data were analyzed statistically. All clinical outcomes (abdominal pain severity, abdominal pain frequency, bloating/distention severity, bowel habit dissatisfaction, and interaction with quality of life) showed significant improvements in herbal medicine group compared to the placebo without serious side effects (independent t-test, P <0. 05).

Conclusion: Although this pilot study showed the efficacy of this herbal medicine in improving IBS-SSS, more studies with larger sample size are needed to confirm the efficacy and safety of this herbal medicine in patients with IBS.

Trial registration:

This trial was registered in the Iranian Registry of Clinical Trials under Reg. No. IRCT20150927024228N4.

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Code: DA-21135
ICGH2021-25
Category: 6.4 Other colonic and anorectal disorders

Effect of Aromatherapy Inhalation of Rose Essence in Clinical Symptoms of Patients with Irritable Bowel Syndrome

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Introduction: Irritabale bowel syndrome is one the most common intestinal disease that psychological factors have important role on that. In this study we evaluate the effect of aromatherapy with Rosa damascena on clinical signs of IBS.

Methods: In a double blind randomized clinical trial, we chose 60 patients with IBS. The patients filled a two parts

questionnaire. In the first part they filled about their bowel habits and in the second part they showed their level of anxiety. The participants were randomly allocated to the aromatherapy and placebo group. The aromatherapy group were treated with inhalation of Rosa Damascena oil and the placebo group inhaled grapeseed oil.

Results: The mean age in aromatherapy and control group was 32 and 32.9 years, which was not significantly different. No significant difference in experiencing pain and duration of the abdominal pain was observed between the two groups before or after the intervention. Before and after intervention no significant difference was observed in the stool form and stool frequency and presence of mucus between the two groups. Before and after the intervention no significant difference was observed in the level of hidden anxiety between the two groups. However, after the intervention the level of apparent anxiety was decreased in the aromatherapy group.

Conclusion: The findings of our study suggests that except anxiety, Rosa essence was not effective on any other manifestations of IBS.

Send Date: 2021/10/01

Code: DA-21023
ICGH2021-26
Category: 4.6 ساير اختلالات كولون و آنوركتال

Evaluation of Adjuvant Effects of Celecoxib in Combination with Fluoxetine in Depression Treatment of Patients with Irritable Bowel Syndrome

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Introduction: A significant proportion of patients with irritable bowel syndrome are also suffering from some degree of depressive disorder due to the impact of the disease on their quality of life. This study investigated the effect of anti-inflammatory drugs in the simultaneous treatment of depression and irritable bowel syndrome.

Methods: The study was performed as a double-blind randomized clinical trial. The population includes 58 patients of 18 to 60 years of age, with simultaneous irritable bowel syndrome and depression whom attended the Sanandaj healthcare centers in 2020. The population was randomly divided into two groups of intervention and control. The intervention group was treated with fluoxetine and celecoxib and the control group was treated with fluoxetine and placebo. Patients' depression scores in both intervention and control groups were measured and

recorded with Beck questionnaire before treatment, three weeks and six weeks after treatment, respectively. Data were analyzed using SPSS software - version 21 - at 95% confidence level.

Results: In the intervention and control groups, the mean age of patients was86/9±45/33 and 05/9±83/32 years (P=0.08), the proportion of women was 62.9% and 37.9% (P=0.606). Depression score of day zero was 75/6±82/20 and75/6±65/18 (P=0.241), three weeks later it was 72/5±52/9 and 75/6±10/12 (P=0.123), and finally, it was 08/5±20/7 and50/6±17/11 (P=0.011) six weeks after the treatment.

Conclusion: In patients with irritable bowel syndrome and concomitant depression, co-administration of fluoxetine with celecoxib in comparison with fluoxetine alone, without causing side effects within six weeks after treatment, significantly reduces the depression score.

Send Date: 2021/07/20

Code: DA-21085
ICGH2021-27
Category: 1.1 اپيدميولوژى

Irritable Bowel Syndrome: Psychological Disorder or Poverty? Results of a Large Cross-sectional Study in Iran

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Introduction: Irritable bowel syndrome (IBS) is a functional disease with no exact laboratory or imaging findings. IBS

is more common in areas with a history of psychological trauma and war. This study aims to report the prevalence and possible determinants of IBS in southwestern Iran, an area with a notable history of war.

Methods: We randomly enrolled 1849 permanent residents in 29 cities aged 20 to 65 years. A validated for Farsi version Rome III criteria and a questionnaire, including demographic data and health history, were administered to each subject. Participants who fulfilled the Rome III criteria were categorized into three groups: Diarrhea dominant (IBS-D), Constipation dominant (IBS-C), and Mixed type (IBS-M).

Results: The total prevalence of IBS was 3.2%, with 70% of subjects being of Arab descent (P = 0.004). IBS was more common in females, singles, illiterate subjects, and people younger than 30 years; however, none of these differences were statistically significant. People with depression, anxiety, self-report of psychological disorders, and very low socioeconomic status had a significantly higher prevalence of IBS (P < 0.05). After multivariable logistic regression analysis, very low socioeconomic status had an independent role in IBS predictivity (OR: 2.28, 95% CI: 1.01–5.15).

Conclusion: This study shows a higher prevalence of IBS symptoms in a population-based study in the region compared to counterparts in other regions of Iran. Considering the higher prevalence of self-reported psychological disorders, further studies are recommended to focus on the exact diagnosis of mental disorders and their influence on IBS.

Send Date: 2021/09/11

Code: DA-21091
ICGH2021-28

<div dir="rtl">گروه : ۵.۱۵ اختلالات عملکردی دستگاه گوارش</div>

Evaluation of irritable bowel syndrome prevalence in medical students

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Introduction: Irritable bowel syndrome (IBS) is a functional gastrointestinal disorder and requires early diagnosis due to its negative impacts on the quality of life. According to the lifestyle pattern of medical students, IBS has a significant prevalence in these individuals. The present study aims to investigate the prevalence and factors associated with IBS in medical students.

Methods: This cross-sectional study has been conducted on 100 medical students studying at Isfahan University of Medical Sciences in 2019-20. The ROME IV diagnostic criteria were administered to diagnose IBS and individuals were divided into four groups of constipation-dominant (IBS-C), diarrhea-dominant (IBS-D), mixed type (IBS-M) and unspecified (IBS-U). The association of studying grade, gender and residence with IBS was evaluated.

Results: The mean age of the students was 23.2±4.8 years, including 68 (68%) women. According to ROME-IV criteria, 24 (24%) ones were diagnosed with IBS among which 18 (75%) ones were females.[1] The IBS cases were dominantly in IBS-C group (54.16%). IBS was not associated with gender (P-value = 0.498), educational grade (P-value = 0.661) and type of the residence (P-value = 0.562) in the studied medical students.

Conclusion: According to the present study, the prevalence of IBS was 24% among medical students, which was higher among women. Most patients had IBS-C, but IBS did not show a statistically significant relationship with gender, educational grade and type of the residence.

Send Date: 2021/09/16

Code: DA-21027
ICGH2021-29
<div dir="rtl">Category: 10 تغذیه</div>

Glutamine Supplementation Enhances the Effects of a Low FODMAP Diet in Irritable Bowel Syndrome Management

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Introduction: Although irritable bowel syndrome (IBS) is one of the most common gastrointestinal disorders presenting to gastroenterologists, therapeutic strategies are not yet well established. Accordingly, we conducted a randomized, double-blind, placebo controlled, clinical trial to evaluate the possible superiority of adding glutamine supplement to low fermentable oligo- di- mono- saccharides and polyols (FODMAP) diet in patients with IBS.

Methods: Eligible adults were randomized to receive a low FODMAP diet either with glutamine (15 gram/day) or a placebo for 6 weeks. The primary end point was a significant reduction in IBS-symptom severity score (IBS-SSS). Secondary end points were changes in IBS symptoms, bowel habits and quality of life.

Results: Fifty patients were enrolled in the study, and 22 participants from each group completed the study protocol. The glutamine group had significant changes in total IBS-

severity score (-180±60.57; p=0.014), dissatisfaction with bowel habit (-38.18±18.55; p <0.001) and abdominal pain frequency (-32.73±22.08; p=.043). Improvement in IBS-severity score of more than 45% was observed in 22 of 25 participants (88%) in glutamine group, while it was only 15 of 25 participants (60%) in the control group (p=0.015). No serious adverse events were observed.

Conclusion: Our findings indicate the superiority of adding glutamine supplementation to low FODMAP diet in amelioration of IBS symptoms, while confirming the beneficial effects of low FODMAP diet in IBS management.

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Code: DA-21092
ICGH2021-30
Category: 5.15 اختلالات عملکردی دستگاه گوارش

Assessment of the correlation between sleep quality and Irritable Bowel Syndrome (IBS)among medical students

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Introduction: Remarkable high rates of functional gastrointestinal disorders, irritable bowel syndrome (IBS) in particular, is prevalent among medical students. On the other hand, nature of studying medicine leads to sleep disorders in this population. Objectives: The current study aims to assess the prevalence and association between IBS and sleep quality in medical students.

Methods: This is a cross-sectional study on 100 medical students to assess the correlation between sleep disorders and IBS. ROME IV criteria were utilized to determine the diagnosis of IBS and The Pittsburgh Sleep Quality Index (PSQI) to evaluate sleep disorders. The students' length of sleep, age, gender and residence were recorded.

Results: According to ROME-IV criteria, 24 medical students, including 18 females (75%) were diagnosed with IBS. As measured by the Pittsburgh Sleep Quality Index (PSQI), 66% of the students reported disturbed sleep quality. The mean length of sleep of the participants was 6.02 (±1.29 hours). The IBS incidence was not associated with age (P-value=0.56), gender (P-value=0.49) or residence (P-value=0.66). The logistic regression assessment revealed that impaired sleep quality was an independent risk factor for IBS diagnosis among the medical students (P-value<0.001, OR:10, 95%CI: 4.3- 23.3).

Conclusion: According the current study, IBS was diagnosed in 24% of the medical students in Isfahan. Length of sleep was significantly associated with the diagnosis of IBS, but age, gender, residence and sleep quality.

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Code:DA-21040
ICGH2021-31
Category: 2.2 Dyspepsia

The efficacy of the herbal medicine of Bunium persicum and Coriandrum sativum on clinical symptoms of patients with functional dyspepsia: A double-blind randomized active-controlled trial

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Introduction: Functional dyspepsia (FD) is one of the most prevalent chronic disorders affecting up to 30% of the world population with considerable impairment of quality of life. This study evaluated the efficacy of the herbal medicine of B. persicum (Zireh) and C. Sativum (Geshniz) on symptom severity, symptom frequency, and quality of life of patients with FD.

Methods: This double-blind randomized controlled clinical trial, with parallel groups allocation ratio of 1:1, was conducted in a referral clinic of Afzalipour Hospital affiliated with Kerman University of Medical Sciences in Kerman, southeastern Iran.

A total of 90 patients with FD (diagnosed based on the Rome IV criteria) were included in this study. The patients with complications during the intervention, pregnancy or lactation, a history of allergy to herbal drugs, and severe organic or psychiatric disorders were excluded.

The participants received one capsule containing 500 mg of herbal medicine (seeds powder of B. persicum and C. Sativum) or placebo (Corn starch) twice a day for 4 weeks and were subsequently followed up for 4 more weeks. Clinical outcomes were assessed via the Dyspepsia Severity Questionnaire, the Rome IV Diagnostic Questionnaire, and Nepean Dyspepsia Index Questionnaire.

Results: A total 40 participants in each group completed the follow-up period, and their data were analyzed statistically. All clinical outcomes (epigastric burning, epigastric pain, postprandial fullness, and early satiety) showed significant

improvements in herbal medicine group compared to the placebo without serious side effects (P <0.05).

Conclusion: Although this herbal formula can alleviate both epigastric pain syndrome (EPS) and postprandial distress syndrome (PDS), PDS seems to be improved higher than EPS.

Send Date: 2021/08/18

Code: DA-21032
ICGH2021-32
Category: 5.7 Management

The Effect of Low FODMAP Diet with and without Gluten on Irritable Bowel Syndrome: A Double Blind, Placebo Controlled Randomized Clinical Trial

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Introduction: Irritable bowel syndrome (IBS) is among the most prevalent gastrointestinal (GI) conditions.Since the pathophysiology of this syndrome is still unclear. It has been shown that low FODMAP (fermentable oligosaccharide, disaccharide, monosaccharide, and polyol) diet improves IBS symptoms by up to 70%.One of the most consumed food items in the FODMAPs is wheat, which is one of the most prevalent triggers of IBS; however, it is not yet elucidated which of wheat constituents (FODMAPs or gluten) contribute to the IBS symptoms.The aim of this research was to show the gluten-related argument and determine if gluten can trigger symptoms in IBS patients.

Methods: Participants were randomly assigned to one of two groups: the control group received a low FODMAP diet with 5 gram/day rice flour, and the intervention group received 5 gram/day gluten powder. The duration of diet was 6 weeks and subjects completed three days of dietary recalls at the end of week 2 and week 6 to assess their adherence to low FODMAP diet.

Results: From 63 patients referred to our clinics, 49 patients enrolled in the study.Significant improvements were observed in in both gluten and placebo groups but in placebo group more than intervention groups(P< 0.05). The symptoms worsened only in five participants in gluten group . There were no significant difference between two

groups' symptoms before and after adjustment for baseline value. dietary FODMAPs were less than two gram/day in both groups at 2nd and 6th weeks of intervention without any significant difference between two groups.

Conclusion: This study has demonstrated that gluten containing diet did not have any adverse effect on the clinical symptoms and QOL in most of IBS patients. It seems that the wheat and barley exaggerate the IBS symptoms mainly through their fructan content, while their gluten is responsible for symptoms only in few percent of patients.

Send Date: 2021/08/02

Code: DA-21133
ICGH2021-33
Category: 1. 5 پایه / پاتوژنز / آسیب شناسی

Crohn-like colitis in a young man presenting with anemia

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Introduction: Inflammatory bowel disease (IBD) is known as a chronic complex inflammatory condition of the gastrointestinal tract (GI), characterized by a disrupted mucosal structure, altered gut microbial composition, and systemic biochemical abnormalities which can lead to significant morbidity.

The exact etiology of IBD is not known clearly, however, the most dominant hypothesis suggests that IBD is caused by exaggerated immune response, triggered by environmental factors towards the altered gut microbiota or pathogenic microorganisms in a genetically prone host.

Gut microbiota alteration (dysbiosis) is considered to be a novel factor involved in the pathogenesis of IBD.

Case Report: Here we presented a young Afghan male who has been evaluated for anemia and went through anemia work up.

Through his work ups there were multiple localized ulcers in sigmoid colon represented crohn's disease. Terminal ileum could not be intubated due to dolichocolon in his first colonoscopy. Pathology showed crypt destructive colitis, chronic inflammation suggestive for IBD. Mesalamin and prednisolone have been initiated but the patient didn't respond well to treatment of Crohn s disease and his anemia was resistant. Other complementary investigation started after 6 months of treatment. MR enterography showed very large and dilated sigmoid. The second colonoscopy again showed multiple discrete localized ulcers in sigmoid,

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Introduction: This multi centric cross sectional study designed to evaluate is it really necessary to deprive IBD patients from consumption of dairy foods (DFs).

Methods: A multicenter study with 12 gastroenterology referral centers in 4 countries was designed to evaluate gastrointestinal (GI) symptoms after consumption of DFs from all outpatients with IBD during six months and to compare non IBD cases treated at the same centers.

Results: Overall 1888 cases included (872 IBD patients and 1016 non IBD cases). 56.6% of participant was female with average age of 40.1 years. Racially 79.8% of participant was Caucasian, originally citizens of 10 countries. Relative prevalence of IBD was higher in Africans and Indians and the most frequent prevalence of dairy products intolerance seen in Asians. Among IBD patients, 571 cases diagnosed as UC and 189 as CD. Average duration of IBD was 6.8 years. The most prevalent GI symptoms after consumption of DFs were bloating and abdominal pain. Totally, intolerance of DFs was more prevalent among IBD patients in comparison with non IBD cases (65.5% vs. 46.1%, P = 0.0001) but among IBD patients who had not any family history of lactase deficiency, food sensitivity or both were 59.91%, 52.87% & 50.33% and similar to non IBD cases (P = 0.68, 0.98 & 0.99 respectively).

