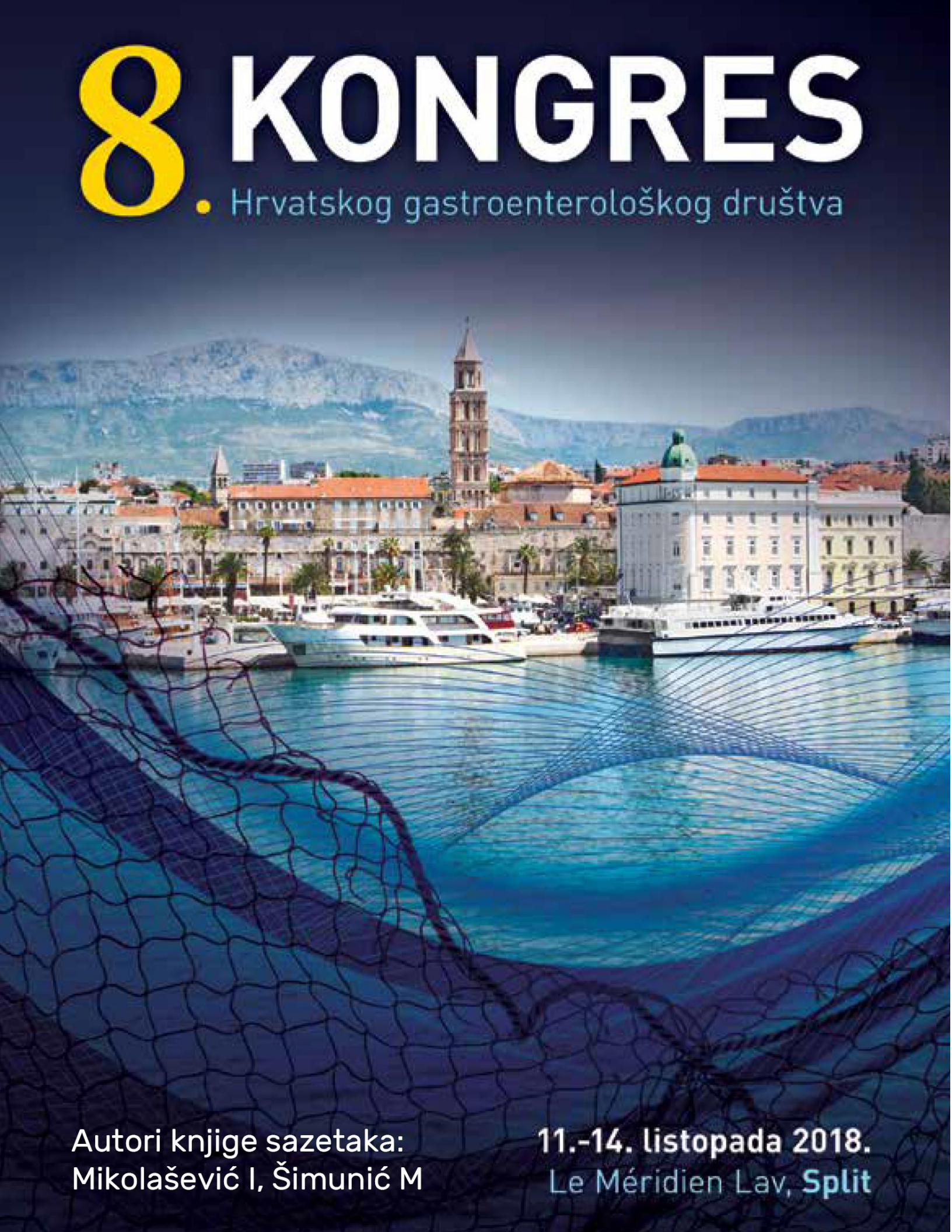
Iskustvo liječenja kronične hepatitis C infekcije direktno djelujućim lijekovima u Kliničkoj bolnici Merkur

Mijić, Maja; Jelić, Ana; Ostojić, Ana; Dinjar Kujundžić, Petra; Sobočan, Nikola; Lalovac, Miloš; Kunac, Nino; Ilić, Diana; Borčić, Tina; Bogadi, Ivan; ...

8. KONGRES

Hrvatskog gastroenterološkog društva



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Autori: Dinjar Kujundžić P, **Ostojić A**, Mijić M, Jelić A, Sobočan N, Lalovac M, Kunac N, Ilić D, Borčić T, Bogadi I, Mišetić Dolić Z, Škurla B, Mrzljak A, Kocman B, Vidjak V, Gašparov S, Filipec Kanižaj T

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Autori: **Božin T**, Tješić Drinković I, Bokun T, Brkljačić B, Čurić J, Aralica G, Kujundžić M, Salkić N, Grgurević I

9. FIRST EXPERIENCES WITH VEDOLIZUMAB THERAPY IN A CROATIAN TERTIARY CENTER
Autori: **Oršić Frič V**, Borzan V, Borzan B

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Autori: **Jelaković M**, Sremac M, Knežević Štromar I, Premužić M, Ostojić R, Krznarić Ž

RELATIONSHIP BETWEEN COFFEE CONSUMPTION AND NAFLD

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Abstract:
Background and aim: There is emerging evidence for the positive effects of coffee consumption in patients with liver disease. Our aim was to determine the effects of coffee intake on a liver enzymes, inflammation parameters, non-invasive elastographic markers of liver steatosis and fibrosis, as well as to degree of NAFLD detect by liver biopsy.
Patients and methods: In this cross-sectional study we have analyzed 575 patients with NAFLD. There was 273 (47.5%) man and the mean age was 59±13 years. NAFLD was detected by controlled attenuation parameter (CAP) and liver stiffness measurements (LSM) assessed by transient elastography (TE). In part of the patients (113) the liver biopsy was done as well. Coffee drinking was recorded using semi-quantitate questionnaire and categorized as yes vs. no and as 0, 1, 2, ≥3.
Results: The great majority were coffee drinkers (77.6%). Patients were divided into four subgroups of patients depending on the number of cups of coffee per day (0, 1, 2, ≥3). Firstly we have analyzed the influence of coffee drinking on the elastographic parameters of liver steatosis and fibrosis (CAP and LSM). Interestingly, patients that were drinking more cups of coffee had higher CAP, while the same group of patients had lower LSM values in comparison to nondrinkers or those who were drink only one cup of coffee per day, although that was not statistically significant. Next we have investigated the influence of coffee drinking on biopsy findings. There was no significant difference in the degree of NASH, although patients who were not coffee drinkers had lower degree. On the other hand those who drank more coffee had the lowest degree of fibrosis, although this difference is not statistically significant. Furthermore, drinking coffee had no influence on liver enzyme levels. Finally, drinking coffee had beneficial influence on ferritin and CRP values as inflammation parameters.
Conclusion: according to our results drinking coffee have beneficial effect on degree of fibrosis detected by TE (LSM) and liver biopsy, as well as on inflammation parameters.

Prikaz rezultata probira na hepatitis C u Splitsko-dalmatinskoj županiji

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Abstract:
U Hrvatskoj manje od 2% stanovnika ima anti-HCV protutijela i prema tome se Hrvatska ubraja u skupinu zemalja s niskom prevalencijom anti-HCV-a. Od 1993. do 2017. godine u Splitsko-dalmatinskoj (SD) županiji prijavljeno je 1613 osoba s HCV infekcijom. Budući da je procjena da u županiji ima barem još 3000 osoba s HCV-infekcijom koje nisu prijavljene, poduzet je aktivniji pristup u pronalaženju takvih bolesnika. Sastavljen je tim koji se sastoji od zdravstvenih i nezdravstvenih djelatnika te je poduzet čitav niz aktivnosti usmjerenih prema skupinama s većom incidencijom HCV-infekcije. Unutar terapijskih zajednica za prevenciju i liječenje bolesti ovisnosti proveden je probir HCV-infekcije, a slične aktivnosti poduzete su i u udrugama veterana domovinskog rata u kojima su testirani branitelji koji u anamnezi imaju podatke o ranjavanju, operacijama i primanju krvi i krvnih pripravaka do 1993. godine. Aktivniji pristup koji se ostvaruje dolaskom liječnika bolesniku, obavljanjem pregleda i dogovaranjem o daljnjem praćenju i liječenju, pokazao se za te skupine bolesnika učinkovitijim nego klasični pristup pri kojem bolesnik dolazi liječniku u ordinaciju. Kao rezultat svih ovih aktivnosti povećan je broj novootkrivenih HCV infekcija u stanovnika SD županije u posljednje tri godine, a mnogima od njih je skraćen put do liječenja.

Overview of the screenig results on hepatitis C in Split-Dalmatia County
Less than 2% of Croatian population have positive antibodies to HCV and therefore is Croatia recognized as a country with low HCV prevalence. From 1993 to 2017 there were 1613 reported cases of HCV infection in Split-Dalmatia County (SDC). Since it is estimated that there are at least 3000 non-registered persons with HCV infection in the SDC, a more active approach in identifying these patients has been initiated. A multidisciplinary team has been established to initiate a number of activities aimed at groups with higher incidence of HCV. Screening for HCV infection was implemented within the therapeutic communities for prevention and treatment of addicition. Similar acitivities have been taken in veterans' associations for those who were

wounded, had a surgery or received blood transfusion in the period up to 1993. A more active approach is achieved by physicians' active search for patients and regular check-up and treatment plans, which proved to be more effective than the classical patients' help-seeking approach. As a result of these activities, an increased number of new HCV infections in the population of SDC was identified in the last three years, and the waiting time for treatment was shortened.

Inflamatorni fibroidni polip (Vanekov tumor), polip terminalnog ileuma sa znakovima intususcepcije: prikaz slučaja

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Abstract:
Inflamatorni fibroidni polip (Vanekov tumor), polip terminalnog ileuma sa znakovima intususcepcije: prikaz slučaja

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KUTEROVAC A, OB "Dr.Ivo Pedišić" Sisak, Sisak, Hrvatska; Nikolić M, KBC „Sestre milosrdnice“, Zagreb, Hrvatska; Filipović-Čugura J, KBC „Sestre milosrdnice“, Zagreb, Hrvatska; Demirović A, KBC „Sestre milosrdnice“, Zagreb, Hrvatska; Ivana Babić Gvozdenović, OB Pula, Pula, Hrvatska

Uvod

Inflamatorni fibroidni polip (IFP) je rijetka, lokalizirana, submukozna tvorba gastrointestinalnog sustava prvi puta opisana od češkog patologa Josefa Vaneka 1949. godine (1). Ostala upotrebljavana nazivlja su eozinofilni granulom, submukozni fibrom ili inflamatorni pseudotumor. Antrum želuca (70%) je najčešće sijelo, iza kojeg slijedi ileum (20%), jejunum, rektum, žučnjak, jednjak i duodenum (2,4,5). Veličina IFP-a obično korelira sa simptomima. Kada se prezentiraju simptomatski, klinička prezentacija ovisi o lokalizaciji tumora. Simptomi mogu biti blagi poput mučnine, povraćanja, dispepsije, boli u abdomenu ili promjena karaktera

pražnjenja crijeva (3). Također se mogu prezentirati krvarenjem iz gastrointestinalnog sustava, anemijom i opstrukciijom crijeva. Etiologija nije poznata no povezuje se s aktiviranim mutacijama PDGFRA gena. Histološki potječu od submukoznog sloja s karakterističnom vaskularnom i fibroblastnom proliferacijom te inflamatornim odgovorom, dominantno eozinofila, nerijetko i s mukoznom ekstenzijom. Nisu opisivane displastične promjene ni rekurencije tumora (4).

Prikaz slučaja

Kod asimptomatskog 68-godišnjeg muškarca, u sklopu praćenja ranije bilateralne adrenalektomije i operacije desne pretklijetke zbog metastaza melanoma nepoznatog primarnog sijela, učinjena je gastroenterološka obrada zbog PET-CT nalaza solidnog mekotkivnog tumora terminalnog ileuma sa znakovima intususcepcije crijeva.
Laboratorijski nalazi, tumorski markeri, kromogranin A, nalaz stolice na antigen H.pylori te sonografski nalaz abdomena urednih su vrijednosti. Gornjom i donjom endoskopijom nije pronađeno značajne patologije. PET-CT-om je vizualiziran solidni mekotkivni tumor bez izrazitije opacifikacije kontrastom, promjera oko 4x3 cm u distalnom dijelu ileuma, oko 10-15 cm od valvule Bauchini uz znakove intususcepcije ileuma (Slika 1). Intraoperacijski se nađe na oko 20 cm oralno od valvule Bauchini tumorska tvorba unutar lumena ileuma s invaginacijom (Slika 2). Učinjena je djelomična resekcija ileuma uz resekciju cekuma, a kontinuitet probavne cijevi uspostavljen je formiranjem ileokolonalne anastomoze. Patohistološkom analizom utvrđeno je da se radi o inflamatornom fibroidnom polipu – Vanekovom tumoru (Slika 3 i 4).

Zaključak

Inflamatorni fibroidni polipi su najrjeđi benigni mezenhimalni tumori tankog crijeva. Predilekcijska mjesta su u antrumu (70%) i ileumu (20%) (2). IFP tankog crijeva je specifičan jer se obično prezentira intususcepcijom crijeva (5), iako se najčešće otkriju slučajno u asimptomatskih bolesnika (3). Ovaj slučaj asimptomatskog bolesnika predstavlja rijedak primjer IFP-a terminalnog ileuma sa znakovima intususcepcije.

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Povećana arterijska krutost u pacijenata s upalnim bolestima crijeva – sličnost s pacijentima s arterijskom hipertenzijom

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Abstract:
Cilj: recentnija istraživanja su pokazala kako su kronične upalne bolesti povezane s ranijim nastupom ateroskleroze. Cilj istraživanja je pokazati kako pacijenti s upalnim bolestima crijeva imaju povećanu arterijsku krutost, što je povezano s duljinom trajanja bolesti. Također, cilj je usporediti biljege arterijske krutosti između pacijenata s upalnim bolestima crijeva i pacijenata s arterijskom hipertenzijom.
Metode: Ukupno 89 pacijenata s upalnom bolesti crijeva je uključeno u istraživanje, uz kontrolnu skupinu od 73 pacijenta s dobro kontroliranom arterijskom hipertenzijom. Neinvazivni mjerni uređaj je korišten za mjerenje brahijalnog krvnog tlaka i procjenu brzine pulsnog vala (eng. pulse wave velocity, PWV) u obje skupine pacijenata.
Rezultati: pacijenti s upalnom bolesti crijeva i patološkim nalazom PWV su bili signifikantno stariji te su imali dulje trajanje bolesti ($p < 0.05$). U druge dvije dobne kvartile PWV je bila viša u bolesnika s upalnim bolestima crijeva u odnosu na bolesnike s hipretenzijom.
Zaključak: Kronična upala u pacijenata s uaplnim bolestima crijeva može biti odgovorna za ubrzanu aterosklerozu i povećanu arterijsku krutost. Upalne bolesti crijeva te duljina trajanja bolesti trebali bi biti rizični faktori za supkliničko oštećenje organa, kao što je i arterijska hipertenzija.

AMYLOIDOSIS WITH GASTROINTESTINAL INVOLVEMENT

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Abstract:
INTRODUCTION
Amyloidosis is defined as an extracellular deposit of the abnormal protein fibrils. There are six types of the amyloidosis: primary, secondary, hemodialysis-related, hereditary, senile, and localised. Primary amyloidosis is associated with monoclonal light chains in serum and urine, and secondary amyloidosis is associated with inflammatory, infectious and malignant diseases. Amyloidosis of the gastrointestinal tract is common in primary and secondary amyloidosis. The clinical symptoms of the amyloidosis in GI tract depend of the amount and the localisation of the amyloid deposits. Patients with gastrointestinal amyloidosis can present with abdominal pain, dysmotility, diarrhea, malabsorption, and weight loss. Endoscopic findings are nonspecific.
CASE REPORT
We presented the case of a patient who suffered from diabetes and heart decompensation and who has been admitted to the hospital because of the worsening of the mentioned diseases. The patient had lost more than 10 kg in the last 6 months. During the hospital stay evacuation of the pleural effusion has been made and MSCT and abdominal MR were performed, and no malignancy was found. Clinical picture was dominated by malnutrition and cachexia. Patient was treated with supportive therapy and in spite of all the measures taken, the patient died. The autopsy finding was the marked amyloidosis of the gastrointestinal tract. Amiloid deposits were found in the liver, pancreas and the heart, together with the amyloid deposits in the blood vesel walls of the gastrointestinal tract.
CONCLUSION
Gastrointestinal amyloidosis is common in primary and secondary amyloidosis. Additionally, gastrointestinal amyloidosis should be suspected in patient with malnutrition and weight loss and with nonspecific endoscopic findings. This case emphasises the importance of the early recognition of the sistemic amyloidosis so the managment can be instituted.