Conclusion: The rate of DFs intolerance among IBD patients without family history of lactase deficiency or food sensitivity is similar to non IBD cases and there is no reason to deprive them from DFs.

Send Date: 2021/08/21

Code: DA-21142
ICGH2021-36
Category: 5.5 درمان

Evaluation of the efficacy, side effects and

outcome of Adalimumab in patients with the cure-resistant inflammatory bowel disease

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Introduction: Adalimumab is an anti-tumor necrosis factor immunoglobulin-1 antibody increasingly being reported as a potential treatment option for inflammatory bowel disease (IBD). There have been several studies on the effects of Adalimumab on remission induction and maintenance of recovery in patients with IBD, but the results of these studies have been inconsistent. Therefore, this study aims to Evaluation of the efficacy, side effects and outcome of Adalimumab in patients with the Cure-Resistant IBD within one year of starting treatment.

Methods: In this cross-sectional study conducted from 2017 to 2020 in mazandaran, 54 patients with inflammatory bowel disease who were resistant to treatment with 5-aminosalicylate plus immunomodulators and were treated with Adalimumab were included in the study. Indication for Adalimumab, side effects, and clinical outcome at 1, 3, 6, 9 and 12 months for each patient were recorded using Partial Mayo score for Ulcerative colitis (UC) and Harvey Bradshaw index for Crohn's disease (CD).

Results: A total of 54 patients (57.3% female) received at least one dose of Adalimumab. Patients under 40 years old (66.7%) were significantly more than patients over 40 years old (33.3%) (p=0.014), that 25 patients with ulcerative colitis and 29 patients with Crohn's disease Complications of Adalimumab in this study were observed in only two patients (3.7%), both of whom were in the CD group (6.9%). Patients were followed for an average of 4.42±11.33 months (range 3 to 20 months). Our results showed that the intensity of disease activity based on Mayo and Harvey-Broadway scores in all patients decreased significantly after three months of treatment) (p = 0.011). The difference in the rate of remission of patients by type of UC and CD disease was not significant in any of the study periods (0 to 15 months). Adalimumab treatment improved 72.2% of the subjects during the follow-up period. 14.8% did not respond to treatment and 5.5% showed a decrease in response to treatment that the drug was discontinued in these two groups during the follow-up period. In three patients with CD, receiving the drug during the study did not change their disease activity.

Conclusion: According to the results of this study, more than 60% of patients responded partially or completely

to Adalimumab treatment. No serious side effects or opportunistic infections have been reported by patients. Therefore, this study provides evidence of the effect of Adalimumab on the recovery of cure-resistant IBD patients.
Send Date: 2021/10/02

Code: DA-21126
ICGH2021-37
Category: 5.5 درمان

Methotrexate in patients with Crohn's disease refractory to anti-TNF-α

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Introduction: Methotrexate (MTX) has been used to maintain remission in patients with Crohn's disease as a second-line maintenance agent following thiopurines. This study was designed to assess the effectiveness of MTX monotherapy or combination therapy in patients with Crohn's disease refractory to anti-tumor necrosis factor (anti-TNFα) agents.

Methods: A retrospective, observational single-center study of data from a private clinic was conducted on patients with moderate to severe Crohn's disease who were refractory to anti-TNF- α. Intramuscular weekly injections of MTX was added. The patients were followed for 24 months. Adverse events were recorded.

Results: A total of 32 patients were treated with anti-TNF- α and MTX. Eleven (33.3%) patients were female. Perianal disease was seen in 19 patients (59.4%), 4 (12.5%) had Crohn's colitis and 9 (28.1%) had stricturing disease. Clinical response was 75%. Twenty-one patients had complete response and three patients had partial response. Adverse events were recorded in 3 (0.9%) patients and MTX was discontinued in two of them.

Conclusion: MTX could be an alternative treatment option compared with azathioprine being added to anti-TNF- α in patients with moderate to severe refractory Crohn's disease.
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ICGH2021-38
Category: 7.5 اداره بیماری

Sleep Disturbances in Inflammatory Bowel Disease

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Introduction: Inflammatory bowel diseases (IBD), namely ulcerative colitis (UC) and Crohn's disease (CD) are characterized by relapsing chronic inflammation of the gastrointestinal (GI) tract, which may potentially include extra-intestinal manifestations (EIMs). IBD can be severely disabling and has been associated with sleep disorders. We aimed to study the frequency of sleep disturbances in a cohort of IBD patients

Methods: We prospectively recruited IBD patients who attended the Gastrointestinal Unit Clinic of Ghaem Hospital in Mashhad, Iran, from April 2019 to March 2021. In order to evaluate sleep quality the patients completed a verified translation of Insomnia Severity Index (ISI), Epworth Sleepiness Scale (ESS), Pittsburgh Sleep Quality Index (PSQI), Obstructive Sleep Apnea (OSA) Berlin Questionnaire (BQ) and Restless Leg Syndrome Questionnaire by means of an online or phone survey.

Results: We assessed the sleep quality of 82 IBD patients (13 CD and 69 UC). Low quality of sleep was seen in 63.4% (n=52) cases. Patients who suffered from pancolitis were significantly more likely to have sleep disturbances compared with those from partial colitis (p=0.02). Furthermore, RLS was positive in 62.2% (n=51) patients while it was associated with an increased CRP level (p=0.04) among our patient pool.

Conclusion: Low sleep quality was evident in more than half of our IBD cohort. Gastroenterologists should seek help from psychologists for IBD patients in order to diagnose sleep disorders and enhance the quality of sleep in these patients.
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Code: DA-21037

ICGH2021-39
Category: 5.5 درمان

Evaluation of therapeutic response to adalimumab (Cinnora) in individuals with refractory

inflammatory bowel disease

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Introduction: This study is going to review therapeutic response to adalimumab (Cinnora) in patients with resistant IBD

Methods: In this interventional case series study, 20 confirmed cases of IBD were recruited between May 2020 and Sep 2020 in Guilan Province, north of Iran. These patients were under subcutaneously injection of adalimumab (made by CinnaGen Co.), 40 mg twice a day within 2 days and 80 milligrams in next two weeks. Patients were following up every three months in a year and they were checked out in term of laboratory tests, medication history, quality of life (IBDQ_9 questionnaire), drug side effects, drug reaction and response to treatment. Harvey-Bradshaw Index and Mayo score were used to evaluate Crohn's disease (CD) and UC activity

Results: In this study 3 patients were suffering from CD and 17 other were suffering from UC. Average age was between $41.20+15.97$. Most of the participants (75%) were female and married. A majority were non-smokers (95%) and non-drinkers of alcohol (90%). About 70% of cases didn't use fatty (full fat) diet and 70% of them were consuming high fiber diet. In 5% of patients developed cardiac, allergies and neurology side effects due to taking the drug. During the study patients had significant increase in scores of IBDQ_9 ($P<0.001$). Also based on Mayo and Harvey scores, the condition of patients with CD and UC was improved significantly ($P<0.001$). The mayo score were changed from moderate and severe (6/71) to mild (2/59). Harvey score was changed from moderate (14.67) to silence (2.33). Results from this study stated that amount of Cr, ALP, CRP, Hb, WBC, Calprotectin was closer to normal range after 12 months ($P<0.001$)

Conclusion: This indicates the effect of adalimumab (Cinnora) on the treatment of refractory inflammatory bowel disease

Send Date: 2021/08/15

Code: DA-21094
ICGH2021-40
Category: 5.6 Medical

Primary sclerosing cholangitis associated inflammatory bowel disease: A novel entity in IBD

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Introduction: Primary sclerosing cholangitis (PSC) is a rare, chronic, and progressive cholestatic liver disease involving intra- and/or extrahepatic bile ducts. PSC in significant number of patients results in end stage liver diseases. Nearly 60 percent of PSC patients suffer from concomitant inflammatory bowel diseases (IBDs). Classically, IBDs are divided to two principle types, Crohn's disease (CD) and ulcerative colitis (UC). However, with growing knowledge PSC associated IBD (PSC-IBD), it seems to be a rather distinct entity with specific genetics, clinical and microbiota characteristics.

Areas covered: In this article we aim to review PSC-IBD unique characteristics from clinical, genetic and microbiota point of view.

Expert opinion: PSC-IBD unique characteristics contribute to the notion that PSC-IBD could be a distinct entity. Acknowledgment of PSC-IBD as a novel entity necessitate designing new clinical guidelines in confirmation of diagnosis and developing novel therapeutic settings.

Article highlights:

• PSC genetic susceptibility shows a distinct pattern compared to the IBD patients.

• PSC-IBD colonic involvement in contrast to IBD is right sided and has more severe course.

• Risk of malignancies in PSC-IBD patients is considerably higher compared to IBD patients.

• Microbiota studies in PSC patients revealed a distinct microbiota pattern compared to the IBD patients.

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Code: DA-21107
ICGH2021-41
Category: 18 GASTROINTESTINAL BLEEDING

Prevalence of gastrointestinal bleeding in patients with COVID-19 referred to Afzalipur Hospital of Kerman

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Introduction: Although the lungs are the main target of SARS-CoV-2 infection; but SARS-CoV-2 can damage various organs and cause several extra-pulmonary effects, including gastrointestinal manifestations. The main symptoms of gastrointestinal involvement are abdominal pain, nausea, vomiting, diarrhea, and less common gastrointestinal bleeding. This study aimed to evaluate the prevalence of gastrointestinal bleeding in patients with COVID-19.

Methods: This cross-sectional study investigated the prevalence of gastrointestinal bleeding in patients with COVID-19 referred to Afzalipour Hospital in Kerman from April 2020 to May 2021. The records of patients with definitive diagnosis of COVID-19 who were hospitalized in the emergency department, ward and ICU and had gastrointestinal bleeding at the time of admission or in the course of hospitalization were reviewed and their endoscopic and colonoscopic findings were recorded. To analyze the data, descriptive statistics (frequency, relative frequency and mean central index), analytical (chi-square test and regression) and SPSS software version 20 were used.

Results: A total of 80 patients with gastrointestinal bleeding with COVID-19 were included in the study. Considering the total number of patients with COVID-19 in the study period (3563 patients), the prevalence of gastrointestinal bleeding in patients with this disease was 2. 24%. The mean age of the patients was 58. 01±20. 71 years. The majority of patients were men (63. 8%). Gastric erosion 27. 7%, gastric ulcer 23%, duodenal ulcer 21. 5%, esophageal ulcer 12. 3%, esophageal erosion 6. 1%, were the most common endoscopic findings. On colonoscopy, hemorrhoids were the most common lesion with consisting 25% of colonoscopic findings. The mortality rate of the patients studied in this study was 36. 2% and 63. 8% were discharged.

Conclusion: The current study presented findings on the pattern of gastrointestinal bleeding and its overall prevalence in patients with COVID-19 in Afzalipour Hospital in Kerman. These findings can be used to adopt the best approaches for prevention, diagnosis and treatment of gastrointestinal bleeding in patients with COVID-19 and provide a basis for further studies on useful interventions and a more accurate understanding of the pathophysiology of the disease.

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Code: DA-21031
ICGH2021-42
Category: 3.16 عفونت های دستگاه گوارش

Persistence of SARS-CoV-2 RNA in the nasopharyngeal, blood, urine, and stool samples of patients with COVID-19: A hospital-based longitudinal study

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Introduction: This study aimed to investigate the persistence of SARS-CoV-2 RNA in the nasopharyngeal, blood, urine, and stool samples of patients with COVID-19.
Methods: In this hospital-based longitudinal study, 100 confirmed cases of COVID-19 were recruited between March 2020 and August 2020 in Guilan Province, north of Iran. Nasopharyngeal, blood, urine, and stool samples were obtained from each participant at the time of hospital admission, upon discharge, one week after discharge, and every two weeks until all samples were negative for SARS-CoV-2 RNA by reverse transcription-polymerase chain reaction (RT-PCR) assay. A survival analysis was also performed to identify the duration of viral persistence.
Results: The median duration of viral RNA persistence in the nasopharyngeal samples was eight days from the first positive RT-PCR result upon admission (95% CI: 6.91-9.09); the maximum duration of viral shedding was 25 days from admission. Positive blood, urine, and stool RT-PCR

results were detected in 24%, 7%, and 6% of the patients, respectively. The median duration of viral persistence in the blood, urine, and stool samples was seven days (95% CI: 6.07-7.93), six days (95% CI: 4.16-8.41), and 13 days (95% CI: 6.96-19.4), respectively. Also, the maximum duration of viral persistence in the blood, urine, and stool samples was 17, 11, and 42 days from admission, respectively.
Conclusion: According to the present results, immediately after the hospitalized patients were discharged, no evidence of viral genetic materials was found. Therefore, appropriate treatments were selected for the patients at this hospital. However, we recommend further investigations on a larger sample size in multi-center and prospective randomized controlled trials (RCTs) to evaluate the effects of different drugs on the shedding of the virus through body secretions.
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Code: DA-21069
ICGH2021-43
Category: 3.16 عفونت های دستگاه گوارش

SARS-COV-2 Seroprevalence among Health Care Workers in Private and Public Hospitals in Tehran, Iran

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Introduction: Estimating the prevalence of SARS-COV-2 antibody seropositivity among health care workers (HCWs) is crucial. In this study the seroprevalence of anti-SARS-COV-2 antibodies among HCWs of five hospitals of Tehran-Iran with high COVID-9 patient's referrals was assessed.

Methods: HCWs from public and private hospitals were included and were asked questions on their demographic characteristics, medical history, hospital role and usage of personal protective equipment (PPE). Seroprevalence was estimated on the basis of ELISA test results (IgG and IgM antibodies in blood samples) and adjusted for test performance.

Results: Among the 2065 participants, 88.4% and 11.6% HCWs were recruited from the public and private hospitals, respectively. The overall test-performance adjusted seroprevalence estimate among HCWs was 22.6 (95% CI 20.2-25.1) and it was higher in private hospitals (37.0%; 95% CI 28.6-46.2) than public hospitals (20.7%; 95% CI 18.2-23.3). PPE usage was significantly higher among HCWs of public versus private hospitals (66.5% vs. 20.0%). Test-adjusted seroprevalence estimates were highest among assistant nurses and nurses, and lowest among janitor/superintendent categories.

Conclusion: Seroprevalence of SARS-COV-2 among HCWs depends on hospital type, hospital department, and hospital role. The PPE usage was especially suboptimal among HCWs in private hospitals. Continued effort in access to adequate PPE is warranted.

Send Date: 2021/08/30

Code: DA-21060
ICGH2021-44
Category: 1.1 اپیدمیولوژی

Association between gastrointestinal symptoms and disease severity in patients with COVID-19 in Tehran City, Iran

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Introduction: It is important to identify the relationship between COVID-19 and gastrointestinal symptoms for health organizations in different communities.

Methods: It was a cross-sectional descriptive-analytical study that was conducted on 381 patients those where admitted to Imam Hossein Hospital with a confrmed diagnosis of COVID-19 on nasopharyngeal polymerase chain reaction testing for SARS-CoV-2 from frst March to end of June in Tehran city; 2020. Data was entered and analyzed by using SPSS version 22 and level of signifcant was consider less than 0.05.

Results: Out of all the patients with COVID-19, 164 (43%) had gastrointestinal symptoms. The most symptoms of them were nausea (19.2%), vomiting (17.2%), abdominal pain (15.7%), diarrhoea (12.6%), haematomas (1%), melena (1.6%), rectal bleeding (1.6%), and constipation (1.8%), respectively. The mean D-dimer1 value was signifcantly different between the 2 groups with gastrointestinal symptoms and no gastrointestinal symptoms. In other words, there is a strong relationship between the variable D-dimer1, which is one of the important symptoms showing the severity of COVID-19 disease, and gastrointestinal symptoms (p < 0.0001).

Conclusion: Our fnding shows a statistical relationship between the level of D-dimer and gastrointestinal symptoms in patients with COVID-19. The mortality rate was higher in patients with gastrointestinal symptoms, which is an important outcome for gastroenterologists.

Send Date: 2021/08/25

Code: DA-21086
ICGH2021-45
Category: 7.3 Metabolic/genetic disorders

**Fatty liver in COVID-19:
A risk Factor or a Common Receptor?**

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Introduction: A recent outbreak of the novel coronavirus (SARS-COV-2) has been posing significant threats to global health since December 2019. It originated from Wuhan, China and was declared a pandemic by the World Health Organization (WHO) on March 11th, 2020. SARS-COV-2 has caused clusters of severe respiratory diseases, leading to ICU admissions and respiratory failure. Extra-pulmonary manifestations have been reported such as

diarrhea and elevated liver enzymes. Liver diseases have been reported in 60% of patients with SARS-CoV-1 and since its genome sequence is more than 80% similar with the novel SARS-CoV-2, we should pay more attention to the largest organ in our body.

To the best of our knowledge, non-alcoholic fatty liver disease (NAFLD) has not been mentioned in association with this novel viral disease. Here, we present our experience on patients suspicious for COVID-19 pneumonia who visited our emergency department in one of the main referral hospitals affiliated with Tehran University of Medical Sciences, Tehran, Iran from February 20 to March 28, and underwent chest CT scan. From a total of 441 patients who underwent CT scan in our outpatient setting, 125 (28.3%) were highly suggestive for COVID-19 pneumonia. According to the density of liver on non-contrast CT scan for non-invasive diagnosis of steatosis , we noticed that moderate to severe fatty liver disease was significantly more prevalent in those with COVID-19 pneumonia (16.8% vs 2.2%, p<0.0001), when liver was assessed in the upper abdomen cuts of chest CT scans.

Recently, Zhe Xu reported a 50-year-old man who had died of COVID-19, with post-mortem liver biopsies showing moderate microvesicular steatosis and mild lobular and portal activity.

In a retrospective study performed by Medeiros AK on 316 patients (204 RT-PCR positive; 112 RT-PCR negative), regression analysis showed a 4.7-times odds of steatosis in the COVID-19 positive group as compared to controls (OR 4.698; 95% CI 2.12–10.41, P < 0.001) .

Whether NAFLD predisposes patients to COVID-19 or having common receptors and pathways causes their co-occurrence needs to be meticulously evaluated.

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Code: DA-21145
ICGH2021-46
Category: 3.16 عفونت های دستگاه گوارش

Evaluation of the Relationship between Clinical Changes Related to Liver Enzymes and Gastrointestinal Symptoms with Coronavirus Infection

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Introduction: Gastrointestinal problems caused by coronavirus infection, identification of clinical changes and gastrointestinal enzymes and gastrointestinal symptoms in patients and knowing how to change them, control and compensate for these changes to normal In patients, it is important and attention. Therefore, this study was designed with regard to different symptoms of coronavirus and gastrointestinal changes in patients with the aim of investigating clinical changes, laboratory indicators and gastrointestinal symptoms in patients with coronavirus.

Methods: This study was performed based on patient records in the archives of Velayat hospital, Qazvin. The records of all patients with gastrointestinal problems with coronavirus, which were confirmed by CT scan and Real time PCR, it was studied from February 2020 to August 2020. SPSS software version 23 was used for data analysis. Analysis of variance (ANOVA), paired samples t-test and Chi-square were used for statistical analysis (P <0.05).

Results: During the study period, 160 patients with coronavirus infection who also had gastrointestinal and hepatic disorders were randomly evaluated. Most patients were between the ages of 30 years < Clinical changes were directly related to changes in alanine aminotransferase, alkaline phosphatase, bilirubin, amylase and lipase (P <0.05). Also, physical symptoms in all patients with coronavirus infection and gastrointestinal disorders included vomiting, nausea, diarrhea, and abdominal pain (P <0.05).

Conclusion: In the present study, the symptoms and clinical changes were the same in all patients with coronavirus infection who were simultaneously with gastrointestinal and hepatic disorders. Therefore, the presence of gastrointestinal and hepatic symptoms and changes in laboratory parameters can be used as a prognosis in identifying people with coronavirus.

Send Date: 2021/10/03

Code: DA-21089
ICGH2021-47
Category: 7.7 هپاتیتهای ویرال: تظاهرات پایه

Severe Acute Hepatitis in a COVID-19 patient; A Case Report

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Introduction: Coronavirus infection (COVID-19) is caused by novel coronavirus SARS-CoV-2, which has affected more that 160 million people around the world. Manifestations of this infection vary widely among patients but the most common presentation is respiratory symptoms. liver enzymes abnormalities is one of the reported presentations mostly in hospitalized patients.

Case Report: Patient report: a 39-year-old man who has been recently tested positive for COVID-19, presented with jaundice. liver enzyme patterns showed acute severe hepatitis. Although liver enzymes changes is a quiet common manifestation in COVID-19 infection, further investigation was done to rule out any other possible cause of acute severe hepatitis. Hepatitis A antibody IgM and herpes simplex virus antibody IgM came back positive. With conservative and symptomatic management, liver function tests and coagulation studies were back to normal values within only 2 months of symptoms presentation.

Discussion: We hereby reported case of a patient who was infected with three viruses at the same time. In our patient, COVID 19 infection on one hand and simultaneous HAV and HSV infections on the other hand, aggravated liver function which led to severe acute hepatitis. In conclusion, physicians should take all the possible causes of acute hepatitis in consideration when dealing with abnormal liver enzymes in a patient with COVID-19 infection.

Send Date: 2021/09/15

کد: DA-۲۱۰۲۴
ICGH2021-48
گروه: ۱۸ خونریزی های دستگاه گوارش

GI Bleeding in covid19

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گزارش مورد : خونریزی گوارشی فوقانی وتحتانی در بیماری وپاندمی کووید۱۹ مشاهده شده است .علائم ونشانه های گوارشی در کووید ۱۹ وجود دارد وبخصوص در کودکان وجوانان ونیز ســوش های جدید کووید شــایع تر است .اما خونریزی گوارشی شایع نیســـت .ولی به علت چالش های تشــخیص دقیق علت، مصرف بعضی داروها به صورت درمانی وپیشــگیری واداره تشــخیص ودرمانی سخت تر دراین پاندمـــی درصورت وقوع GIB درایـــن مقاله موردبحث قـــرار گرفته ونیز پروگنوز بدتر این بیماران پیگیری بالینی و لزوم ارائه آماری ومروری را می طلبد.

تاریخ ارسال: ۲۰۲۱/۰۷/۲۳

Code: DA-21033
ICGH2021-49
Category: 3.16 عفونت های دستگاه گوارش

Changes in hand hygiene behaviors and its related factors among northern Iranian population during the first peak and subsidence of COVID-19 pandemic period: Results from PERSIAN Guilan Cohort Study (PGCS)

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Introduction: The current study was conducted to investigate the changes in hand-washing behaviors and its related factors among the northern Iranian population during the first peak and subsidence of COVID-19 pandemic period.

Methods: This cross-sectional study was conducted during two periods in Guilan (Northern provinces of Iran). First period conducted at the first peak of COVID-19 pandemic in Iran (between 03/23/2020 and 03/30/2020), and second period conducted at the first subsidence of COVID-19 pandemic in Iran (between 05/3/20 and 05/10/2020). The questionnaire was completed by 571 adult participants. Data on frequency, procedure and circumstances of hand-washing and obsessive-like behaviors were collected. Potential correlates of reduction in frequency of hand washing were analyzed by multiple logistic regression

Results: Compared to peak of COVID-19 pandemic, frequency and procedure of hand-washing and obsessive-like behaviors were significantly reduced at the subsidence of COVID-19 pandemic (all p<0.05). Females with negative family history of coronavirus disease had greater odds (Adjusted Odds Ratio = 2.19, P =0.03) of reduction in the frequency of daily hand-washing. Younger than 50 years old males and males who reduced the procedure of hand-washing had greater odds (AOR = 1.71, P =0.02 and AOR = 2.16, P =0.001, respectively) of reduction in the frequency of daily hand-washing.

Conclusion: Northern Iranian populations were found to decrease their frequency and quality of hand washing and obsessive-like behaviors over time from the first peak to first subsidence of COVID-19 pandemic. Thus, special attention should be paid to maintaining the general population's perceived susceptibility to illness, especially in younger men during the pandemic.

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Code: DA-21066
ICGH2021-50
Category: 7. 2 Nutrition - metabolism - pharmacology

Effect of Polypill on Prevention of Cardiovascular Diseases with Focus on Nonalcoholic Steatohepatitis (PolyIran-Liver): A Randomized Controlled Trial

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Introduction: Individuals with nonalcoholic steatohepatitis or elevated liver enzymes have increased cardiovascular mortality but are often excluded from prevention trials. We investigated the effectiveness of fixed-dose combination therapy in prevention of major cardiovascular events (MCVE) among individuals with and without presumed nonalcoholic steatohepatitis (pNASH).

Methods: 2400 Participants over 50 were randomized into intervention and control. Consent was taken post-randomization. Participants in the intervention group were given a combination pill containing aspirin, atorvastatin, hydrochlorothiazide, and valsartan (Polypill). Participants were followed for 5 years. pNASH was diagnosed by ultrasonography and elevated liver enzymes. The primary outcome was MCVE. ClinicalTrials. gov ID: NCT01245608.

Results: 892 participants did not consent or meet enrollment criteria and 1508 entered the study. During 5-years of follow-up, 63/787 (8. 0%) intervention group participants and 86/721 (11. 9%) controls had MCVE (adjusted RR 0. 61, 95%CI 0. 44 to 0. 83). Although the adjusted relative risk of MCVE in participants with pNASH (0. 35, 95%CI 0. 17 to 0. 74) was under half that for participants without pNASH (0. 73, 95%CI 0. 49 to 1. 00), the difference did not reach statistical significance. Outcomes were also evaluated for the pre-consent population. 138/1249 in the intervention group (11. 0%) and 137/1017 controls (13. 5%) had MCVE during the 5-year follow-up (unadjusted RR 0. 83, 95%CI 0. 66-1. 03). Participants with pNASH in the intervention group had a significant decrease in liver enzyme levels after 60 months of follow-up (intragroup -12. 0 IU/L, 95%CI -14. 2 to -9. 6).

Conclusion: Fixed-dose combination therapy is safe and effective for prevention of MCVE even among participants with fatty liver and increased liver enzymes.

Send Date: 2021/08/29

The Association of Mediterranean Diet (MeD) and Dietary Approaches to Stop Hypertension (DASH) with NAFLD among Iranian adults of Amol Cohort Study (AmolCS)

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Introduction: Non-alcoholic fatty liver disease (NAFLD) is an emerging cause of chronic liver diseases and a major health problem worldwide. Dietary patterns may play a critical role in controlling and preventing this disease, but the evidence is limited. The current study aims the association of adherence to the Dietary Approach to Stop Hypertension (DASH) diet and Mediterranean Diet (MeD) with non-alcoholic fatty liver disease (NAFLD) among Iranian adults of Amol Cohort Study (AmolCS).

Methods: In a cross-sectional analysis among 3220 adults (55.3% men), age ≥ 18 years (46.96 ±14.67), we measured usual dietary intake with a validated food frequency questionnaire (FFQ) and then calculated dietary pattern scores for DASH and MeD. Sociodemographic and lifestyle factors were collected by a structured questionnaire. The presence and degree of NAFLD were also determined by abdominal sonography. Multiple regression models were used to estimate odds of NAFLD across tertiles of DASH and Mediterranean dietary scores. The associations of DASH and Mediterranean dietary patterns with NAFLD were adjusted for sex, age, BMI, smoking status, physical activity, anti-diabetic medications, heart disease, diabetes, and stroke status. Dietary DASH and Mediterranean components were adjusted for total energy intake, based on the residual methods.

Results: After adjusting for multiple potential confounders, we found an inverse association of DASH and MeD with

NAFLD (Ptrend=0.02, and Ptrend=0.002, respectively). Those in the highest tertiles of adherence to the DASH and MeD had the lowest risk for NAFLD (OR=0.80, 95%CI=0.66–0.96, OR=0.64, 95%CI=0.52–0.78, respectively). The results of logistic analysis of MeD stratified by gender and abdominal obesity revealed the favorable association was more pronounced in women (OR=0.42, 95%CI=0.29–0.61, Ptrend=0.004), and in participants with or without abdominal obesity (OR=0.62, 95% CI=0.47–0.81, Ptrend=0.03, OR=0.64, 95%CI=0.475–0.91, Ptrend=0.04, respectively). Similar results were obtained for the adherence to DASH diet score with prevalence NAFLD patients with abdominal obesity (OR = 0.75, 95% CI = 0.57–0.97, Ptrend = 0.04).

Conclusion: The findings suggested that favorable adherence to healthful diets was inversely associated with NAFLD risk in Iranian adults, especially women and subjects with or without abdominal obesity. Further prospective investigations are needed to confirm this suggestion.

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ICGH2021-52

گروه : ۳.۷ متابولیک / اختلالات ژنتیکی

تاثیر تمرین ترکیبی با رژیم DASH بر شاخص های آسیب کبد بیماران مبتلا به کبد چرب غیر الکلی (NAFLD)

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زمینه و هدف: بیماری کبد چرب غیرالکلی NanalcoholicFatty Liver Disease (NAFLD) متــداول تریــن وضعیــت مزمن کبدی اســت کــه مرتبط بــا شـــیوه زندگــی بدون فعالیــت و عادات تغذیه ای نادرســت می باشـد. هدف اصلــی پژوهــش حاضــر، بررســی تاثیــر ۱۲ هفته تمریــن ترکیبــی همراه بــا مصرف رژیــم غذایی DASH بر ســطح آنزیــم ALT ، چربــی کبــد و شاخص های آنتروپومتریــک در بیمــاران مبتلا به کبدچــرب غیرالکلی بود. **روش بررســی** : مطالعــه حاضر، از نــوع مطالعــات مداخلــه ای و به روش کارآزمایی بالینی تصادفی شــده (Randomized clinical trial) صــورت گرفت. ایــن پژوهش دارای دوبازوی ۱- رژیم غذایی DASH و۲- رژیم غذایی DASH همــراه بــا تمرین ترکیبــی و به صورت دوســوکور انجام پذیرفت. بیمــاران مبتلا به کبد چرب غیر الکلی بــا معرفی فوق تخصص گوارش، بصورت رانــدوم به دو گروه تقســیم شـــدند. یک گروه تحت نظــر متخصص تغذیه، رژیم غذایی DASH را دریافــت و بیمــاران گروه ۲ تمرین رژیــم غذایی DASH بــه همــراه تمرین ترکیبــی منتخب طبــق برنامه تحــت نظر مربی باشــگاه انجــام دادند. در فواصل زمان های مشــخص انــدازه گیری متغیرهــا با اندازه گیریهای آنتروپومتریک، ســونوگرافی و بیوالکتریــک ایمپدانس انجام پذیرفت. **یافته ها**: ســی و نه نفر مطالعــه را به اتمام رســاندند که شــامل ۵۴.۸٪ مرد و

۶۳.۲٪ زن بودنــد. مصرف رژیم غذایی DASH بــه تنهایی (۱۹ نفر) و یــا به همــراه تمرین ترکیبــی (۲۰ نفر) باعث کاهش معنــی داری در میانگین درجه چربــی کبد در ســونوگرافی (به ترتیب grade ۰.۷۸۹ و grade ۰.۶۵۰) وزن، (بــه ترتیب ۱.۰۸ kg و ۳.۸ kg)، WHR (شــاخص دور کمــر به دور باســن) (بــه ترتیــب ۰.۰۱۲ و ۰.۰۱۴)، دور گردن (به ترتیب ۱.۱۶ cm و ۱.۲۸ cm) در هر دو گروه شــد. (p<۰/۰۵) آنزیــم ALT تنهــا در گروه رژیــم غذایــی DASH همــراه با تمرین ترکیبی در مقایســه با گــروه رژیم غذایی DASH بــه تنهایی کاهش معنادار نشــان داد (به ترتیب IU/L ۷.۰۸ و ۱.۹۲ IU/L). **نتیجه گیری**: مصرف رژیم غذایی DASH و تمرین ترکیبی می تواند باعث بهبودی برخی شــاخص های مرتبط با کبد چرب در بیماران کبد چرب غیر الکلی شود.