Neobična klinička prezentacija disekcije aorte

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Abstract:
Uvod

Disekcija aorte predstavlja prodor krvi kroz razdor intime te odvajanje intime i medije uz stvaranje lažnog lumena. Simptomi su iznenadna pojava jakih bolova u prsima ili leđima. Stanje se dijagnosticira radiološkim metodama, a liječi se kirurški ili medikamentozno. Disekcije aorte se klasificiraju anatomski. DeBakeyev sustav klasifikacije razlikuje tip I disekcije koje počinju u uzlaznoj aorti i šire se najmanje do luka aorte, tip II disekcije koje počinju i ograničene su na uzlaznu aortu, te tip III disekcije koje počinju u silaznoj prsnoj aorti ispod polazišta lijeve podključne arterije s širenjem distalno ili proksimalno. U Stanfordskom sustavu klasifikacije tip A disekcije zahvaća uzlaznu aortu, dok tip B zahvaća silaznu prsnu aortu.

Prikaz slučaja

72 godišnja bolesnica s anamnezom arterijske hipertenzije hospitalizirana je na Kliniku za kardiologiju s kliničkom slikom intermitentnog totalnog bloka atrioventrikulskog provođenja. Tijekom boravka na Klinici bolesnica se žali na bol u epigastriju te je imala hematoheziju. Učinjena je gastroenterološka obrada. Ezofagogastroduodenoskopijom se vizualizira edematozna te vulnerabirna sluznica želuca i duodenuma promjenjene po tipu ishemije. Kolonskopijom se vizualizira hematozirani sadržaj koji se slijeva iz gornjeg dijela GIT-a, uz blijedu, urednu sluznicu.
Potom slijedi MSCT angiografija aorte, trunkusa coeliacusa i mezenteričkih arterija kojom je utvrđena disekcija aorte Stanford A, DeBekey I koja se proteže od aortne valvule do područja zajedničkih zdjeličnih arterija. U descendentnom dijelu aorte disekcija ulazi u trunkus coeliacus te gornju mezenteričnu arteriju onemogućavajući adekvatnu krvnu opskrbu organa.

Bolesnica je prezentirana kardiokirurgu, međutim s obzirom na opseg ishemije zahvat nije bio indiciran.
Konzultiran je i interventni radiolog no intervencijsko liječenje nije bilo tehnički izvedivo.
Bolesnica je liječena medikametoznom terapijom, međutim ubrzo ulazi u kardiorespiratorni arest te umire.

Zaključak

U algoritmu obrade disekcije aorte endoskopija nije uvriježena metoda. U ovom slučaju se incijalno nije posumnjalo na navedeno stanje, a tranzitorni totalni AV blok je zamaskirao dijagnostiku do pojave hematohezije. U pretraženoj literaturi nismo našli endoskopke slike ishemije na razini trunkusa celijakusa/art.mesen. superior u čijoj je podlozi bila disekcija aorte, te je ovaj slučaj vrlo edukativan za kliničare.

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First experiences with vedolizumab therapy in a Croatian tertiary center

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Abstract:
Introduction: Vedolizumab is a monoclonal antibody against α4β7 heterodimer on leukocyte surface that selectively inhibits gut leukocyte homing. It is an effective therapeutic option in patients with ulcerative colitis and Crohn's disease, with a good safety profile. Aim of this study is to present our first data on vedolizumab therapy in our IBD patients.
Materials and Methods: We retrospectively collected data of patients who received vedolizumab at the Department of Gastroenterology and Hepatology of Clinical Hospital Center Osijek from May 2016 till the end of November 2017. Data on diagnosis, disease duration, previous therapy, previous surgical procedures, duration of vedolizumab therapy, response and adverse events were collected.
Results: During observed period, 21 of our patients received vedolizumab, 13 patients with Crohn's disease and 5 patients treated for ulcerative colitis. Three patients were treated for refractory pouchitis. Six patients (29 %) were anti-TNF naïve and 15 patients (71 %) received one or more anti-TNF drugs in prior therapy. Only five patients had disease duration prior to therapy of less than 5 years. Two patients did not respond to the induction therapy and 17 (81%) had clinical remission after the induction period. Sixteen patients (76%) were still in remission at the time of data collection (median follow up period 9 months; min 2, max 15 months). There was no statistically significant difference between CRP levels at the beginning of vedolizumab therapy and after 6 or 12 months (p=0,198 and p=0,953, respectively). Endoscopy after 6-12 months was done in 13 of 14 patients who were receiveing therapy for at least 6 months. Mucosal healing was seen in 9 of those 13 patients. Of adverse events, two patients had urticaria (after which the drug was stopped) and one patient had CMV colitis.
Conclusion: Even in our difficult to treat group of patients (anti-TNF experienced and with long disease duration), vedolizumab was showed to be an effective and safe therapeutic option.

Pharmacoeconomic analysis of different intravenous iron replacement therapies

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Abstract:
Introduction
Iron-deficiency anaemia develops in various gastrointestinal conditions. In patients with severe anaemia or intolerance to oral iron, treatment with intravenous iron is indicated.
Our aim was to compare costs of iron replacement therapy (IRT) with new intravenous iron preparations and sodium ferric gluconate (SFG) in a cohort of patients treated at our day-care unit.

Methods
We collected data on 86 consecutive patients who received intravenous IRT with either ferric carboxymaltose (FCM) or iron III isomaltoside (IIM) in day-care unit of Department of Gastroenterology and Hepatology of CHC Osijek, Croatia from October 2016 till March 2017. Age and data on iron preparation used, total dose of iron administered and number of infusions per patient were collected.
Costs of intravenous iron together with infusion-related costs, costs of personnel and non-hospital costs, such as time off-work, were considered.
Prices of the drug and other infusion-related materials were obtained from hospital pharmacy. Nurse working hours were calculated as minimal time needed for infusion with addition of 15 min per visit for infusion preparation and administration. Patients from 18-65 years of age were considered as working active. One visit to day-care unit was considered as one day off-work. Cost of off-work day was calculated as 70% of average daily salary in Croatia plus one day salary for a replacement.
Total calculated costs of therapy with FCM and IIM were compared to projected costs of therapy with SFG for same number of patients with equivalent dose of iron.

Results
During 6 months, 86 patients received 230 vials of either FCM or IIM. If the same number of patients received the equivalent dose of iron as SFG, costs of the drug together with infusion related costs would be 5.2 times lower. On the other hand, with SFG therapy number of infusions

would be 13.5 times greater with 18.7 times more nurse working hours needed. Considering higher number of infusions on SFG therapy, costs of off-work days would be 14.1 times greater for 49 working active patients of our cohort.

Conclusion

SFG is less expensive than FCM and IIM when considering only drug price and therefore often considered as preferred therapy from the aspect of hospital and department management. Our aim was to show that all relevant costs such as costs of personnel and time off-work should be taken into account when considering different IRTs. Overall costs of intravenous iron therapy support the use of new preparations.

Chronic use of statins and aminosalicylic acid and incidence of postERCP acute pancreatitis. Preliminary data from the STARK study, a prospective international, multicenter, cohort study

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Abstract:
Background and aim: Acute pancreatitis is the most frequent complication of endoscopic retrograde cholangiopancreatography (ERCP). Some prophylactic strategies have been investigated to prevent it, such as the use of pancreatic stents or the use of peri-procedural NSAIDs; the incidence of post-ERCP acute pancreatitis (PEP) in patients consuming aminosalicylic acid (ASA), an NSAID, is unclear. Statins are widely used lipid-lowering drugs and recent studies suggest that chronic statin intake may be associated with a lower incidence of acute pancreatitis. Our aim is to investigate whether chronic statin and/or ASA intake is associated with a lower incidence of PEP.
Patients & Methods: Stark project (Statin and ASA for Risk of PEP) is a prospective, international, multicenter, cohort study, developed under the auspices of the Pancreas 2000

educational program. Consecutive patients undergoing ERCP were included prospectively. Demographic and medical data were retrieved by anamnesis. The patients were followed-up to detect those with PEP. Outcomes for PEP were retrieved from medical records. The final sample size was estimated to be 1,016 participants. A multivariate analysis (binary logistic regression) was performed; the variables included in the model were: statin intake, ASA intake, sex, age, center, difficult cannulation, procedure time, sphincter of Oddi dysfunction or previous episodes of acute pancreatitis. Adjusted odds ratios (aOR) were calculated.
Results: 638 patients were included for this preliminary analysis. Median age was 68.7 years (67.7-69.8), 333 (52.2%) patients were male, 41 patients developed PEP (6.4%), 16 patients (8.6%) under statin treatment versus 25 patients (5.6%) who were not consuming statins (p¼ 0.160). The multivariate analysis showed an aOR of 1.86 (0.874-3.986), p¼0.107 for PEP incidence in statin users. Regarding ASA consumption, 6 patients (5,8%) under ASA treatment versus 35 patients (6.6%) who were not consuming ASA developed PEP (p¼ 0.782). The multivariate analysis showed an aOR of 0.837 (0.292-2.399), p¼0.740 for PEP incidence among ASA users.
Conclusion: Our preliminary data suggest that chronic use of statins and/or ASA is not associated with a lower incidence of PEP.