تاریخ ارسال: ۲۰۲۱/۰۹/۲۷

Code: DA-21131
ICGH2021-53

Category: 1.1 اپیدمیولوژی

Comparison of Risk Assessment Tools for Cardiovascular Diseases: Results of an Iranian Cohort Study

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Introduction: Several popular cardiovascular risk assessment tools have been developed in Western countries; however, the predictive abilities of these tools have not been evaluated in Middle Eastern countries. The present study aimed to determine these abilities in a population-

based study in Northern Iran.

Methods: In a Cohort study, 2883 individuals (1629 men and 1254 women), aged 40-74 years, were included. We determined the predictive abilities of American College of Cardiology/American Heart Association (ACC/AHA) risk prediction tool, Framingham general cardiovascular risk profile in primary care settings, and Systematic Coronary Risk Evaluation (SCORE) equations for low and high risk European countries. Receiver Operating Characteristic (ROC) analysis was used to determine the predictive abilities of these four risk assessment tools.

Results: Based on Areas Under Curves (AUCs) values and related 95% confidence intervals (95% CIs), the discriminative abilities of the ACC/AHA tool, the Framingham approach, and the SCORE for low- and high-risk European countries to estimate non-fatal CVD events were 0.6625, 0.6517, 0.6476, and 0.6458, respectively, in men, and 0.7722, 0.7525, 0.7330, and 0.7331, respectively, in women. Moreover, the abilities of these four tools to estimate fatal CVD events were found to be 0.8614, 0.8329, 0.7996, and 0.7988 in men, and 0.8779, 0.8372, 0.8535, and 0.8518 in women, respectively.

Conclusion: The risk assessment tools investigated showed acceptable predictive abilities in women. The ACC/AHA approach however showed slightly better performance compared with SCORE tool and benfited from the lowest cost compared with all the other tools.

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Code: DA-21083
ICGH2021-54
Category: 1.1 اپیدمیولوژی

Metabolic syndrome and lifestyle-associated factors in the ethnically diverse population of Khuzestan, Iran: a cross-sectional study

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Introduction: Metabolic syndrome (MetS) is a cluster of risk factors, mainly central obesity, insulin resistance, and dyslipidemia, leading to life-threatening cardiovascular diseases. The prevalence of MetS can vary based on different ethnicities and many cultural and lifestyle factors. We aimed to evaluate the prevalence of MetS and possible correlations with lifestyle-associated factors among different ethnicities in Khuzestan, Iran.

Methods: This cross-sectional study was conducted in Khuzestan province of Iran, among 30, 504 participants aged 20-65 years, between October 2016 and November 2019. Data was collected through questionnaires along with anthropometric and biological measurements. The National Cholesterol Education Program Adult Treatment Panel III definition was used to estimate MetS prevalence.

Results: Overall, 31.9% (95% CI 31.4-32.4) had MetS (34.2% [95% CI 33.3-35.1] among males; 30.7% [95% CI 30.0-31.3] among females [p < 0.001]). Central obesity, elevated fasting blood sugar levels, and dyslipidemia were the most common abnormalities among those with MetS. The risk of MetS was estimated to increase by age, male gender, residing in urban regions, lower educational levels, lower physical activity levels, lower sleep time, and a positive family history of diabetes mellitus (p < 0.001). Individuals of the Arab and Bakhtiary ethnicities had the highest and lowest risk of MetS, respectively.

Conclusion: MetS prevalence varied among different ethnicities. Aging and some lifestyle-associated factors such as physical activity and sleep time were related to the

risk of MetS. Raising awareness about risk factors of MetS would be of great value in setting new health policies to manage the rising trend of MetS

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Code: DA-21123
ICGH2021-55
Category: 13.7 سایر موارد

Serum Alkaline phosphate level associate with Metabolic Syndrome components regarding of Non-Alcoholic Fatty Liver; A population Based study in Northern Iran

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Introduction: Serum alkaline phosphatase (ALP), is an indicator of hepatobiliary disorders as metabolic syndrome (MetS). To assess the association between serum ALP levels with metabolic syndrome (MetS) with or without Non-Alcoholic Fatty Liver in a cohort study in northern Iran.

Methods: The data of about 5257 subjects aged more than 18- year participating in Amol cohort were used. We extracted the required data and investigated the correlation between liver enzymes and MetS . A multiple logistic regression analyses based on serum ALP quartiles were done.

Results: There was a positive linear trend between serum ALP levels and the numbers of MetS' components in both genders. After adjusting for age, both genders with NAFLD were increased risk of Mets. Individuals in 2th quartile of ALP had increased risk of NAFLD that was increased in the 4th quartile. Furthermore, higher ALP levels were associated with increased risk of MetS, the association that continued to persist in women after adjusting to NAFLD.

Conclusion: There is a significant association between the serum ALP levels and MetS independent from the fatty liver changes, suggesting this marker as a feasible predictor for MetS.

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Code: DA-21082
ICGH2021-56
Category: 1.1 اپیدمیولوژی

Association of anthropometric indices with cardiovascular disease risk factors among adults: a study in Iran

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Introduction: Cardiovascular diseases (CVDs) are the leading cause of death in the world. Many modifiable risk factors have been reported to synergistically act in the development of CVDs. We aimed to compare the predictive power of anthropometric indices, as well as to provide the best cut-off point for these indicators in a large population of Iranian people for the prediction of CVDs and CVD risk factors.

Methods: All the data used in the present study were obtained from Khuzestan comprehensive health study (KCHS). Anthropometric indices, including BMI (body mass index), WC (waist circumference), HC (hip circumference), WHR (waist-to-hip ratio), WHtR (waist-to-height ratio), ABSI (a body shape index), as well as CVD risk factors [dyslipidaemia, abnormal blood pressure

(BP), and hyperglycaemia] were recorded among 30 429 participants.

Results: WHtR had the highest adjusted odds ratios amongst anthropometric indices for all the risk factors and CVDs. WC had the highest predictive power for dyslipidaemia and hyperglycaemia [area under the curve (AUC) = 0.622, 0.563; specificity 61%, 59%; sensitivity 69%, 60%; cut-off point 87.95, 92.95 cm, respectively], while WHtR had the highest discriminatory power for abnormal BP (AUC = 0.585; specificity 60%; sensitivity 65%; cut-off point 0.575) and WHR tended to be the best predictor of CVDs (AUC = 0.527; specificity 58%; sensitivity 64%; cut-off point 0.915).

Conclusion: In this study, we depicted a picture of the Iranian population in terms of anthropometric measurement and its association with CVD risk factors and CVDs. Different anthropometric indices showed different predictive power for CVD risk factors in the Iranian population.

Send Date: 2021/09/10

Effects of a Low Free Sugar Diet on the Management of Nonalcoholic Fatty Liver Disease: A Randomized Clinical Trial

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Introduction: A diet rich in fructose and saccharose is a risk factor for the development of nonalcoholic fatty liver disease (NAFLD). Thus, a low free sugar diet could be a therapeutic tool for this population, who often suffer from obesity as well. However, there is a lack of research using this diet. We aimed therefore to analyze the effects of a low free sugar diet on overweight and obese NAFLD patients by assessing lipid profile, glycemic indices, liver enzymes, inflammatory factors, and hepatic steatosis and fibrosis.

Methods: Participants with FibroScan-proven NAFLD were randomized to a 12-week dietary intervention (low free sugar diet or usual diet). A general questionnaire, 24-h food recall, and metabolic equivalent of task questionnaire were completed. Anthropometric measurements, lipid profile, glycemic indices, liver enzymes, inflammatory factors, and hepatic steatosis and fibrosis were assessed at the beginning and end.

Results: Forty-three subjects completed the 12-week intervention. Low free sugar diet compared with the usual diet significantly decreased the concentrations of ALT (43.00±27.54 to 27.95±20.77 U/L), TG (172.86±83.04 to 144.19±65.55), TC (155.54±37.55 to 139.86±33.63 mg/dL), FBS (103.95±15.42 to 91.00±14.36 mg/dL), insulin (14.37±5.79 to 8.92±5.43 mU/L), HOMA-IR (3.81±1.80 to 2.06±1.29), hs-CRP (3.80±1.09 to 2.88±0.52 mg/L), TNF-α (4.60±1.54 to 3.41±0.69 pg/mL), NF-kb (3.89±1.34 to 3.35±1.33), as well as resulted in reduced fibrosis score and steatosis score, with increased QUICKI (P < 0.05). The differences in AST, GGT, HDL-C and LDL-C were not significant (P > 0.05).

Conclusion: Low free sugar diet in overweight/obese NAFLD patients may reduce hepatic steatosis and fibrosis while improving glycemic indices, decreasing the concentrations of biomarkers of inflammation, TG, and TC levels.

Send Date: 2021/08/06

Effects of Hydroalcoholic Extract of Cichorium Intybus Leaves on Liver Functional Indexes in patients with Non-Alcoholic Fatty Liver Disease: a Double Blind Randomized Clinical Trial

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Introduction: Anti -oxidant properties of Cichorium Intybus Leaves have been proven in many in-vivo and in-vitro studies. The aim of the present study was to investigate the effect of Cichorium intybus oral capsules in comparison to placebo on liver functional indexes in patients with non-alcoholic Fatty liver disease (NAFLD).

Methods: This study was a double-blind clinical trial study in which 40 patients with NAFLD were randomly divided into intervention and control groups. The first group received 500 mg of hydroalcoholic extract once a day and healthy life style education for two months and the control group received placebo along with the education in the same way. Liver function tests, fasting blood sugar and lipid profile were measured at baseline and at the end of intervention.

Results: The results of this study showed that ALT (P=0.04) and TG (P=0.04) in patients receiving Cichorium intybus

decreased significantly after two months of intervention, but not in the placebo group (P>0.05).

Conclusion: Cichorium intybus seemed to have an effect on improvement of liver functional indexes and it probably prevented the progression of NAFLD.

Send Date: 2021/09/22

Code: DA-21121
ICGH2021-59
Category: 13.7 ساير موارد

Is Melatonin Associated with Pro-Inflammatory Cytokine Activity and Liver Fibrosis in Non-Alcoholic Fatty Liver Disease (NAFLD) Patients?

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Introduction: The associations between serum levels of melatonin and concentrations of tumor necrosis factor (TNF)-a and interleukin (IL)-6 were assessed among patients with different degrees of non-alcoholic fatty liver disease.

Methods: In this cross-sectional study, adult patients diagnosed with fatty liver disease by Fibroscan evaluation were included if they met the inclusion/exclusion criteria for NAFLD. The participants were categorized into the three following groups: 1) fibrosis> 9.1KP and steatosis >290 dbm; 2) fibrosis: 6-9.0 KP and steatosis 240-285; and 3) fibrosis < 5.8 KP and steatosis<240 dbm. Post-fasting, 5 ml of venous blood was collected for laboratory assessment, and a questionnaire including demographic, anthropometric, laboratories and clinical data was completed.

Results: A total of 97 participants were included. The mean age was 42.21±11 years, and 59 patients (60.0%) were female. Melatonin levels as well as pro-inflammatory cytokines levels were correlated with advancing fibrosis and steatosis in univariate analysis. A significant association was observed between these cytokines and advancing fibrosis, severe steatosis levels, and melatonin concentrations. Furthermore, in the multiple linear regression model, melatonin levels showed a significant association with these cytokines.

Conclusion: Melatonin may have protective effects on tissue injury during advancing liver fibrosis via cytokines modulation. Therefore, it can be considered as a potential therapeutic management strategy for NAFLD.

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Code: DA-21038

ICGH2021-60
Category: 7.12 Imaging - radiology (incl. interventional radiology)

Diagnostic Accuracy of Vibration Controlled Transient Elastography in Noninvasive Assessment of Hepatic Fibrosis in Nonalcoholic Fatty Liver Disease

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Introduction: Liver biopsy is the current gold standard for diagnosing hepatic fibrosis; however, it has some limitations, such as life-threatening complications, low acceptance by the patients, and variations in the related sample. On the other hand, given the epidemiologically considerable number of Non-Alcoholic Fatty Liver Disease (NAFLD) patients globally, it is not feasible to perform the patient follow-ups using liver biopsy. Therefore, there is a need for the development of non-invasive investigations for diagnosing hepatic fibrosis. Vibration-Controlled Transient Elastography (VCTE) is one of these non-invasive methods.

Methods: The present study included 73 patients suffering from NAFLD who were older than 18years. The patients underwent VCTE by an experienced physician at the Hospital. Then, they underwent a liver biopsy under ultrasound guidance by an experienced radiologist in the same hospital. ROC curve of different fibrosis stages was used to evaluate the VCTE verification. Then, the sensitivity and specificity of the method were calculated.

Results: VCTE could detect any fibrosis (stage 1 and higher) with an Area Under the ROC curve (AUROC) of 0.381 (95% CI: 0.258-0.517). Moreover, it detected stage 2-4 fibrosis with an AUROC of 0.400 (95% CI: 0.212-0.588), stage 3-4 fibrosis with an AUROC of 0.687 (95% CI: 0.507-0.881), and stage 4 fibrosis with an AUROC of 0.984 (95% CI: 0.9621.00). the area under the curve in advanced fibrosis and cirrhosis is very close to one and the ideal state, which shows the very high sensitivity of the VCTE method in the diagnosis of advanced liver fibrosis and cirrhosis. Also given the 100% NPV in stage 4, VCTE should be considered as a good non-invasive method to rule out cirrhosis.

Conclusion: the VCTE has high clinical validity in diagnosing the advanced stages of fibrosis and can be a suitable alternative to the invasive method of liver biopsy with high reliability.

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Code: DA-21061
ICGH2021-61
Category: 3.7 اختلالات ژنتیکی / متابولیک

Serum zinc, copper, selenium, and vitamin D in fatty liver patients versus healthy subject

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Introduction: In this comparative case-control study the serum zinc and copper and selenium and vitamin D in fatty liver patients and control group was compared.

Non-alcoholic fatty liver disease is a common metabolic disease. Determination of contributing factors is important for better treatment and prognosis in the patients. Vitamins and minerals are important indices.

Methods: In this case-control study 75 patients with non-alcoholic fatty liver disease and 50 control subjects were enrolled. The serum zinc and copper and selenium and vitamin D were measured by spectrophotometer method in single lab by same kit for each one of the indices and compared across the groups.

Results: The results in this study demonstrated that serum zinc and selenium and vitamin D were same across the case and control groups (P>0.05) and serum copper level was higher in case group (P=0.001).

Conclusion: This study showed no significant difference between serum zinc and selenium and vitamin D in patients with non-alcoholic fatty liver disease versus control subjects; but the copper was higher in case group.