PREVENTION OF INFECTIOUS COMPLICATIONS IN PREDICTED SEVERE ACUTE PANCREATITIS - A SINGLE CENTER RANDOMIZED CONTROLLED TRIAL

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Abstract:
Background and aim: It is mostly accepted there is no need for routine antibiotic prophylaxis in mild cases of acute pancreatitis (AP). However, evidence of beneficial effects on preventing infectious complications in severe acute pancreatitis (SAP) is still controversial with imipenem showing potential reduction of infected pancreatic necrosis. We aimed to investigate the prophylactic use of imipenem for prevention of infectious complications in predicted SAP.
Patients and methods: Consecutive patients with AP and an APACHE II ≥8 were randomly assigned in a double-blind manner to receive imipenem 500 mg i.v. three times daily (group 1) or an identical placebo (group 2) ideally for ten days. Infectious complications including infected pancreatic necrosis, pneumonia, urinary tract infection (UTI), positive blood cultures, sepsis, and other infections were determined as the primary study outcome. We excluded patients with prior AP and chronic pancreatitis, active malignancy, known immune deficiency, active infection at admission, concomitant antibiotic treatment present within 72 hours before enrollment, pregnant and breasfeeding patients, those younger than 18 years, and unwilling to participate. Concomitant treatment including enteral nutrition was given equally and according to current recommendations in both groups.
Results: A total of 98 patients were randomized, 49 to each group. Patients were similar according to demographic characteristics and average disease severity scores on admission. Infective complications were present in 10/49 patients in group 1 and 12/49 patients of group 2 (P=0,81). There was no significant difference in specific infective complications: infective pancreatic necrosis (3/49 vs. 2/49), pneumonia (3/49 vs. 2/49), UTI (3/49 vs. 5/49), positive blood cultures (1/49 vs. 3/49), sepsis (1/49 vs. 2/49), and other infections (4/49 vs. 3/49),

respectively. We found no significant differences in mortality (P=1,00), organ failure (P=0,39), and local complications (P=0,31). Occurrence of mycotic infections was similar in both groups. Conclusion: Our results add to the available evidence that there is currently no ground to support the routine use of prophylactic antibiotics in patients with pedicted SAP.

Meta-analysis and trial sequential analysis of prophylactic antibiotics for acute pancreatitis

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Abstract:
Backround and aim: Prophylactic antibiotics (AB) are not recommended for treatment of acute pancreatitis (AP). Their use is still widespread despite several trials showing no firm evidence of efficacy. To evaluate the effects of prophylactic antibiotics (PAB) for AP in a meta-analysis and investigate the need for further research by trial sequential analysis (TSA).
Patients & methods: Medline, Scopus and Web of Science were searched for randomized clinical trials assessing prophylactic use of AB in AP. Primary outcomes were all infectious complications and mortality. Secondary outcomes comprised infected pancreatic necrosis (IPN) and other specific infections, organ failure, surgical interventions and length of hospital stay. TSA was performed for primary outcomes, and secondary outcomes with significant results at a level of α=0.05 and power of 80%. Risk of bias was assessed using the Cochrane tool for bias assessment. Results for dichotomous outcomes were expressed as risk ratios (RRs) with 95% confidence intervals (CIs) and continuous results were expressed as mean differences (MDs) with 95% CIs.
Results: A total of 18 trials with 1134 pts were included in the analysis. PAB were received by 576 pts, while 558 were assessed as controls. Most of trials were assessed as being of high risk of bias. Overall mortality rate was similar in both groups with RR 0.85 (95% CI 0.64-1.14; P=0.27; I2=0%), but the risk for infectious complications was significantly reduced in pts receving PAB (RR 0.60; 95% CI 0.49-0.74; P<0.00001;I2=56%). This reduction was mainly due to the decreased risk of sepsis (RR 0.43; 95% CI 0.25-0.73; P=0.002;I2=0%) and urinary tract infections (RR 0.46; 95% CI 0.25-0.86; P=0.02;I2=11%), while a trend in risk reduction of IPN was shown with RR 0.78 (95% CI 0.60-1.00; P=0.05;I2=0%). There was no significant difference in risk of other infections, fungal infections, organ failure and surgical interventions. Length of hospital stay was diminished in the intervention group by MD -6.65 (95% CI -8.86 to -4.43; P<0.00001;I2=0%) days. For the detection of RRR of 30% in a 10% mortality rate among controls the required sample size is 2714 pts, while the number of included pts is 1076. A 30% RRR of 15% rate of IPN among controls requires 1725 pts, while only 959 are included so far. A 30% RRR of 40% rate of infectious complications has been achieved at 526 included pts, although the estimated sample is 1113. To show a minimally relevant mean shortening of hospital

stay of 3 days requires a sample size of 391 pts and according to TSA this has already been achieved at the level of 351 included pts.
Conclusion: PAB clearly decrease the rate of infectious complications in AP, but mainly due to RRR of extrapancreatic infections, which requires no further research. No significant effect is shown on IPN and mortality, although firmer evidence requires additional trials and a larger sample size.

Neutrophil-lymphocyte ratio, hematocrit, blood urea nitrogen and red-cell distribution with in the early prediction of clinically relevant outcomes in patients with acute pancreatitis

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Abstract:
Background and aim: Various clinical and biochemical factors have been evaluated as potential predictors of severity in acute pancreatitis (AP). Early detection of severe cases may prompt more intensive treatment measures resulting in better clinical outcomes. Our aim was to investigate the usefulness of hematocrit (HTC), neutrophil-limphocyte ratio (NLR), blood urea nitrogen (BUN), and red cell distribution width (RDW) measured on admission in prediction of peri/pancreatic necrosis, organ failure (OF), local complications (LC), and mortality in patients with AP.
Patients and methods: A retrospective analysis of prospectively collected data was performed on 382 patients with AP admitted consecutively at a tertiary healthcare facility from January 2014 to December 2016. Patients were diagnosed with AP based on the 2012 Revised Atlanta criteria. Patients with chronic pancreatitis or pain lasting for >72 hours before admission were excluded. Pearson's rank correlation test was performed, and for parameters with significant correlations receiver operating curves were constructed (ROC) to calculate sensitivity and specificity of each measured parameter.
Results: Data from a total od 382 patients were collected. Missing data for each parameter measured accounted for less than 5% of the total number of patients. We showed a rather weak, but significant correlation between NLR and all given outcomes, mortality (r=0.147; P=0.019), OF (r=0.185; P=0.004), necrosis (r=0.179; P=0.007), and LC (r=0.129; P=0.044). HTC showed significant correlations with necrosis (r=0.137; P=0.011) and LC (r=0.246; P<0.0001), but no significant correlation with OF and mortality. On the contrary, significant correlations of RDW were established with mortality and OF (r=0.121;P=0.019) and (r=0.126;P=0.018), respectively, but not with necrosis and LC. Very strong correlations were shown for BUN with increased mortality (r=0.294; P<0.0001) and OF (r=0.329; P<0.0001), but not with necrosis and LC. We

took a cut-off value of >6 for NLR which showed the following results: mortality (AUC 0.660; P=0.029; Se 74%; Sp 47%;), OF (AUC 0.654; P=0.002; Se 77%; Sp 50%) necrosis (AUC 0.632; P=0.003; Se 74%; Sp 48%), and LC (AUC 0.579; P=0.042; Se 66%; Sp 52%). Results for HTC in prediction of necrosis and LC showed AUC 0.597 (P=0.016;Se 69%; Sp 50%) and AUC 0.650 (P<0.0001; Se 68%; Sp 58%), respectively, for a cut-off of >0.41. For prediction of mortality RDW showed AUC 0.630 (P=0.014; Se 35%, Sp 82%) and for OF an AUC 0.601 (P=0.022; Se 31%; Sp 83%) for a criterion >15. BUN showed for mortality an AUC 0.819 (P<0.0001; Se 59%; Sp 85%) and for OF an AUC 0.765 (P<0.0001; Se 51%; Sp 87%) given a cut-off >9. Conclusion: Most of the variables measured at admission showed a significant correlation with clinically important outcomes in AP. However, when specifically analysed it can be seen that as single diagnostic tools they have a rather high degree of false positives results, therefore are not very reliable in prediction of severe cases by themselves. Use of several different and easily accessible measurements might achieve better accuracy in early detection of high risk patients with unfavorable clinical outcomes.