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کد:DA-21125
ICGH2021-63
گروه : ۲.۴ بیماری سلیاک / سندروم های سوء تغذیه و انتروپاتی های غذایی

نقش انعطاف پذیری شناختی و ذهن آگاهی در پیش بینی تاب آوری بیماران سلیاک

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زمینه و هدف: بیماری های مزمن همچون سلیاک، از دسته بیماری های طولانی مدتی هستند که علاوه بر آسیب های جسمی موجب آسیب

های روانشناختی زیادی می شوند .در این میان تاب آوری از ویژگی هایی است که می تواند تحمل این شرایط را برای بیمار میسر سازد. در همین راستا پژوهش حاضر نقش انعطاف پذیری شناختی و ذهن آگاهی را در پیش بینی تاب آوری بیماران سلیاک مورد بررسی قرار داده است. **روش بررسی:** پژوهش حاضر از نوع همبستگی بود و جامعه آماری آن شامل کلیه بیماران مبتلا به بیماری سلیاک شهر گرگان بود که تعداد ۱۱۴ نفر به روش نمونه گیری دردسترس انتخاب شدند و به پرسشنامههای انعطاف پذیری شناختی دنیس و وندروال(۲۰۱۰)، و پرسشنامه ذهن آگاهی بائر و همکاران و پرسشنامه تاب آوری کانر و دیویدسون(۲۰۰۳)، پاسخ دادند. سپس داده ها با استفاده از آمار توصیفی و استنباطی در نرم افزار SPSS نسخه ۱۶ در سطح آماری ۰/۰۵ تجزیه و تحلیل شد. **یافته ها:** نتایج نشان داد که انعطاف پذیری شناختی و ذهن آگاهی توان پیش بینی معنادار تاب آوری را در بیماران سلیاک داشته است.در واقع ذهن آگاهی در گام اول توانست حدود ۹ درصد از تغییرات مربوط به متغیر تاب آوری و متغیر انعطاف پذیری شناختی به همراه متغیر ذهن آگاهی در گام دوم توانست حدود ۱۷ درصد از واریانس متغیر ملاک(تاب آوری) در بیماران مبتلا به بیماری سلیاک را تبیین کند. **نتیجه گیری:** طبق یافته های این پژوهش می توان نتیجه گرفت انعطاف پذیری شناختی و ذهن آگاهی می تواند تاب آوری بیماران سلیاک را پیش بینی کند.

تاریخ ارسال: ۲۰۲۱/۰۹/۲۵

Code: DA-21049
ICGH2021-64
Category: 16.3 Gastrointestinal infections

Rapid molecular identification of *Citrobacter freundii*, the causative agent of diarrhea in humans

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Introduction: Rapid detection and effective treatment of *Citrobacter Freundii* as a heat-stable and Shiga-like toxin-secreting cause of diarrhea in humans is of particular importance. In this study, the identification of *C. freundii* was performed by targeting a specific nucleobiomarker using the polymerase chain reaction (PCR) method.

Methods: Genomic DNA extraction was performed using overnight culture of the bacteria in tryptic soy broth medium. A unique sequence of a protein-coding gene in *C. freundii* was targeted for specific primer design. The target region was amplified using a gradient thermocycler. The specificity of the method was investigated using various bacteria from closely related genera and species. PCR products visualized using a natural dye in a colorimetric assay and confirmed by gel electrophoresis.

Results: Concentration of 1-85 ng/µl was considered as appropriate for further analysis. A high molecular weighted band of genomic DNA on agarose gel was determined as quality control of extraction process. A 266 bp band of target gene was observed in *C. freundii* while no amplicon band was detected for other bacteria including Morganella

morganii, Enterobacter aerogenes, Pseudomonas aeruginosa, Yersinia enterocolitica, Shigella sonnei, Serratia marcescens, Burkholderia cepacia, and *Klebsiella pneumoniae*. As in the colorimetric assay, a color change from purple to green was observed for *C. freundii* where for negative samples the purple color of the dye changed to blue leaving a distinct color differentiation.

Conclusion: The developed technique could differentiate positive and negative samples in a less than two hours with high specificity facilitating commercialization in diagnostic kits.

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Code: DA-21104
ICGH2021-65
Category: 2.4 بیماری سلیاک / سندروم های سوء تغذیه و انتروپاتی های غذایی

Prevalence of Steatohepatitis in Euometabolic Celiac Patients in East Azerbaijan

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Introduction: Different diseases are associated with celiac disease (CD). The most common extraintestinal manifestation of CD are liver diseases. Elevated serum transaminases have been reported in 24-54% of celiac patients. Although different studies investigated the prevalence of CD in patients with NAFLD, a few studies aimed at determination of prevalence of NAFLD in patients with CD. Considering the prevalence of celiac disease in Iran and the high prevalence of fatty liver, it may be essential to study the prevalence of fatty liver disease in patients with celiac disease.

Methods: In this cross sectional study, all patients registered in celiac disease registry of East-Azerbaijan were included. According to the NCEP ATP III definition, metabolic syndrome is present if three or more of the following five criteria are met: waist circumference over 40 inches (men) or 35 inches (women), blood pressure over 130/85 mmHg, fasting triglyceride (TG) level over 150 mg/dl, fasting high-density lipoprotein (HDL) cholesterol level less than 40 mg/dl (men) or 50 mg/dl (women) and fasting blood sugar over 100 mg/dl. Those with positive metabolic syndrome criteria were excluded from the study, and those with a higher level of liver enzymes (in the absence of other causes of the fatty liver) underwent an ultrasounography for diagnosis of nonalcoholic fatty liver disease.

Results: A total of 350 patients were evaluated. 84.8% of CD patients were euomethabolic and from the euomethabolic population, 24.1% has been shown a higher level of liver transaminases. In the present study, 16.7% had fatty liver. According to sonographic criteria, 10.4% of patients had fatty liver grade 1 and 6.3% had grade 2.

Conclusion: According to the results, it is suggested that due to the higher prevalence of celiac disease in patients with non-alcoholic fatty liver, evaluation of celiac patients with non-alcoholic fatty liver (in the absence of other causes of the fatty liver) should be on the agenda of physicians.

Send Date: 2021/09/19

Code: DA-21048
ICGH2021-66
Category: 4.2 Coeliac disease/malabsorption syndromes and food enteropathies

High frequency of non-alcoholic fatty liver in Celiac, Golestan province, Northeast of Iran

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Introduction: Celiac disease (CD), or as it is called Gluten enteropathy, could result in various complications such as liver abnormalities. Non-alcoholic fatty liver disease (NAFLD) affected 25.2% of individuals worldwide and has become one of the most common causes of cirrhosis. This study aimed to report the frequency of NAFLD, patients with CD in Golestan province, Northeast of Iran.

Methods: In this cross-sectional study, patients diagnosed with celiac disease based on a positive anti-tTG Ab and proved in small bowel biopsy were recruited between March 2018 and March 2020 (N=80), through the registry system located in Golestan Research Center of Gastroenterology and Hepatology, Northeast of IRAN. Ultrasonography was performed and NAFLD diagnosis was done based on attenuation of the liver itself (less than 40 Hounsfield Unit (HU)) or in comparison with the spleen (liver attenuation≤10, then spleen).

Results: Among 80 CD patients (46 female, mean 39.13±12.5 years) NAFLD was reported in 34(43.5%), which was mild in 31(39%), moderate in 2 (2.5%) and severe in 1 (1.3%). One Cirrhosis and no hepatomegaly had been found.

Conclusion: In the present study NAFLD was seen in 43.5% of our CD patients that composed a large amount.

This may be suggested to do closer follow-up of the complications in celiac disease.

Send Date: 2021/08/21

Code: DA-21117
ICGH2021-67
Category: 4.2 Coeliac disease/malabsorption syndromes and food enteropathies

Adherence to the Gluten-Free Diet (GFD) in Celiac: Self-report or expert view

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Introduction: Celiac disease (CD) is an immune-mediated disorder caused by consuming gluten in genetically predisposed individuals. CD causes inflammatory changes in the small intestinal mucosa and changes in structure.

Methods: The only accepted treatment is strict and lifelong adherence to a gluten-free diet (GFD). This study aimed to evaluate the adherence to a GFD in patients with celiac disease in our re-gion.Eighty-seven cases participated and completed the Celiac Dietary Adherence Test (CDAT). Also, the Standardized Dietician Evaluation (SDE) was used.

Results: The mean (standard deviation) age was 32.41 (15.45) years. Of patients, 32 (36.8%) were male and 55 (63.2%) were female. 85 people fully answered the CDAT, of which 72 (32.8%) adhered to the diet according to their self-expression, but in the SDE, 52 (30.23%) had great to good adher-ence.

Conclusion: There was no significant difference in the mean age between the two groups with adherence to the diet and the group without adherence or with weak adherence, although in the non-adherence group, the mean age was generally higher.There was no significant difference between the two groups in terms of sex, although in general, adherence was higher in women.

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کد: DA-۲۱۱۰۲
ICGH2021-68
گروه : ۲.۴ بیماری سلیاک / سندروم های سوء تغذیه و انتروپاتی های غذایی

بررسی اثر اپلیکیشن هوشمند سلیاک بر علائم گوارشی در بیماران مبتلا به سلیاک

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زمینـه و هدف: بـا در نظر گرفتـن اهمیت آمـوزش رژیم فاقـد گلوتن در بیمـاران مبتلا به سـلیاک، در این مطالعه ما به بررسـی اثـر آموزش از طریق اپلیکیشـن موبایل بر علائم گوارشـی در بیماران مبتلا به سـلیاک پرداختیم.
روش بررسـی: در ایـن مطالعـه مداخلـه ای، ۶۰ بیمار مبتلا به سـلیاک به طـور تصادفی بـه دگروه مداخلـه (دریافت اپلیکیشـن هوشـمند) و کنترل (آموزش معمول فردی در کلینیک) تقسـیم شـدند. علائم گوارشـی با استفاده از پرسشـنامه GSRS در ابتـدای مطالعه و ۳ ماه بعد از آموزش ارزیابی شـد.
یافته ها: از ۶۰ بیمار مبتلا به سـلیاک که وارد مطالعه شـده بودند، ۵۸ بیمار مطالعه را به پایان رسـاندند. تفاوت معنـی داری بین دو گروه در ابتدای مطالعه وجـود نداشـت. اما سـه مـاه بعـد از مداخله، میانگیـن نمره ی GSRS و زیرنمره ی سـوء هضم به طور معنی داری در گـروه مداخله کاهش یافته بود (p<۰.۰۱). همچنین مقایسه بین گروهی نیز نشان داد که میزان کاهش نمره ی سوء هضم در گروه مداخله بطور معنی داری کمتر از گروه کنترل بود (P=۰.۰۰۲).
نتیجـه گیـری : اسـتفاده از نـرم افـزار موبایل هوشـمند سـلیاک میتواند منجـر بـه کاهـش علائـم گوارشـی در بیمـاران مبتلا به سـلیاک گردد.

تاریخ ارسال: ۲۰۲۱/۰۹/۱۹

Code: DA-21101
ICGH2021-69
Category: 2.4 بیماری سلیاک / سندروم های سوء تغذیه و انتروپاتی های غذایی

اثر آموزش گروهی در مقایسه با آموزش فردی بر علائم گوارشی در بیماران مبتلا به سلیاک

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زمینـه و هدف: با توجه بـه اهمیت آموزش رژیـم فاقد گلوتـن در بیماران مبتلا به سـلیاک و کمبود مقالات بررسـی کننده اثر آمـوزش گروهی در این بیمـاران، این مطالعه با هدف مقایسـه آمـوزش گروهی و آمـوزش فردی در کلینیک بر روی علائم گوارشـی در بیماران مبتلا به سلیاک طراحی و اجرا شد.
روش بررسـی: در این مطالعه ی مداخلـه ای ۱۳۰ بیمار مبتلا به سـلیاک بصـورت تصادفـی به دو گـروه آموزش گروهـی (۶۶ بیمـار) و آموزش فردی (۶۴ بیمـار) تقسـیم شـدند. علائـم گوارشـی بـا اسـتفاده از پرسشـنامه GSRS در ابتـدای مطالعـه و ۳ ماه بعد از مطالعه مورد ارزیابـی قرار گرفتند.
یافته ها: میانگین سـنی بیماران مورد مطالعه ۹.۵۹±۳۷.۵۷ سـال بود. تفاوت معنی داری بین دو گروه در ابتدای مطالعه بین دو گروه وجود نداشت. نتایج آزمون ANCOVA نشان داد که بعد از تعدیل برای مقادیر اولیه میانگین نمره علائم گوارشی در گروه مداخله بطور معنی داری پایین تر از گروه کنترل بود (p=۰.۰۴).
نتیجه گیری: آموزش گروهی تاثیر معنی داری بر علائم گوارشی در بیماران مبتلا به سلیاک دارد و میتواند به عنوان یک روش آموزشی در این بیماران مورد استفاده قرار گیرد.

تاریخ ارسال: ۲۰۲۱/۰۹/۱۹

Code: DA-21093
ICGH2021-70
Category: 4. 6 سایر اختلالات کولون و آنورکتال

The evaluation of rubber band ligation compared with topical medical treatment in symptomatic bleeding internal hemorrhoids

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Introduction: Internal hemorrhoid disease is the most common clinical proctologic disorder. Surgical treatment is the obvious therapeutic strategy for this disease, but due to the significant complications, non-invasive approaches are preferred rather than surgical one. The current study aims to assess the one-year follow-up outcomes of medical therapy and rubber band ligation (RBL) for the management of internal hemorrhoid.

Methods: The current non-randomized clinical trial has been conducted on 57 patients with rectal bleeding due to grade II-III internal hemorrhoid disease assigned whether in medical treatment with antihemorrhoid cream (n=30) or RBL (n=27). Medical treatment was applied thrice daily until complete bleeding control. RBL was performed for the patients and repeated through monthly visits, if needed. The outcomes, recurrence and complications were compared between the group in a twelve-month follow-up.

Results: The mean period of antihemorrhoid cream administration to control bleeding was 5. 05±2. 17 days. The bleeding was well-controlled within 6-8 days in 83. 2% of the patients. . Bleeding reocurred for 3. 53±1. 94 times/ year in medical treatment. There was an inverse correlation between age and recurrence in medically-treated patients (r=-0. 78, P-value<0. 001). RLB was needed once, twice and thrice in 25%, 29. 6% and 44. 4% of the patients, respectively. Three RBL patients (11. 11%) experienced complications, including pain(two ones: 7. 40%) and insignificant bleeding (1 patient: 3. 70%).

Conclusion: According to the current study, considering the negligible complications and appreciable success rate of RBL for the eradication of grade II/ III hemorrhoid disease, this procedure can be recommended as the choice approach of low-to-moderate grade hemorrhoid disease, in drug resistant conditions, in particular

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Code: DA-21044
ICGH2021-71
Category: 2. 3 پاتوژنز: عوامل میکروبی

Heterogeneity of cagA motifs in paired *H. pylori* isolates from individual patients with 10-years interval

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Introduction: *Helicobacter pylori* is distinguished by high genetic diversity which can be explained by a long evolutionary history as well as the ability of horizontal gene transfer. Among *H. pylori* virulence factors, cagA gene owing four EPIYA motifs (A, B, C, and D) is highly prone to genetic rearrangement which could have great impact on clinical outcomes. In the present study paired formalin-fixed and paraffin-embedded (FFPE) gastric tissues which were obtained from 30 *H. pylori*-positive patients with 10-years interval were recruited to examine the changes in *H. pylori* cag A motif by time.

Methods: Paired FFPE gastric biopsies were obtained from 30 *H. pylori* positive patients which were 10 years apart from archive of pathology department of digestive disease research institute Tehran, Iran. After DNA extraction, presence of *H. pylori* was assessed by PCR amplification of *H. pylori*16S rRNA gene. Presence of cagA and type of EPIYA motifs was determined by PCR using cagA motifs-specific primers.

Results: All the recruited samples carried H pylori 16S rRNA gene. In 8/30 patients no variation was observed in the motif pattern of cag A while there has been significant changes in remaining 22 patients. In 11 /30 patients, at least one motif was removed from second sample comparing to primary sample while in 11/30 patients at least one more motif was observed in secondary samples. Overall variation in EPIYA motif-C was the dominant change observed between paired samples.

Conclusion: Results of this study revealed a remarkable heterogeneity in EPIYA motif pattern of cagA gene specially motif-C in individual hosts during time. Considering the relation between number and organization of cagA motif with *H. pylori* pathogenicity, further study could elucidate the impact of observed variation on disease status.