Disfagija kao vodeći simptom eozinofilnog ezofagitisa

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Uvod
Eozinofilni ezofagitis je kronična imunološki posredovana upalna bolest jednjaka s rastućom prevalencijom, koja je definirana simptomima disfunkcije jednjaka i infiltracijom epitela sluznice jednjaka eozinofilima (≥15 eos/vvp), bez poznatog drugog uzroka eozinofilije.
Prikaz slučaja
Muškarac u dobi od 67 godina upućen je na ezofagogastroduodenoskopiju zbog otežanog gutanja krute hrane u trajanju od nekoliko mjeseci. Endoskopski je vizualizirano linearno nabiranje sluznice jednjaka koja je višestruko bioptirana zbog sumnje na eozinofilni ezofagitis. Histološkom analizom bioptata nađena je gusta infiltracija epitela sluznice jednjaka eozinofilima (>15 eos/vvp) uz prisutnost eozinofilnih apscesa. Provedena je empirijska terapija inhibitorom protonske pumpe (esomeprazol) u dvostrukoj dozi u trajanju od 8 tjedana te potom ponovljena ezofagogastroduodenoskopija s biopsijama sluznice jednjaka. Histološki nalaz izraženog intracelularnog edema uz gustu infiltraciju eozinofilima (>15 eos/vvp), eozinofilne mikroapscese i subepitelno ožiljkavanje veziva te anamnestički podatak o perzistiranju disfagije, upućivao je na dijagnozu eozinofilnog ezofagitisa. Kako bi se isključili drugi potencijalni uzroci eozinofilne infiltracije jednjaka, uz rutinske laboratorijske testove provedeno je određivanje imunoglobulin A protutijela na tkivnu transglutaminazu, serumskih imunoglobulina (IgA, IgG, IgM, IgE), kalprotektina i tumorskih biljega. Dodatno je učinjen prick test na inhalacijske i nutritivne alergene, bris nosa na eozinofilne granulocite, citološka analiza razmaza periferne krvi, spirometrija, rendgenogram torakalnih organa, ultrazvučni pregled trbuha i akt gutanja s pasažom gastroduodenuma. Obzirom da među rezultatima navedenih testova nije zabilježeno odstupanja, kod bolesnika je postavljena dijagnoza eozinofilnog ezofagitisa. Preporučena je dijeta s

eliminacijom 6 namirnica (jaja, kravlje mlijeko, pšenica, soja, orašasto voće, morski plodovi) uz nastavak terapije inhibitorom protonske pumpe u dvostrukoj dozi. Nakon 2 mjeseca uredno provedene terapije postignuta je regresija simptoma zbog čega je nastavljena dotadašnja terapija, a u nastavku se planira kontrolna ezofagogastroduodenoskopija s biopsijama zbog procjene histološkog odgovora.

Zaključak

Obzirom na porast incidencije i prevalencije ove progresivne kronične upalne bolesti, naš cilj je bio ukazati na važnost uzimanja biopsija sluznice jednjaka kod bolesnika s disfagijom, bez obzira na endoskopski izgled sluznice. Ujedno smo htjeli naglasiti kako sami histološki nalaz ezofagealne eozinofilije ne podrazumijeva dijagnozu eozinofilnog ezofagitisa dok se ne isključe moguće diferencijalne dijagnoze.

Gastric adenocarcinoma as cause of gastrocolic malignant fistula. Diagnostic and therapeutic approach.

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Abstract:
Abstract

A fistula (a term derived from the Latin word for pipe) is an abnormal connection between 2 epithelialized surfaces that usually involves the gut and another hollow organ. The most gastrointestinal fistulas (75%-85%) occur as a complication of abdominal surgery.
An 81-year old Caucasian man presented to the ER with symptoms of general weakness, nausea, and diarrhea lasting over the last 5 days. He reported the loss of 7 kilograms of body weight in the previous week. His routine laboratory tests showed microcytic anemia with Hb 90 g/l and mean corpuscular volume of 81,1 pg, with BUN slightly raised (9,2 mmol/l), and elevated CRP (84 mg /l). Further imaging methods used in diagnosing were endoscopy: EGD which showed neoplastic process approximately 6 cm in size, located at the greater curvature of the stomach. At the center of the process, communication with the colon was visible. MSCT scan of the abdomen with gastrografin revealed a large neoplastic process of antropyloric stomach region with anterior breach towards transverse colon. Local fatty tissue showed signs of infiltration as well as per continuitatem spreading and infiltration of the left liver lobe with an increased number of mesenteric lymph nodes. The course of hospitalization was further complicated with the development of NSTEMI and ischemic cerebral infarction. Biopsy at gastroscopy was made two weeks later and adenocarcinoma of the stomach was confirmed. Due to severe comorbidities, the operation was planned for later.

Keywords: fistula, gastrocolic fistula, malignant gastrocolic fistula, gastric cancer complications

First data on the prevalence of celiac disease in Croatia – the reason for action on celiac disease awareness campaign among physicians

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Abstract:
BACKGROUND: Celiac disease is one of the world's most prevalent genetic autoimmune condition but he majority of the patients unfortunately haven't been diagnosed regarding the fact that clinical picture of celiac disease is very heterogenous. Especially adults are less likely to have digestive symptoms and may have one or more unclassical symptoms like unexplained anemia, fatigue, arthritis, osteoporosis, depression or anxiety, unregular menstrual periods, infertility or miscarriages and neurological problems. AIM: To register the number of people with celiac disease (MKB-10 Code K90.0), who used health care in primary health care setting during 2015 and 2016. PATIENTS AND METHODS: The Croatian Institute of Public Health (CIPH) receives the data from the Central Healthcare Information System of the Republic of Croatia (CEZIH), which records all persons visiting a family doctor in primary health care setting. During the visit, the doctor records the diagnosis of the illness after finishing diagnostic work-up. For the purpose of this paper, the CEZIH database for the diagnosis of celiac disease (K90.0), by sex and the counties of residence, was searched for by 2015 and 2016. RESULTS: In 2015, CEZIH registered 2906 persons with celiac disease (K90.0). In 2016, CEZIH recorded 3261 persons with celiac disease (K90.0). We found that prevalence was 2.1 and 2.3 times higher in females than males. CONCLUSIONS: According to CEZIH data the prevalence of celiac disease in Croatia is about 8/10.000 inhabitants. It is much lower than that reported by most of the European countries suggesting the necessity of new celiac awareness programmes for physicians. Physicians – general practitioners (GPs), gastroenterologists (GIs) and other specialists should be aware of celiac disease as differential diagnosis in the routine clinical work. The delay in diagnosing is dangerous because people with undiagnosed and untreated celiac disease can develop long-term complications like malnutrition, malignant disease, neurological deficits, infertility, and coronary heart disease.

A CASE REPORT OF A PANCREATIC INTRADUCTAL PAPILLARY MUCINOUS NEOPLASM AND LITERATURE REVIEW

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Abstract:
Introduction
Intraductal papillary mucinous neoplasm (IPMN) of the pancreas is characterized by intraductal papillary proliferation of mucin-producing epithelial cells that exhibit various degrees of dysplasia. Pancreatic intraductal papillary mucionous neopalasm (IPMN) represent the most common pancreatic cystic neoplasm. IPMN usually are diagnosed incindentally and they are classified as: a brach-duct IPMN, main-duct IPMN and combined-type. According to the histomorphological and immunohistochemical characteristics they are four histological subtypes: gastric, intestinal, pancreatobiliary, and oncocytic. If IPMN affects main pancreatic duct it has more agressive behavior and for that cases surgery is recommended. Duct obliteration can lead to reccurent episodes of different pancreatic inflammation, mimicking acute of chronic pancreatitis. Chronic pancreatitis is reported as a potential risk factor.
Case report
We represent a cese report of 62 year old men who was misdiagnosed as pancreatic pseudocyst on CT. Patient had a history of a two episodes of acute pancreatitis. On the first CT pseudocyst of pancreas was diagnosed. After long term follow up of pseudocyst, MRCP was sugessted by radiologist because of unspecific features of the pancreatic pseudocyst. On MRCP main-duct IPMN was diagnosed, which was confirmed on the surgery.
Conclusion
If we have patinent with recurrent episodes of acute or chronic pancreatitis of unknown etiology, especially if that is male patient who is older than 60 years, we have to think on the IPMN. In that case we have to send the patient to the MRCP, which is the gold standard diagnostic procedure.