Send Date: 2021/08/18

Code: DA-21129
ICGH2021-72
Category: 5.3 استراتژی های مدیریت

Investigating the Effect of Quadruple Therapy with Saccharomyces Boulardii or Lactobacillus Reuteri Strain (DSMZ 17648) Supplements on Eradication of

Helicobacter pylori and Treatments Side Effects: A Double-Blind Placebo-Controlled Randomized Clinical Trial

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Introduction: The primary goal of this placebo-controlled study was determining the effect of quadruple treatment with Saccharomyces boulardii or Lactobacillus reuteri on eradication of *Helicobacter pylori* and side effect of the treatment.

Methods: This study was a double-blind, randomized, placebo-controlled trial. Here, eradication of *helicobacter pylori* was reported comparing conventional anti-*H. pylori* therapy versus conventional therapy supplemented with S. boulardii and L. reuteri DSMZ 17648. A total of 156 patients were included in the current study; and patients positive for *H. pylori* infection (n =156) were randomly assigned to 3 groups: 52 patients (Group P) received conventional quadruple therapy plus L. reuteri and 52 patients (Group S) received conventional quadruple therapy plus S. boulardii daily, for 2 weeks. Also, a total of 52 patients were included as control group. At the end of the treatment period, all the subjects continued to take proton pump inhibitor (PPI) alone for 14 days and then, no medication was given for 2 weeks again. Patients provided 2 fecal samples: one sample was prepared 2 weeks after PPI discontinuation, and one sample was prepared 1 month after the first test. During follow-up, gastrointestinal symptoms were assessed using an evaluation scale (Glasgow dyspepsia questionnaire (GDQ)), and adverse events were assessed at 7, 14, 21, and 28 days.

Results: A total of 156 subjects who were confirmed to be affected with *H. pylori* infection, which 60.9% of them were female and 39.1% of them were male, with a mean age of 47.76 ± 13.92 years old (age range of 16–74 years old) participated in the study. Eradication therapy was effective for 94.2 % of subjects in Group S and 92.3 % of subjects in Group P, and 86.5 % of subjects in control group with no differences between treatment arms. In the Group S, chance of developing symptoms of nausea (OR=2.74), diarrhea (OR=3.01), headache (OR=10.51), abdominal pain (OR=3.21), and anxiety (OR=3.58) was significantly lower than control group (p<0.05). But in Group P, only chance of developing headache was significantly reduced (OR=3.75, p<0.05) and no significant differences were seen in other side effects.

Conclusion: Findings of the study revealed that in case groups, eradication rates were improved compared to the control group, but this improvement was not statistically significant. However, in the group that received the S. boulardii probiotic as a supplement, the side effects of quadruple treatment were significantly reduced, showing that adding S. boulardii supplement to the treatment protocol of the patients affected with *H. pylori* infection can help to reduce the side effects of treatment.

Levofloxacin + tetracycline quadruple regimen for eradication of *Helicobacter pylori*: a multicenter multinational randomized clinical trial

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Introduction: This multinational multi center randomized controlled trial designed to evaluate efficacy of Tetracycline + Levofloxacin for HP eradication.

Methods: During a six month period, all of the cases with HP infection in eight referral tertiary centers of three countries included and randomly allocate to receive either Tetracycline + Levofloxacin or clarithromycin base quadruple regimen for two weeks. Then pantoprazole continued for 4 more weeks and after one to two weeks of off therapy, they underwent UBT to prove eradication.

Results: Overall 788 patients included (358 male (45.4%), average age 44.2y). They diagnosed as non-ulcer dyspepsia (516 cases, 65.5%), PUD (234 cases, 29.69%) and intestinal metaplasia (38 cases, 4.8%). The participants randomly allocated to groups A & B to receive either Tetracycline + Levofloxacin or clarithromycin.

Among groups A and B in ITT and PP analysis, 75.2% & 82.1% (285 cases) and 67.5% & 70.1% (276 cases) of participants achieved eradication respectively (P = 0.0001). The complete compliance rate in group A & B were 84.4% and 83.6% respectively. During study, 33.5% of participants in group A (127 cases) reported side effects compare with 27.9% in group B (114 cases, P = 0.041). The most common complains among groups A and B were nausea and vomiting (12.6% & 9.3%) respectively. In sub group analysis, the eradication rate of Tetracycline + Levofloxacin among patients with non-ulcer dyspepsia, PUD and intestinal metaplasia were 79.4%%, 88.1% & 73.9% respectively. These figures in group B (clarithromycin base) were 71.3%, 67.6% & 61.5% respectively (P= 0.0001, 0.0001 & 0.043).

Conclusion: Overall, the combination of Tetracycline + Levofloxacin is more efficient for HP eradication in comparison with clarithromycin + Amoxicillin despite more complication rate and in areas with high rate of resistance to clarithromycin, this therapeutic regimen could be an ideal choice for HP eradication.

Send Date: 2021/08/20

Code: DA-21045
ICGH2021-74
Category: 5.3 استراتژی های مدیریت

Antimicrobial activity of liposome-coated superparamagnetic iron oxide nanoparticles (SPIONs) on *H. pylori*

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Introduction: Almost after 40 years of the successful discovery and culture of *H. pylori*, scientists are facing new strategies for resistance of this bacterium against antibiotics, which have created new challenges in the world of biomedicine. Recently, nanotechnology using nanoscale materials is increasingly being utilized for clinical applications, especially as a new paradigm against multidrug-resistant organisms. In this study, for the first time, anti- *H. pylori* activity of magnetic nanoparticles called SPIONs (Superparamagnetic Iron Oxide Nanoparticles), which were coated with a layer of liposomes, carry the antimicrobial peptide pexiganan, was assessed using the well-diffusion method.

Methods: Superparamagnetic iron oxide nanoparticles were synthesized by the co-precipitation method with a size of about 10 nm. After synthesizing and purifying the nanoparticles, they were coated with a layer of liposomal bilayer by thin-film hydration to maximize their biocompatibility. Then, spontaneously, the antimicrobial peptide of Pexiganan was attached to the magnetoliposomes. Antibacterial activity of synthetic nanoparticles with and without pexiganan was assessed against three clinical isolates of *H. pylori* using the well-diffusion method.

Results: At the concentration of 100%, 75%, and 50% of synthetic nanoparticles, no visible growth was observed on the plate which indicates strong anti- *H. pylori* activity. Concentrations less than 50% did not have an inhibitory effect. There was no difference between the activity of nanoparticles with and without antimicrobial peptides.

Conclusion: The results indicate that the prepared compound can prevent the growth of *H. pylori* and might be a suitable alternative to develop as an antibacterial agent against the multidrug-resistant strains of *H. pylori*. Further in vitro and in vivo studies may lead to valuable findings in the treatment of *H. pylori* infection.

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Code: DA-21030
ICGH2021-75
Category: 5.3 استراتژی های مدیریت

Lactobacillus ruteri compared with placebo as an adjuvant in quadruple therapy for Helicobacter Pylori eradication: A randomized, double-blind, controlled trial

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Introduction: Due to the increase in antibiotic resistance and side effects of *H. pylori* eradication regimens, alternative strategies for the treatment of *H. pylori* infection are being considered. The aim of this study was to evaluate the efficacy of probiotic as an adjuvant in quadruple therapy for *H. pylori* eradication compared with placebo.

Methods: This randomized, double-blind, controlled trial was conducted on 450 patients with confirmed *H. pylori* infection. We randomly allocated patients (1:1) to receive probiotic (Lactobacillus ruteri, 100mg) or placebo as an adjuvant in quadruple therapy with bismuth subcitrate 240mg, pantoprazole 40mg, amoxicillin 1000 mg and clarithromycin 500mg all twice daily for 14 days. The primary outcome of the study was the *H. pylori* eradication rate at eight weeks after the end of treatment using 14C-urea breath test. The secondary endpoint of study was patient-reported side effects of drugs.

Results: *H. pylori* eradication rates were higher in the probiotic group, compared to placebo, but this difference was not statistically significant, according to both intention-to-treat (78.7% (95 % CI; 71.24 - 86.16) versus 72% (95 % CI; 64.9-79.1), respectively) and per-protocol (80.1% (95 % CI; 73.7 – 86.5) versus 75.2 %(95 % CI; 68.4 – 82), respectively). About 69.7% of patients in the probiotic group experience side effects compared to 98.6% in the placebo group that was statistically significant (P-value <0.001). Headache and all gastrointestinal adverse events except constipation were significantly lower in the probiotic group compared to placebo (P-value <0.001).

Conclusion: Although Lactobacillus ruteri as an adjuvant of 14-day quadruple therapy lead to a higher eradication rate of *H. pylori* infection compared to placebo, but this difference was not statistically significant. However, Lactobacillus ruteri reduced the frequency of drug-associated adverse events.

Send Date: 2021/08/02

Code: DA-21046
ICGH2021-76
Category: 3.4 Diagnosis

An ultra-fast amplification-free nanoparticle-based method for early-phase identification of *Helicobacter pylori*

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Introduction: *Helicobacter pylori* is known as type 1 carcinogen and the main cause of gastritis, stomach ulcers and gastric cancer. *H. pylori* infection is primarily diagnosed by the conventional methods. However, due to the importance of early-phase diagnosis of *H. pylori*, we developed a non-crosslinking gold nanoprobe method based on the aggregation of nanoparticles for the direct detection of the target.

Methods: A specific target region in the genomic DNA of *H. pylori* was selected, and a complementary thiolate probe was designed. The probe was used to functionalize gold nanoparticles. The genomic DNA content of the samples was accessed by the boiling method. The nucleic acid content of the cells was used for the further detection procedure. After a single denaturation and annealing stage, magnesium chloride was used for the induction stage in the colorimetric assay.

Results: The results show that the designed Au-nanoprobe could attach specifically to the target region among ten different bacteria, providing a specific colorimetric detection approach in less than six minutes. Furthermore, the optimized concentration of the salt yielded an optimum color differentiation between the positive and negative samples. In positive samples, the nanoparticles stayed dispersed (red) due to a successful hybridization and increased charge density while in negative samples, aggregation occurred due to the absence of a complementary sequence resulting in a blue shift.

Conclusion: The direct gold nanoprobe-based method could be employed as a simple, rapid, and affordable

method to nano-diagnosis of *H. pylori* and help to restrain the spread of *H. pylori* infection

Send Date: 2021/08/20

Code: DA-21029
ICGH2021-77
Category: 2.3 پاتوژنز: عوامل میکروبی

Helicobacter pylori infection in Iran: demographic, endoscopic and pathological factors

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Introduction: *Helicobacter pylori* (*H. pylori*) infection is the most important risk factor for gastritis and peptic ulcer. However, factors other than *H. pylori* are involved in its pathogenesis. In the current study, we aimed to compare the clinical manifestations and endoscopic and histopathological findings of patients with and without *H. pylori* infection

Methods: In this cross-sectional study, 233 patients with dyspepsia, referred for endoscopy, were examined regarding the presence of *H. pylori* infection. During an endoscopic exam, 5 biopsy specimens were taken from the stomach. The criteria for the presence of *H. pylori* infection was the presence and identification of bacteria in pathology. Two groups of *H. pylori*-positive and *H. pylori*-negative patients were compared regarding their demographic, endoscopic, and pathological findings

Results: Of 233 patients, 154 (66.1%) were non-smokers, 201 (86.3%) were not alcohol users, and 153 (65.7%) used tap water. The most common symptom, reported in 157 (67.4%) patients, was epigastric pain. There was a significant relationship between the number of family members, marital status, and the presence of *H. pylori* infection. Also, there was a significant relationship between the endoscopic and pathological findings of patients with *H. pylori*.

Conclusion: The results of the present study revealed that *H. pylori* infection was not associated with sex, alcohol consumption, or non-steroidal anti-inflammatory drug (NSAID) use. The role of *H. pylori* in the pathophysiology of peptic ulcer was clarified. Also, there was a significant difference in the endoscopic and pathological findings of patients with *H. pylori*

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Code: DA-21112
ICGH2021-78
Category: 19.1 Endoscopy - Upper GI

Quality in Endoscopy

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Introduction: Improving in quality of care, provided by the health services for individuals and populations, will increase the likelihood of desired health outcomes and care consistent with current recommended guidelines. Australian health system dedicated major funds for improving in quality of endoscopy in order to increase adenoma and other early neoplastic lesions of the colon. Subsequently, it will increase colon cancer survival rate and the patient's outcome.

Proper endoscopy unites designed to provide a high-quality endoscopy care. This can categorized as below:

1.Preprocedural care
2.Intraprocedural care
3.Post procedural care

Preprocedural care: In this section, proper endoscopy ward design is fundamental.

In this regard, scope processing room need to consider as a separate most important part of every standard endoscopy unit. Before the procedures indications and complications of each procedure need to be assessing by the clinician or clinicians and also discuss with the patient. Documenting patient information and informed consent, conducting a standardized risk assessment before the endoscopic intervention, considering the patients medications, especially anticoagulants before the procedures and

conducting a team time out before the procedure are essential. Common issues during this period include: appropriate indication, informed consent, risk assessment, formulation of a sedation plan, management of prophylactic antibiotics and antithrombotic drugs, and timeliness of the procedure.

Intraprocedural care: During the procedure close observation of the patients vital signs, correct selection of anesthetic drugs are inseparable part of anesthetist job. Using proper scope size and collateral instruments, recognition of all abnormalities with good documentation and avoiding, recognizing, and managing the complications are mandatory. Considering appropriate ergonomic condition is vital for preventing musculoskeletal problems in endoscopist in long term.

In modern endoscopy units using CO_2 instead of air for reducing post procedure abdominal pain and distension is recommended. However, there is no difference in cecal intubation time, total examination time or success rate also the cost of Co_2 vs O_2 use need to consider. Moreover, water pump assisted endoscopy is also recommended not only for cleaning of endoscopy field but also better intubation of especially sigmoid colon.

Post procedure: Proper procedure report, smooth recovery, explanation and discharge, detailed recommendations and follow-up plans, early detection, and proper management of possible complications, and considering patients feedback for improving the system. A good endoscopy unit should have metric measurements feedback for endoscopist for improving their important abilities like Adenoma Detection Rate (ADR), cecal intubation rate, Boston bowel preparation scale and withdrawal time.

Finally, Swiss cheese model could prevent (Check &re check by other team members) complications causes by inevitable human errors.

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Code: DA-21090
ICGH2021-79
Category: 2.2 Dyspepsia

What is the Utility of Prompt Endoscopy in Deciding How to Approach Dyspeptics from the Community without Alarm Symptoms? A Decision Tree Analysis

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Introduction: Esophagogastroduodenoscopy (EGD) is commonly used for assessment of dyspepsia in the general population. Gastroenterology societies recommend different ages for doing EGD. We developed a decision tree model and performed a utility assessment to determine the optimal age at which to conduct EGD for assessing dyspepsia in the general population

Methods: We developed a decision tree with two main strategies: "prompt endoscopy, PE", and "test and treat with managed endoscopy, T&T" with three main outcomes of "no cancer", "early cancer" (amenable to cure), and "advanced cancer". We delineated the paths to the outcomes with each strategy and conducted a utility assessment involving gastroenterology physicians and patients referring to a referral gastroenterology clinic. Using the mean utilities obtained for each path and the highest prevalence of gastric cancer among the general dyspeptic population in Iran as a high prevalence area for gastric cancer, we calculated the expected utilities for each strategy. We included a sensitivity analyses testing the performance of the decision tree under various assumptions.

Results: The expected values for PE and T&T, the main strategy nodes, were 0.721 and 0.980 respectively under the base case assumptions, clearly favoring T&T. On sensitivity analysis, when utilities were kept constant and prevalence increased stepwise, the preferred strategy changed at a prevalence of 69.0% for upper GI cancers. When the prevalence of cancer was kept fixed at 1.2% and the utility of EGD was increased stepwise, a utility of 98.0% or more was required for the PE to become the preferred strategy. A third sensitivity analysis in which both prevalence and utility of EGD were increased stepwise revealed that if the prevalence of cancer in the given dyspeptic population is at least 3.0% and the utility of PE is 97.0% or more, then prompt endoscopy has a higher utility.

Conclusion: According to our data, utility of EGD is the most important factor in determining the method of assessing dyspeptic patients in the general population. The T&T strategy is the preferred method in most cases with PE better reserved for those with a very low disutility for EGD.
Send Date: 2021/09/15

Code: DA-21052
ICGH2021-80
Category: 20.2 Enteral dilatation and stenting (esophagus - stomach - duodenum - colon)

Endoscopic diverticulectomy for a large Zenker's Esophageal Diverticula: a Case report

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Introduction: Traditionally surgical resection has been the optimal treatment of esophageal (Zenker) diverticula over the past century. Developments in minimally invasive surgery and new endoscopic devices have led to a paradigm change. Nowadays, Zenker's Diverticulum can be treated by flexible endoscopy as a quick and safe technique.

Case Report: Here we report a 95-years-old woman presenting with a chronic history of frequent cough, dysphagia for solids and later difficulty in swallowing fluids along with decreased appetite and weight loss from 6 months ago. The primary diagnosis was food impaction and the upper gastrointestinal endoscopy was performed for several times and the oesophageal lumen was not visible and couple of endoscopists reported esophagus as blind loop full of food remnant.

Discussion: We supposed these reposts compatible with diverticula. So a barium swallow requested, but the patient was so disabled and unable to do it. So at first the food remnant exsect by a basket, then after several attempts, the entrance of esophagus found beside large inlet of diverticula. According to the patient's age and general condition, the surgeon consultation considered her as inoperable and offered a surgical gastrostomy. So a endoscopic diverticulectomy was considered as a therapeutic option for the management. Endoscopic Zenker diverticulotomy was done using flexible endoscope under deep sedation. At first a guide wire passed into the stomach, then a NG tube passed to keep the lumen of esophagus open, then the cricopharyngeal muscle and septate between diverticula and esophagus cut with knife and 4 hemoclips deployed in the site of diverticulectomy and hemostasis achieved. Both the procedure and the postoperative course were free of complications. The patient kept NPO for 72 h then she permitted to swallow water and the day after, she start to eat. 5 days after procedure, she discharged with improvement of general condition.

Send Date: 2021/08/22

Code: DA-21055
ICGH2021-81
Category: ۲۱. ۵ انتروسکوپی

indications and complications of balloon Enteroscopy: a 3 years cross sectional survey

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Introduction: The advent of capsule endoscopy (CE) and balloon-assisted Enteroscopy has changed the diagnosis and management of small intestine disorders over the past decade. The purpose of this evaluation is to review the findings of small intestine evaluation by Balloon Enteroscopy in Imam Hospital of Ahvaz between 2016 and 2019.

Methods: The present study is a descriptive epidemiological study that has been conducted using the files in the archives of Ahvaz Imam Hospital on a cross-sectional basis between 2016 and 2019 on all of the cases referred to this tertiary center to perform balloon Enteroscopy about their indications and any potential complication. A questionnaire containing several sections designed to collect the following data. Part A: (Basic Information) including age, sex, date and type of admission. Part B: (Record of previous diseases and procedures) including general health profile. Part C: (Enteroscopy Process Findings) and Part D: any potential complication.

Results: Overall 42 procedures performed (29 male (69%) and 13 female (31%). The mean age of females (41.96y) was fewer than males (52.16y). The most common reasons for referring for Enteroscopy was Melena with unknown source (8 cases, 19%) and abdominal pain (6 cases, 14.3%). More than half of the patients (28 cases, 67%) were nonsmoker. The most common findings of Enteroscopy include: PUD (12 cases, 28.6%), hemorrhage from angiectasia (11 cases, 26.2%), erosive gastritis (9 cases, 21.4%) and small bowel stenosis and atrophy (7 cases, 16.7%). Among the complications after Enteroscopy, only abdominal pain was reported (2 cases, 4.76%).

Conclusion: balloon Enteroscopy is a safe procedure and useful for finding of source of obscure bleedings and pain of unknown origin.

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Code: DA-21074
ICGH2021-82

گروه : ۳۶ مدیریت بیماریهای بدخیم

Novel Mutations and Phenotypic Associations

Identified Via Apc Gene Analysis in Iranian Classical Familial Adenomatous Polyposis Study

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Introduction: Familial adenomatous polyposis (FAP) is an inherited disorder, which can develop into cancer and is a result of germline mutations in the adenomatous polyposis coli gene (APC).

Methods: The diagnosis was made based on clinical and pathological examination. We screened the APC gene for mutation and evaluated the genotype-phenotype correlation in 21 classical unrelated FAP patients with autosomal dominant pattern in pedigree chart.

Results: Mean age at onset of 27.90 years and males to female ratio was 13/8. Nine patients had a coexisting colorectal cancer, of which 6 had APC mutations .Congenital hypertrophy of the retinal pigment epithelium was the most common extra colonic manifestation. The most common symptom was abdominal pain (43%).

Genomic DNA sequencing of codon 999 to 1410 of the APC gene was identified in 14 of the 21 patients, with a mutation rate of 66.66%.including one novel frame shift mutation, three nonsense mutations and 10 novel missense mutations (71%). The most frequent mutations were in codon 1308 and 1350.

Conclusion: In conclusion, our study results indicate that the APC gene has a high mutation detection rate (66.66%) between codons 999 and 1410, and codons 1308 and 1350 are two mutation hotspot regions.

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Effect of nanoformulated Panitumumab on Kaep1-Nerf2 gene expression in Colorectal cancer cells

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Introduction: Oxidative stress, including reactive oxygen species (ROS), has been known to cause malignant disorders such as colorectal cancer. The nuclear factor erythroid 2-related factor 2 (Nrf2)/Kelch-like ECH-related protein 1 (KEAP1) pathway is well known to protect cells from oxidative stress and inflammation. The current investigation introduces effective nanomedicine (PEGylated gold nanoparticles conjugated with Panitumumab) that induced ROSs mediating apoptosis pathways as effective strategies for colorectal cancer treatment.

Methods: The AuNPs synthesized, stabilized by polyethylene glycol (PEG), functionalized, and covalently conjugated with Panitumumab. The physicochemical properties of engineered nanomedicine (AuNPs-PEG-Pan) were characterized by UV-vis spectrum. Then, the effects of nanoformulation Panitumumab on cell viability, ROS production and oxidative stress gene expression (Kaep1-Nerf2) were evaluated in the colorectal cancer cell line.

Results: The engineered nanomedicine was found to effectively induced apoptosis in SW-480 cells and resulted in a significant reduction in cancer cells viability. In addition, the maximum production of ROS was obtained after the treatment of cells with an IC50 dose of GNPs-PEG-Pan. Based on our real-time PCR data, in the treated SW-480 cells with the AuNPs-PEG-Pan, the expression level of Keap1 ($p < 0.01$) was significantly increased, while the expression of Nerf 2 ($p > 0.01$), were found to be significantly decreased as compared to the untreated control cells.

Conclusion: We introduced a nanoformulation of Panitumumab with a high apoptosis effect on colorectal cancer cells compared to the free Panitumumab.

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Oxidative stress-induced antiproliferative and apoptotic effects of nanoformulated cetuximab in colorectal cancer cells

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Introduction: The current investigation introduces an advanced and effective active targeted tumour therapeutic nanomedicine composed of pegylated gold nanoparticles (PEG-GNPs) conjugated with Cetuximab (Cet) that induced reactive oxygen species (ROSs) mediating apoptosis pathway as effective strategies for colorectal cancer treatment.

Methods: The GNPs synthesized, stabilized by polyethylene

glycol (PEG), functionalized, and covalently conjugated with Cetuximab. The physicochemical properties of engineered nanomedicine (GNPs-PEG-Cet) were characterized by UV-vis spectrum. Then, its biological impacts, including cell viability, apoptosis, and ROS production, were evaluated in the colorectal cancer cell line.

Results: The engineered nanomedicine was found to effectively induced apoptosis in SW-480 cells and resulted in a significant reduction in cancer cells viability. From the flow cytometry results, this nanoscale showed a significant apoptotic effect on cells. In addition, the maximum production of ROS was obtained after the treatment of cells with an IC50 dose of GNPs-PEG-Cet.

Conclusion: We introduced a nanoformulation of Cetuximab with a high apoptosis effect on colorectal cancer cells compared to the free Cetuximab.

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Code: DA-21120
ICGH2021-85
Category: ایمونولوژی 7. 10

The interaction between Melatonin and IL-1B, IL-18 and IL-33 in developing and progression of liver fibrosis Among Patients with Non-Alcoholic Fatty liver Disease

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Introduction: Interaction between immune modulators and inflammation factors considered as main underlying pathology of Non-alcoholic fatty liver disease (NAFLD). Cytokines of IL-1B, IL-18 and IL-33 and melatonin has a interaction that may play a major role in developing and progress NAFLD. We try to clear association between these cytokines and melatonin.

Methods: In this cross-sectional study adult patients with diagnosis of fatty liver disease by ultrasonography. All of them underwent Fibroscan evaluation. Subjects who met the inclusion and exclusion criteria for NAFLD were involved. A normal group also selected. The participants were categorized into the three following groups" 1) fibrosis> 9.1kp and steatosis>290 dbm) 2) fibrosis: 6-9.0 KP and steatosis 240-290, and 3) normal group with fibrosis< 6.0 KP and steatosis< 240 dbm. laboratory assessment and a questionnaire including demographic, anthropometric, laboratories and clinical data were completed for each of them.

Results: A total 97 persons included. The mean age was 42.21± 11 years old. 59 patients (60.0%) were female. Cytokines levels have significant associated with liver enzymes. The melatonin levels as well as IL-1 family levels were increased by advancing fibrosis and steatosis. In univariate analysis we observed a significant association between these cytokines and advancing fibrosis , sever steatosis and melatonin concentration. Furthermore , in multiple linear regression model melatonin level has a significant association with levels of these cytokines.

Conclusion: Melatonin may modulate the developing and progression of NAFLD via influence on IL-1B family .Therefore consider the therapeutic model that effect on this process may has great impact.

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Code: DA-21087
ICGH2021-86
Category: 1.4 / زیست شناسی سلول های / آسیب شناسی و مواد مغذی
آب حمل و نقل حمل و نقل / آب و الکترولیت

The association between sleeping patterns and mealtime with Gut Microbiome: A Pilot Study

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Introduction: Disruptions in sleeping related to mealtime may contribute to an imbalance in the gut microbiome, and put individuals at a higher risk for metabolic diseases

including diabetes, obesity and cancers. The aim of this pilot study was to investigate the relationships between late-night eating habits and sleep quality and duration, with gut microbiota (GM) profiles.

Methods: In this cross-sectional study, thirty-six men referred for treatment at the Tehran Gastroenterology and Hepatology Clinic were enrolled. In addition to the collection of demographic information, each participant completed different questionnaires to evaluate, medical history, physical activity level, late-night eating habits, sleep quality and sleep duration. The scores from these questionnaires were used to categorize the study participants into the following groups: sleep quality (good or poor), late night eating (yes or no) and sleep duration (<7 or ≥7 hours). Five grams of stool was also obtained from each participant for GM profiling analysis by sequencing.

Results: The mean age of the study population was 42.1±1.6 years. Firmicutes and Actinobacteria were the two dominant phyla present in all participant samples. Differences in the relative abundance of GM at each taxonomic rank between study groups was largely insignificant. Only Erysipelotrichales at the order level, were found to be significantly different between individuals who had late-night eating habits and those who did not (p and q < 0.05). None of the other investigated parameters demonstrated a significant difference in GM profiles between participants of the study groups.

Conclusion: In this pilot study, we found Erysipelotrichales, a bacterial species previously linked to metabolic disorders and obesity, was more abundant in individuals with late-night eating habits. Studies with higher sample sizes are warranted to better delineate the possible effects of time of eating on microbial composition; to better understand the potential role of these species in disease risk.

Send Date: 2021/09/13

گروه : ۲.۴ بیماری سلیاک / سندروم های سوء تغذیه و انتروپاتی های غذایی

بررسی توزیع فراوانی اختلال خلقی افسردگی در میان بیماران مبتلا به سلیاک مراجعه کننده به درمانگاه گوارش مرکز آموزشی درمانی شهید صیاد شیرازی گرگان

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زمینه و هدف: بیماری سلیاک یکی از عوامل موثر در بروز بسیاری از اختلالات رفتاری بوده و به دلیل تشخیص نامناسب و یا نابهنگام، عوارض غیر قابل جبرانی از خود بر جای می گذارد. این مطالعه با هدف برآورد شیوع اختلال خلقی افسردگی در میان بیماران مبتلا به سلیاک مراجعه کننده به درمانگاه گوارش مرکز آموزشی درمانی شهید صیاد شیرازی گرگان طراحی و اجرا شد.

روش بررسی: در این مطالعه ی توصیفی-تحلیلی ۴۳ بیمار بزرگسال (سن بالای ۱۹ سال) مبتلا به سلیاک مراجعه کننده به درمانگاه گوارش مرکز آموزشی درمانی شهید صیاد شیرازی گرگان حاضر به همکاری وتکمیل پرسشنامه شدند. برای بررسی افسردگی در بیماران ازپرسشنامه استاندارد افسردگی بک-فرم کوتاه ۱۳ سوالی استفاده شد. در انتها پس از بررسی های لازم اطلاعات استخراج شده با نرم افزارspss۲۵ و آزمون های آماری مناسب تحلیل شدند.

یافته ها: میانگین سنی بیماران مورد بررسی ۸۸/۴۰±۰۷/۱۰ سال، و ۲۱ نفر(۴۸.۸٪) زیر ۴۰ سال بودند، ۲۷ نفر(۸/۶۲٪) از کل بیماران را زنان تشکیل می دادند و ۱۴ نفر(۲۹.۸٪) از بیماران دارای تحصیلات آکادمیک بودند. از میان ۴۳ بیمار تحت مطالعه ۲۸ نفر (۵۷٪) دارای درجاتی از افسردگی بودند که ۹ نفر (۱/۱۹٪) درجه خفیف، ۱۵ نفر (۳۲٪) درجه متوسط و ۴ نفر (۵/۸٪) درجه شدید بودند که برای مداخلات روانپزشکی ارجاع داده شدند. از ۲۸ بیمار مبتلا به افسردگی، ۱۲ نفر (۲/۴۶٪) مرد و ۱۴ نفر (۸/۵۳٪) زن بودند که این اختلاف از نظر آماری معنادار نبود.

نتیجه گیری : نتایج این مطالعه نشان دهنده فراوانی نسبتا بالای افسردگی و نیاز بیماران مبتلا به سلیاک به مداخلات درمانی بود.

تاریخ ارسال: ۲۰۲۱/۰۹/۲۰

Code: DA-21068
ICGH2021-88
Category: 2.8 Esophageal malignant disease

Gastroesophageal reflux is associated with decreased risk of esophageal squamous cell carcinoma in men in a high-incidence area: Golestan Cohort Study

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Introduction: Esophageal squamous cell carcinoma (ESCC) accounts for nearly 90% of esophageal cancers worldwide and has a high mortality rate.

Gastro-esophageal reflux disease (GERD) symptoms have inconsistently been associated with an increased risk of ESCC. However, GERD symptoms as a whole do not distinguish between acid and non-acid reflux, which may have differing

associations with ESCC risk.

Objective: To assess the association between GERD symptoms overall, heartburn alone, or regurgitation and ESCC risk in a population with low exposure to tobacco and alcohol.

Methods: • Population-based cohort study from a region of high ESCC incidence in northeastern Iran.

• All cohort intake data was collected via face-to-face interviews and examinations.

• GERD symptoms were categorized into those with ≥ weekly symptoms of:

• GERD (any heartburn or regurgitation)

• Heartburn (heartburn only)

• Regurgitation (regurgitation only or both symptoms)

• ESCC was defined as a histologic diagnosis, confirmed by active surveillance, telephone follow up, and manual chart review.