EXOCRINE PANCREATIC INSUFFICIENCY IN PATIENTS WITH ALCOHOLIC LIVER CIRRHOSIS

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Abstract:
Introduction: exessive alcohol consumption is a cause of many diseases, but the most common are liver cirrhosis and chronic pancreatitis. The aim of this study was to determine the link between alcoholic liver cirrhosis and chronic pancreatitis.
Patients and methods: we included patients with alcoholic liver cirrhosis hospitalized at the Department of Gastroenterology, Clinical Hospital Centre, Rijeka, from October 2015. to November 2016. Patients with liver cirrhosis caused by other factor except alcohol and patients with other pancreatic disease were excluded from the study. The severity of liver disease was assesed by the Child-Pugh score. FE test was performed to determine EPI. Concentration of <200 μg/g indicates a moderate EPI, while values <100 μg/g indicate severe EPI.
Results: 38 patients with alcoholic cirrhosis of the liver were analyzed, with the median age being 60.5 years (range, 43-83 years). Four patients presented with a Child-Pugh score A, 15 with Child-Pugh score B, while 19 patients had a Child-Pugh score C. Moderate to severe EPI, assessed by FE testing, was determined in 7 patients (18.4%), of which 3 presented with severe EPI (FE level <100 μg/g). No observed correlations between FE levels and liver funtion tests were statistically significant. A comparison of groups with and without EPI showed a statistically significant difference in the erythrocyte count (P=0.007).
Conclusion: EPI was found in 25% of patients. Statistical analysis showed no correlation between EPI and ALC. However, the study was performed on a small number of patients and further prospective studies on a large group of patients are necessary to determine a link between this two diseases.
Key words: alcoholic liver cirrhosis, exocrine pancreatic insufficiency, fecal elastase

Impact of hemodialysis on liver stiffness measured with real time two-dimensional shear wave elastography

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Abstract:
ABSTRACT
Background and aims: The impact of hemodialysis (HD) and change in volume status on liver stiffness is still unclear. The aim of the study was to identify factors associated with change in liver stiffness (LS) after one dialysis session.
Methods: A prospective cross-sectional study was carried out, from December 2017 through February 2018, with end stage renal disease (ESRD) patients on regular HD. Measurements of liver stiffness were done using RT 2D-SWE directly before and after one hemodialysis session.
Results: Twenty-seven patients with mean age 69.4±14.75 were included. Mean net fluid withdrawal volume per session was 2874.07±778.35 ml. Mean pre- and post- HD LS measurements were 8.15 kPa (95% CI 7.61-8.68) and 6.70 kPa (95% CI 6.10-7.30), respectively. Mean LS reduction was 1.448±1.14 kPa. The amount of fluid removed correlated with the decline in LS values after HD (ρ= 0.523, P= 0.003). There was positive correlation between time spent on HD (<37 and >37 months) and LS values. The longer the time spent on HD, the greater LS values were present. We also show correlation between the decline in systolic blood pressure after HD and the reduction in LS values after HD.
Conclusion: In ESRD, LS significantly declines after session of HD, therefore the timing of LS measurement is better after HD session. Liver stiffness presumably increases with years spent on hemodialysis.

Low volume EUS center – start up

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Abstract:
It is generally thought that endoscopic ultrasound is advanced endoscopic procedure reserved mainly for tertiary clinical centers. Undoubtedly it requires a level of training that exceeds general endoscopy and training under the supervision as well as cognitive and technical skills. It is reasonable to ask if a hospital with just over 50 pancreatobilliary procedures per year can handle endoscopic ultrasound, but our experience with great number of diagnostic procedures applied to patients from surrounding county hospitals made us think about a potential diagnostic niche. In our experience, to start up EUS in small volume center one should have willing workers, board approval, pool of patients, adequate training, continuous education, supervision under the EUS experts. First two conditions are satisfied at beginning, and adequate patient number should be achieved in years to come from surrounding areas which are too far from tertiary centers in Zagreb and Osijek. Croatian gastroenterology fellowship program teaches applicant to indicate the performance, knowing possibilities of intervention and limitations of endoscopic ultrasound and after completion of fellowship program gastroenterologist should be able to perform EUS of pancreatobiliary tract and GI malignances. Additional 6 months of intensive training under the supervision of experts are achieved, in which 150 procedures are performed under the supervision of experts. Further experience and educated cytologist are needed to establish competency in FNA practice, although 20 supervised FNA procedures were already performed.

Association of body composition and muscle strength with disease activity in patients with inflammatory bowel disease

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Abstract:
Introduction:
Inflammatory bowel disease (IBD) is commonly associated with alteration in fat and lean mass. The conventional indices for assessment of nutritional status such as body mass index (BMI) have been suboptimal and therefore require better modalities which can be assessed by bioimpedance analysis. In addition, correlation of body composition with disease severity has not been well studied. The aim of this study was to evaluate the association of body composition and muscle strength with disease activity in adult patients with Crohn's disease (CD) and ulcerative colitis (UC).
Methods:
All patients underwent the analysis of body composition measured by bioelectrical impedance analysis (TANITA body composition analyser, BC-420MA). Lean mass (LM), fat-free mass index (FFMI) and skeletal muscle index (SMI) were calculated using standard formulae. Muscle strength was obtained from handgrip strength values (HS) measured with Jamar Hydraulic Hand Dynamometer. Medical history data were obtained from clinical and electronic medical records. In order to evaluate disease activity, we used clinical indices: Crohn's Disease Activity Index (CDAI) for Crohn's disease (CD) patients and Partial Mayo Score for ulcerative colitis (UC) patients.
Results:
In this study we have enrolled 75 patients (CD=58, UC=17; 50.7% male, 49.3% female). Clinically active disease (defined as CDAI > 150 or Partial Mayo Score 3) was present in 25 patients (16.9% CD and 42.9% UC). There were no statistically significant differences among patients with active and inactive disease in FFMI kg/m2 17.7 (14.9-20.1) vs. 18.2 (15.3-26.2),

SMI kg/m2 8.9 (7.1-10.7) vs. 9.3 (7.8-10.8), LM kg 50.4 (43-72.4) vs. 55 (43.3-90.5), and fat mass % 19.7 (14.9-45) vs. 23 (17.5-45), $p>0.05$. Muscle strength was significantly lower in patients with active disease (26.6±10.9 kg) comparing to inactive group (32±11.5 kg), $p=0.048$. Underweight patients, defined as BMI<18.5 kg/m2, were significantly more prevalent in active group comparing to inactive (27.8% vs 8.8%, $p=0.04$, $\chi 2=4.219$).

Conclusion:

Results of our study haven't shown consistent association between body composition and disease activity. However, muscle strength was lower in group of patients with clinically active disease. Body composition analysis by BIA could be useful tool in evaluation of patients with inflammatory bowel diseases; however, there is a need to define age, gender and disease specific, percentile-based thresholds specifically for patients with IBD, which can simplify the screening procedures in clinical practice.

Fine needle biopsy as way to get a tissue diagnosis

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Abstract:
Introduction: During performing endoscopic ultrasound (EUS), there are several ways in which tissue samples can be taken. Usually, fine needle aspiration (FNA)is used to produce a small tissue sample sufficient for the analysis of the cytologist. Recently, fine needle biopsy (FNB) has been used, which yields larger tissue samples ideal for pathohistological diagnosis.
Case report: In our institution, the EUS has been running since 2006. Following the new trends in diagnosis, we started using the FNB. So far, we have done three procedure of obtaining satisfactory tissue samples: pancreatic tumor biopsy, lung lymphoma biopsy, and lung cancer biopsy. Here is the presentation of lung biopsy in a patient whose tumor was placed apically and unavailable for taking the sample during bronchoscopy. We have decided to made EUS FNB, to avoid tumor biopsy under the control of MSCT (well being for patients and doctors) and to avoid open lung biopsy. The sample was sent to the pathologist for immunohistochemistry analysis, which set a clear diagnosis of the disease, and treatment of the patient started as soon as possible.
Conclusion: EUS FNB technique requires a good understanding of human anatomy, tumor biology, the ability to control the device, and an adequate diagnostic needle. We used larger caliber cutting needles (22 gauge). That needle acquire larger tissue speciment, preserving tissue architecture and permitting histologic examination (immunohistochemistry). Needles are safe and accurate when used percutaneously, intraluminally or surgically. Diagnosing lesions arising in soft tissue, breast, lung, lymph node, pancreas, liver, kidney, adrenal, spleen, prostate. Satisfactory histologic specimens were procured in 94.7% and tissue acquisition for cytological assessment was successful in 100%, including the transduodenal route, when an expect 19 G Flex aspiration needle was used. The high tissue acquisition rate is partially because of the high elasticity of the needle, which facilitates the transduodenal passFine-Needle Biopsy.

Malignant Small-bowel Tumors over a 10-year period (2007-2017) at General Hospital Zadar

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Abstract:
Introduction: Pneumonia is a leading infectious cause of hospitalization and death among adults in the United States. We investigated the patients treated at Department of pulmology, General Hospital Zadar in 2015 year.
Patients and methods: We made analysis of our adult patiens older than 18 years, treated in Department of pulmology, from January 1, 2015, to December 31, 2015. retrospectivelly. Among all patients, 279 of them with radiographic evidence of pneumonia were selected. The median age of the patients was 67 years (range, 49 to 76). Causative pathogens of pneumonia from our patients were detected by: endotracheal aspirates, and broncho-alveolar-lavage samples, blood samples, acute-phase serum specimens, urine samples, and nasopharyngeal and oropharyngeal swabs.
Results: 279 out of 875 hospitalizied patients were treated in our department because of pneumonia. In 147 out of 279 patients were taken aspirates for isolation of bacteria. In 54 (36.73%) out of 147 patients causative bacteriae were detected. The results are shown et Figure 1. In 37 patients with clinical signs of atypical pneumonia, pathogens were detected in blood samples In 15 (40.54%) out of 37 patients microorganisms were isolated. The results are shown et Figure 2. The aetiology of pneumonia was similar in patients with and without COPD. The most used antibiotic monotherapy were beta-lactams. Except with beta-lactams, the majority of patients were treated with macrolides and quinolones.The most common combination of drugs were beta-lactams combined with macrolides or quinolones. Median length of duration of hospitalization was 7 days (range, from 4 to 12).
Conclusions: The incidence of pneumonia requiring hospitalization was highest among the oldest adults, older than 65 years. Despite current diagnostic tests, no pathogen was detected in the great majority of patients.

IZAZOVI U PRAĆENJU BOLESNIKA S WHIPPLEOVOM BOLESTI

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Abstract:
Uvod
Whippleova bolest je sistemska infektivna bolest uzrokovana gram pozitivnom bakterijom Tropheyma whipplei. Dominantno se javlja u muškaraca srednje životne dobi porijeklom iz europskih zemalja. Sama bakterija može uzrokovati upalu u različitim organskim sustavima od kojih su ipak najčešći gastrointestinalni, lokomotorni i centralni živčani sustav. Klasični simptomi bolesti su artralgija, kronični proljev, gubitak na tjelesnoj težini i bolovi u abdomenu no znatno variraju ovisno o dominantno zahvaćenom sustavu.

Prikaz slučaja
U članku prikazujemo slučaj 58 – godišnjeg bolesnika koji se prezentirao kliničkom slikom kroničnog proljeva, gubitka na tjelesnoj težini i opće slabosti. Inicijalnom dijagnostičkom obradom verificirana je mikrocitna anemija uz diskretno povišene vrijednosti upalnih parametara,a od ostalih laboratorijskih nalaza izdvajamo hipoalbuminemiju, deficit 25-hidroksi vitamina D i hipokalcijemiju. Endoskopskim pregledom probavne cijevi nađene su nespecifične upalne promjene tankog crijeva, dominantno u vidu edema i granuliranosti sluznice duodenuma i jejunuma. Histološki nalaz opisivao je atrofiju crijevnih resica s miješanom upalnom infiltracijom lamine proprije te dilataciju limfnih prostora ispunjenih pjenušavim makrofazima s PAS pozitivnim intracelularnim materijalom. Dodatnom analizom elektronskim mikroskopom vizualizirani su sami bacili unutar sluznice tankog crijeva. Odmah po započetom liječenju (ceftriaksonom u odzi od 2x1g kroz 14 dana) došlo je do promptnog nestanka abdominalnih bolova i proljeva. Terapija je nastavljena trimetoprim-sulfametaksazolom do današnjeg dana, tri godine od postavljanja dijagnoze. Bolesnik je od tada tri puta bolnički reevaluiran. Ponovljenim enteroskopijama i dalje se vizualiziraju nespecifične upalne promjene jejunuma no svake godine značajno manjeg stupnja, dok se histološkom analizom i dalje opisuje atrofija sluzničkih nabora uz infilitraciju makrofazima s PAS pozitvnim materijalom, također blažeg stupnja u svakom sljedećem kontrolnom intervalu. Klinički je bolesnik bez simptoma, stabilne je tjelesne težine, a u laboratorijskim nalazima bez elemenata malapsorbcije.

Zaključak
S obzirom na nisku incidenciju i nedostatak kontroliranih studija, do današnjeg dana ne postoje jasne smjernice o dužini trajanja liječenja i načinu praćenja pacijenata s Whippleovom bolesti.

Prema našem iskustvu u trogodišnjem intervalu praćenja , endoskopskom i histološkom analizom i dalje se opisuju nespecifične upalne promjene sluznice tankog crijeva koje ne koleriraju s odličnim kliničkim statusom bolesnika. Također nismo indicirali prekid antibiotske terapije zbog velike mogućnosti recidiva bolesti. S obzirom na iznesene činjenice, smatramo da je najbolji dokaz odsutnosti bolesti klinički status bolesnika uz potrebu doživotnog praćenja s obzirom na visoku mogućnost recidiva bolesti.

Pancreatic mass – a rare presentation of colon carcinoma metastasis confirmed with EUS-guided FNA

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Abstract:
Introduction: Secondary lesions in pancreas are extremely rare, and present only 2 percent of pancreatic masses. Tumors most commonly found to metastasize to the pancreas are renal cell carcinoma, lung cancer, breast cancer, malignant melanoma, carcinoma of gastrointestinal origin and prostate cancer. Most diagnoses are made after surgical management, and there are a few case reports of metastasis being confirmed preoperatively by endoscopic ultrasound-guided fine needle aspiration (EUS FNA) .
Case: A 68 years old woman presented with upper abdominal pain irradiating to the back, weight loss, stomach distension and jaundice. A year ago she was diagnosed with cancer of the sigmoid colon, and underwent a right hemicolectomy with ileotransveral anastomosis. Histopathological analysis confirmed a colon adenocarcinoma with metastasis in several local lymph nodes. Postoperatively she received adjuvant chemotherapy that ended 3 months before the onset of new symptoms. A CT scan of the abdomen now showed peritoneal dissemination of the disease with ascites and intra- and extrahepatic dilation of bile ducts without local lymph nodes enlargement. EUS was performed to discover the cause of biliary obstruction, which showed a mass in the pancreas, specifically in the distal part of the main bile duct. EUS FNA of the lesion was performed, and cytological analysis of the sample revealed a metastasis of the colon adenocarcinoma. Endoscopic retrograde cholangiography was performed to resolve the biliary obstruction and a 10 F biliary stent was implanted in the main bile duct with a good clinical response. After resolution of obstructive jaundice the patient was referred to the oncologist for further treatment.
Conclusion: Metastasis in the pancreas is a rare cause of obstructive jaundice, and when found in patients with a history of a tumor disease, is frequently misdiagnosed as a second primary tumor. The correct diagnosis is most often established with histopathological analysis postoperatively, and in rare cases with EUS FNA preoperatively. Immunohistochemical analysis helps differentiating the type of tumor cells found in the EUS FNA specimens.

TRANSPLANTACIJE JETARA OD MARGINALNIH DONORA- iskustva KB Merkur

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Abstract:
UVOD: rastući broj transplantacija rezultira sve većom potrebom za donorskim organima što za posljedicu ima transplantacije organa od marginalnih donora (engl. extended donor criteria-EDC). Među proširene kriterije ubrajaju se: dob >65 god., BMI >30 kg/m2, prethodna ovisnost ili malignom, boravak u JIL-u ili mehanička ventilacija >7 dana, AST/ALT >3x, bilirubin >51 mmol/l, serumski Na >165 mmol/l, pozitivna serologija na hepatitis, biopsijom dokazana steatoza jetre >40% i hladna ishemija >14 h. Prema recentnim istraživanjima, steatoza presatka >40%, dob >65 god. i vrijeme hladne ishemije >14h spadaju u "velike" kriterije i povezani su s lošijim preživljenjem presatka i primatelja.
CILJ: prikazati rezultate transplantacija jetara marginalnih donora u KB Merkur u razdoblju od 2013.-2017.
METODE: retrospektivna analiza svih donora kod primatelja prvih transplantacija jetre učinjenih u 5- godišnjem razdoblju (2013.-2017.) u KB Merkur. Svi primatelji bili su uvršteni u sustav Eurotransplant-a prema pripadajućem MELD bodovnom sustavu. U analizu je uključeno 565 donora, a podaci su prikupljeni iz Eurotransplant-ove baze podataka i bolničkog informatičkog sustava.
REZULTATI: u 5-godišnjem razdoblju transplantirano je 503 donora. U analiziranoj kohorti, 85% donora bilo je marginalno s najmanje jednim proširenim kriterijem. Zastupljenost proširenih kriterija bila je slijedeća: 15% BMI> 30 kg/m2, 6% značajna steatoza (histološki steatoza 30-