• Cohort members with missing GERD symptom data, any cancer diagnosis within 3 years of enrollment, or a diagnosis of ESCC within 1 year after enrollment were excluded.

• Multivariate Cox regression models were used to assess the adjusted hazard ratios between GERD symptoms and risk of ESCC.

Results: 49, 604 individuals were included in the study, of which 306 developed ESCC.

There was significant interaction between sex and the association of GERD with ESCC.

9, 037 (18.2%) reported ≥ weekly GERD symptoms: 2, 390 had heartburn only and 6, 618 had regurgitation only or both symptoms.

GERD was significantly associated with female sex (p<0.001), lower socioeconomic status (p<0.001), low fruit and vegetable consumption (p<0.001), drinking hot tea (p=0.004), excess missing teeth (p<0.001), current tobacco smoking (p<0.001), and opium use (p<0.001).

Median follow up time was 13.0 years, until January 1, 2020.

Conclusion: In a region of high ESCC incidence, GERD symptoms were significantly associated with decreased risk of ESCC in men, but not in women. Additional longitudinal studies using tailored GERD symptom questionnaires with objective assessment of acid and non-acid reflux are needed to explore reasons underlying this inverse association.

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Code: DA-21081
ICGH2021-89
Category: 1.1 اپیدمیولوژی

Impact of 2017 ACC/AHA guideline on prevalence, awareness, treatment, control, and determinants of hypertension: a population-based cross-sectional study in southwest of Iran

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Introduction: In 2017, the American College of Cardiology/American Heart Association (ACC/AHA) provided a new guideline for hypertension prevention and management. We aimed to update the prevalence, awareness, control, and determinants of hypertension based on this guideline in Khuzestan province, southwest of Iran, and to estimate the number of people who are eligible for non-pharmacologic and pharmacologic intervention.

Methods: This population-based cross-sectional study was conducted in Khuzestan, a large province in the southwest of Iran. Comprehensive information about the potential relating factors of hypertension was collected, blood pressure was measured, and anthropometric measurements were obtained. Moreover, the dietary pattern was evaluated in 2830 individuals, using a qualitative food frequency questionnaire.

Results: Among 30, 506 participants, 30, 424 individuals aged 20-65 years were eligible for the study. In comparison with the previous guideline released by the Joint National Committee (JNC8), the prevalence of hypertension in Khuzestan dramatically increased from 15.81 to 42.85% after implementation of the ACC/AHA guideline, which was more dominant in the male population and the 45-54 age group. The sex and age adjustment of the hypertension prevalence was estimated to be 39.40%. The percentage

of hypertension awareness, treatment, and control were 45.85%, 35.42%, and 59.63%, which dropped to 22.72%, 26.37%, and 28.94% after implementation of new guideline, respectively.

Conclusion: In the ACC/AHA guideline, a higher number of individuals with the pre-hypertension condition were shifted into the hypertension category and the level of awareness, treatment, and control were dramatically decreased, which highlight a great need to expand the public health infrastructure for further managing the substantial increased burden on healthcare system. However, further studies with population over 65 years are required to estimate the eligibility for antihypertensive treatment in this province after implementation of new guideline.

Send Date: 2021/09/10

Code: DA-21097
ICGH2021-90
Category: 7.8 Viral hepatitis B: clinical aspects

Harmonized Autophagy Versus Full-Fledged Hepatitis B Virus: Victorious or Defeated

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Introduction: Autophagy is a finely tuned process in the regulation of innate immunity to avoid excessive inflammatory responses and inflammasome signaling. In contrast, the results of recent studies have shown that autophagy may disease-dependently contribute to the pathogenesis of liver diseases, such as fibrosis, cirrhosis, and hepatocellular carcinoma (HCC) during hepatitis B virus (HBV) infection. HBV has learned to subvert the cell's autophagic machinery to promote its replication. Given the great impact of the autophagy mechanism on the HBV infection and HCC, recognizing these factors may be offered new hope for human intervention and treatment of chronic HBV. This review focuses on recent findings

viewing the dual role of autophagy plays in the pathogenesis of HBV infected hepatocytes.

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کد: DA-21072
ICGH2021-91
گروه : ۷.۷ هپاتیتهای ویرال: تظاهرات پایه

میزان شیوع ویروس هپاتیت D افراد HBsAg مثبت در جمعیت کوهورت آذر

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زمینه و هدف: ویروس هپاتیت D یـک RNA ویروس ناقص و فاقد کسـپید بـوده کـه بـرای تکثیـر بـه HBsAg ویـروس هپاتیـت B نیـاز دارد. ایـن مطالعـه بـا هـدف بـرآورد شـیوع HDV در بیمـاران HBsAg مثبـت در مطالعـه کوهـورت آذر ، شـمال غـرب ایـران انجـام شـد.
روش بررسـی: در این مطالعه مقطعی ، از ۴۹۴۹ شـرکت کننده در مطالعه کوهـورت آذر ، ۵۱ بیمار HBsAg مثبـت انتخاب شـدند. پنـج نفر از ایـن تعـداد از شـرکت در مطالعـه امتنـاع ورزیدنـد ودر نهایت ۴۶ نفر انتخاب و وارد مطالعه شـدند. تشـخیص Anti-HDV IgG سـرم بیماران بـه روش (Enzyme-Linked ImmunoSorbent Assay) الایـزا انجـام شـد.
یافته ها: در این مطالعه ، میانگین سنی بیماران HBsAg مثبت ۹/۱۴±۵۰/۰۶ سـال و ۵۸/۷ درصـد مرد بودنـد. فقط یک نفـر از ۴۶ بیمار، مبتلا به HDV بودند. بنابراین شیوع عفونت HDV در بیماران مبتلا به آنتی ژن سطحی ویـروس هپاتیـت B مثبـت ۲/۱۷ درصـد (0.1-11.5 :CI .95%) بـود. بیمـار Anti-HDV مثبـت سـابقه بسـتری بیمارسـتانی و سـابقه خدمات دندانپزشکی داشت.
نتیجه گیری: براساس نتایج، شیوع عفونت HDV در بیمارانHBsAg مثبت ۲/۱۷ درصـد بـود. ایـن مطالعـه نشـان داد شـیوع عفونـت هپاتیـت D درمنطقه آذر کوهورت پائین تر از سایر مطالعات گزارش شده از نواحی مختلف ایران است.
تاریخ ارسال : ۲۰۲۱/۰۸/۳۱

Code: DA-21070
ICGH2021-92
Category: 7.9 Viral hepatitis C: clinical aspects

Hepatitis C screening, diagnosis, and treatment scale-up among people who use drugs: micro-elimination in an Iranian city

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Introduction: WHO HCV elimination targets include increased diagnosis (90%) and treatment uptake (80%) by 2030. This study evaluated the impact of a micro-elimination intervention among people who use drugs in Rafsanjan, Iran.

Methods: This observational study is evaluating an intervention to scale-up of direct-acting antiviral (DAA) treatment to reduce HCV RNA prevalence (i.e. micro-elimination) in Rafsanjan, Iran (population 200, 000). Between October 2019 and April 2021 (18 months), participants are recruited from one prison, 35 OAT clinics, four residential addiction treatment centers, one HIV clinic, and a newly established HCV clinic (integrated within existing HIV services). All people attending the study sites are invited to participate. Intervention entails on-site rapid HCV antibody testing, venepuncture sampling for HCV RNA testing (if antibody positive), and DAA dispensing for people with HCV. The uptake of HCV diagnosis and treatment and HCV RNA prevalence are compared at baseline and 12 months post-intervention.

Results: During October 2019-March 2020, 3, 648 people were enrolled. Median age was 40 years (IQR 33-48), majority were male (95%), and reported a history of drug use (injecting and/or non-injecting, 89%). Overall, 6% reported a history of injecting drug use (IDU); of whom, 8% reported injecting in the past year. HCV antibody prevalence was 7% (241/3, 648), including 58% (119/206), 4% (108/2, 920), and 3% (14/414) among people with a history of IDU, non-injecting drug use, and no drug use, respectively. Among those with detectable HCV RNA (181/241), 97% initiated DAA therapy, including 98% (94/96), 96% (71/74), and 100% (11/11) among people with a history of IDU, non-injecting drug use, and no drug use, respectively.

Conclusion: This initiative developed a multi-stakeholder collaboration and implemented Rafsanjan's first HCV program within six months. The preliminary findings, including feasibility of recruitment model and high treatment uptake, are encouraging with regard to HCV micro-elimination.

Send Date: 2021/08/30

تظاهرات بالینی، آزمایشگاهی و هیستوپاتولوژیک، یافته های الاستوگرافی و پیامد درمان در بیماران هپاتیت اتوایمیون شهرستان ساری

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زمینــه و هــدف: هــدف از ایــن مطالعــه بررســی تظاهــرات بالینــی، آزمایشــگاهی و هیســتو پاتولوژیــک، یافتــه هــای الاســتوگرافی و پیامــد درمــان در بیمــاران هپاتیــت اتوایمیون و بررســی عوامل مختلف در پاســخ به درمان در شهرســتان ســاری می باشــد که تا پیش از این انجام نشــده بود.

روش بررســی: این مطالعه بصــورت روش توصیفی اطلاعــات دمو گرافیک وکلینیکی و پاتولوژیک و الاســتوگرافیک کبدی و سرولوژیک ۱۳۶بیمار هپاتیت اتوایمیــون مراجعه کننده به بیمارســتان امام خمینــی و کلینیکهای تخصصی گوارش ساری در پرسشــنامه هایی که به همین منظور طراحی شده، ثبت شد. در نهایت اطلاعات بدســت آمده با اســتفاده از آزمونهای آماری توصیفی شامل تعییــن درصد و فراوانی و برای بررســی ارتباط بین متغیرهــای مورد مطالعه و پاسخ به درمان از رویه لجستیک نرم افزار SAS بررســی .مورد آنالیز قرار گرفت

یافته ها: نتایج نشــان داد ۱۶.۹٪ بیماران مرد و ۸۳.۱٪ بیماران زن بودند. سن متوسط بیماران ۴۱/۵ سال و متوسط سن بیماران سیروزی ۴۶ سال بود. هچنین ۱۶.۲٪ بیماران مبتلا به ســندرم همپوشــان بودند که درصد بیشــتر مربوط به بود. ۳۳.۸ ٪ بیماران مبتلا به بیماری اتوایمیون خارج کبدی بودند AIH/PBC و بیشــترین بیماری مربوط به کــم کاری تیروئید بود. ۱۵.۴٪ افراد دارای فامیل مبتــلا به بیماری های اتوایمیون بودند. از این میان کم کاری تیروئید با شــیوع ۱/۸ درصد بیشــترین فراوانی و ســپس دیابت ۲.۸٪ بود. میزان پاسخ به درمان اولیه ۷۸٪ به صورت کامل و ۳.۴٪ بصورت نســبی و ۱۸.۷٪ بصورت عدم پاســخ بود. میزان بروز ســیروز به عنوان تظاهر اولیه ۲۲.۸٪ و میزان بروز سیروز جدید ۱۲.۵٪ بود. هچنین ۱۸٪ افراد دچار عود شــدند کــه از این میان بدنبال درمان ۶۶.۷ ٪ به بهبودی رسیدند. و ۳۳.۳ ٪ دچار شکست درمان و سیروز شدند. بطور کلــی ۶ بیمار تحــت پیوند قرار گرفتند و ۴ بیمار فوت شــدند و دو بیمار مبتلا به هپاتوســلولار کارسینوما شدند.در بررســی ارتباط عوامل مختلف دموگرافیک ارتباط معنی PT, PLT و بالینی و بیوشــیمیایی با پاســخ به درمان دیده شده بالا با PT داری و پاسخ به درمان داشت، بدین صورت که سطح پلاکت پایین و بالا با PT به احتمال بیشتر عود همراهی پاسخ به درمان کمتری همراهی داشت و داشت. همچنین بین سیروز و غیر سیروز بودن در زمان تشخیص بیماری ارتباط معنی داری با پاســخ به درمان وجود داشــت بطوری که افراد سیروزی پاسخ به درمان کمتری را تجربه کردند. همچنین هیچکدام از عوامل ذکر شــده با سیروز جدید ارتباطی نداشــتند.در میان بیماران مقاوم به درمان با اســتفاده از درمان خط دوم ٪۶۶.۷ به بهبودی رســیدند در بررســی ارتباط نتایج فیبرواسکن اولیه و فالــوآپ کاهش فیبر اسکن بدنبال درمان در فیبرو اســکن بطور واضح دیده شــد.

نتیجــه گیــری : یافته هــای ایــن مطالعه بــه طور کلــی نشــان داد که مــی تــوان فیبرواســکن کبد را بــه عنــوان یــک روش ارزیابــی فیبــروز در بیمــاران در طــی دوران درمــان و پــس از ان پیشــنهاد کــرد.

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Category: 10.7 نارسایی حاد کبدی - پیوند / جراحی

Comparison of portal vein color Doppler characteristics in the liver transplant patients with and without persistent thrombocytopenia and splenomegaly

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Introduction: Thrombocytopenia and splenomegaly are two complications of portal hypertension in the patients with end stage liver disease. We expected resolution of them after liver transplantation (LT) but they persist in some patients. The purpose of this study was to evaluate the portal vein doppler findings in patients with and without these complications after LT to identifying factors associated with their pathogenesis and etiologies.

Methods: Adults with thrombocytopenia and splenomegaly at the time of LT were assessed and divided into the two groups: with and without persistent splenomegaly and thrombocytopenia defined as persistently low platelet count and high spleen size at least 12 months after LT. Color doppler ultrasound was performed for all patients. The laboratory, ultrasound and clinical data of patients were compared between the two groups.

Results: Thirty-nine patients as case and 39 as control group were selected. Etiology of transplant, age, sex, duration of transplant, MELD score did not differ significantly between the two groups. The anastomose ratio (the portal vein diameter at anastomose site to preanastomose site) was lower and the portal-blood flow velocity at the anastomosis site was higher in the case group. The platelet counts after LT correlated with splenic diameter, anastomose ratio, pretransplant spleen size and pretransplant platelet counts (r=-0.75, 0.41, -0.64 and 0.56; respectively). Multivariable logistic regression analysis showed pretransplant spleen size and anastomose ratio in the portal vein after LT associated with persistent thrombocytopenia and splenomegaly.

Conclusion: In cases without improvement of splenomegaly and thrombocytopenia after transplant, should be considered a possible indicator of stenosis in the portal vein at anastomose site. Splenomegaly before transplant is closely associated with delayed recovery of spleen size and platelet count after LT.

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Category: 7.6 Cirrhosis and complications: clinical aspects

Assessment of endosonographic portal hypertension parameters in cirrhotic patients compared to non-cirrhotic patients: Across sectional study in 2018

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Introduction: Early diagnosis and treatment portal hypertension and varices can reduce the mortality of cirrhotic patient. The aim of this study was to assess portal hypertension parameters in cirrhotic patients by endosonography (EUS).

Methods: During 6 months, new cases of cirrhosis referred for variceal screening enrolled in this study. Patients who underwent EUS for CBD stone during the same period served as controls. We assessed the portal, splenic, and azygos veins diameter in both group. We determined the relationship between degrees of hepatic dysfunction in cirrhotic group to portal, splenic, and azygos veins diameter. Presence of esophageal and gastric varices in cirrhotic patient were assess and compared to conventional endoscopy. P-value<0.05 was considered statistically significant.

Results: During the study period, there were 17 patients (11male) with cirrhosis and 31 control subjects (11 males) enrolled. The mean ages of cases were 45.60±12 years and controls was 49±15 years. Patients with cirrhotic group had higher mean portal, splenic, and azygos vein diameters than control group but was not statistically significant. From 17 cirrhotic patients, 7 patients had esophageal varices during conventional endoscopy and 9 patients in EUS, also only one patient had gastric varices in conventional endoscopy versus 7 patients by EUS, that was statistically significant (P-value=0.031).

Conclusion: EUS compared with conventional endoscopy allows for the collection of valuable data from the diagnosis of portal hypertension, esophageal and gastric varices.

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