60%), 30% dob> 65 god., 6% serumski Na>165 mmol/l, 8% anti-HBc pozitivno, 3% ukupni bilirubin>50 mmol/l, 21% GGT>90 U/L, 15% ALT>105 U/L, 24% boravak u JIL-u ili mehanička ventilacija> 7 dana. Preživljenje primatelja i presadaka praćeno je od transplantacije do uključivanja u studiju (raspon od 0 do ukupno 60 mj.), a iznosilo je 90.1% za presatke i 80% za primatelje. Među navedenim kriterijima, statistički značajan utjecaj na preživljenje imala je hipernatremija (Na>165 mmmol/l) dok se ostali analizirani čimbenici nisu pokazali statistički značajnima.
ZAKLJUČAK: rezultati KB Merkur pokazuju visoke stope 5-godišnjeg preživljena primatelja i presadaka u slučaju transplantacija jetre marginalnih donora što opravdava njihovu visoku iskorištenost. Povoljan ishod primatelja i presadka, usprkos visokom udjelu bolesnika s marginalnim presatkom, moguće je povezati s prisutnošću povoljnih parametrima od strane primatelja i operativne procedure. Podaci iz literature pokazuju da rizični čimbenici donora utječu na postransplantacijsko preživljenje presadka i primatelja, a što je veći broj rizičnih čimbenika kod jednog donora to je utjecaj na na rane i kasne ishode tranplantacijskog liječenja veći. Osim obilježja donora, rizični faktori primatelja (visok MELD, dob, komorbiditet, osnovna bolest jetre) i kirurškog zahvata (dugo vrijeme hladne ishemije, reducirani presadak) povezani su s nepovoljnim ishodom za primatelja i presadak. S obzirom na navedeno, optimalnu alokaciju limitiranih broja organa moguće je postići usklađivanjem donora i primtelja te tako postići bolje ishode transplantacije.

Kućna parenteralna prehrana u bolesnika s kompliciranim tijekom Crohnove bolesti

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Abstract:
UVOD

Crohnova bolest idiopatska je upalna bolest crijeva koja može zahvatiti bilo koji dio probavne cijevi. Upalna aktivnost, stvaranje stenoza, fistula i apscesa koji mogu zahtijevati kirurške intervencije, smanjujući površinu crijeva potrebnu za apsorpciju nutrijenata, mogu dovesti u oko 3% bolesnika do sindroma kratkog crijeva ili zatajenja crijevne funkcije, koji nerijetko zahtjevaju dugotrajnu kućnu parenteralnu prehranu.

PRIKAZ SLUČAJA

Prikazujemo slučaj 34-godišnjeg pacijenta kojemu je Crohnova bolest dijagnosticiana u dobi od 13 godina. Radi se o pacijentu sa stenozirajuće-fistulirajućim fenotipom bolesti ileokolonične ekstenzije, koji je u više navrata operativno liječen (resekcija sigme i descedentnog kolona, resekcija stenoze jejunuma i fistula, drenaža apscesa, dvije resekcije ileuma i strikturoplastike, desnostrana hemikolektomija s formiranjem ileostome). Obzirom da je bolesnik bio steroid ovisan, metotreksat rezistentan, azatioprin intolerantan, sa sekundarnim gubitkom odgovora na infliksimab, u ožujku 2018. godine započeta je terapija ustekinumabom.

Hospitaliziran je u lipnju 2018.god zbog bolova u abdomenu povezanih s peroralnim unosom hrane, inapetencije te posljedičnog gubitka na tjelesnoj masi (BMI 14,5 kg/m2). Radiološkom reevaluacijom verificiran je dilatiran duodenom ispred fibrozne stenoze promjera 3 mm, te dvije

fibrozne stenoze ileuma promjera nekoliko milimetara sa rezidualnom duljinom tankog crijeva od 90 cm. Zbog progresivnog gubitka na tjelesnoj masi te nemogućnosti adekvatnog peroralnog unosa hrane i enteralne prehrane zbog sindroma kratkog crijeva, pacijentu je indicirana kućna parenteralna prehrana i postavljen port kateter. Parenteralna prehrana postupno je uvedena uz svakodnevni nadzor nutritivnog tima, zbog visokog rizika metaboličkih komplikacija, osobito «refeeding» sindroma uslijed teške pothranjenosti te nedovoljnog peroralnog unosa u posljednjih 6 mjeseci. Nakon edukacije o aseptičkoj njezi port katetera i primjeni parenteralne prehrane pomoću infuzijske pumpe pacijent je otpušten kući sa standardiziranim pripravkom «all-in-one» 23 kcal/kg/dan, 1.2 g aminokiselina/kg/dan (OlimelN9® 1070 kcal/L) ciklički kroz 15 sati uz svakodnevnu nadoknadu vitamina (Cernevit®) i elemenata u tragovima (Nutryelt®).
Pacijent je tijekom 14 tjedana kućne parenteralne prehrane dobio 5 kg na tjelesnoj masi, dobro tolerira propisani režim kućne parenteralne prehrane, uz redoviti nadzor multidisciplinarnog tima Dnevne bolnice Odjela za kliničku prehranu.

ZAKLJUČAK

Kućna parenteralna prehrana izgledna je opcija liječenja bolesnika s kompleksnim tijekom Crohnove bolesti te zahtjeva multidisciplinirani pristup visoko educiranog i «uigranog» tima. Pravovremena nutritivna intervencija pridonosi boljoj prognozi Crohnove bolesti, te može odgoditi komplikacije koje zahtijevaju ponovljeno kirurško liječenje.

Ključne riječi: Crohnova bolest, kućna parenteralna prehrana, sindrom kratkog crijeva

Ultrasound in the diagnosis of diverticulitis

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Abstract:
ABSTRACT
Acute diverticulitis is a frequent condition nowadays, especially in the developed countries. It includes a variety of conditions, ranging from uncomplicated, localized diverticular inflammation to purulent or fecal peritonitis. Except for patient history, physical examination and laboratory tests, radiologic imaging is extremely important for accurate diagnosis owing to numerous specter of differential diagnoses with similar clinical signs and symptoms. Our case report accentuates abdominal sonography usage for that purpose.
Keywords: acute diverticulitis, paracolic abscess, ultrasound in diverticulitis, CT in diverticulitis

Usporedba učinkovitosti budesonida u prethodno liječenih i neliječenih bolesnika, oboljelih od autoimunog hepatitisa – početno iskustvo Referentnog centra za kronične bolesti jetre

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Abstract:
Uvod: Autoimuni hepatitis (AIH) je kronična bolest jetre koja se liječi imunosupresivnom terapijom, obično prednisonom, a često u kombinaciji s azatioprinom. Međutim, takvo liječenje ima brojne nuspojave, dok je budesonid uveden kao sigurnija i učinkovita opcija zbog svojih farmakodinamičkih svojstava. U Hrvatskoj je odobren u ovoj indikaciji od lipnja 2017. Nije jasno postoji li razlika u njegovoj učinkovitosti u liječenju prethodno liječenih i neliječenih bolesnika s AIH. Cilj nam je istražiti te potencijalne razlike.
Metode: Retrospektivno je analizirana medicinska dokumentacija bolesnika kojima je postavljena dijagnoza ili su liječeni od AIH u našem Zavodu, u periodu od lipnja 2017. do lipnja 2018. godine. Dobiveni su osnovni klinički i laboratorijski podaci, uključujući alanin transaminazu (ALT) i imunoglobulin G (IgG) pri indukciji budesonida i nakon dva mjeseca liječenja.
Rezultati: Uključeno je pet prethodno liječenih i tri prethodno neliječena bolesnika. Svi bolesnici bili su ženskog spola (53±9,7 vs. 51,3±14,7, p> 0,05) i liječene su u dozi od 9 mg dnevno kao monoterapija. Početne vrijednosti ALT bile su slične (303.75±232.8 vs.187.6±89.1 p>0.05), ali IgG je bio veći u skupini prethodno neliječenih (13.4±3.9 vs. 27.9±3.7, p<0.05). Nakon dva mjeseca liječenja, statistički značajno biokemijski odgovor na temelju razine ALT i IgG postignut je samo kod bolesnika koji nisu liječeni (187.6±89.1 vs. 40±14.7 i 27.9±3.7 vs.18±3.05, p<0.05).
Zaključak: Temeljem naših početnih rezultata budesonid bi mogao imati bolji učinak u indukciji remisije AIH u neliječenih nego u prethodno liječenih bolesnika. Međutim, potrebne su veće i prospektivne studije prije nego što se postigne konačni zaključak.

Iskustvo liječenja kronične hepatitis C infekcije direktno djelujućim lijekovima u Kliničkoj bolnici Merkur

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Abstract:
CILJ: Kronična infekcija hepatitisom C (HCV) je među vodećim uzrocima ciroze jetre i posljedično transplantacije jetre u svijetu. Prema dosadašnjim istraživanjima, u komparaciji s drugim indikacijama za transplantaciju jetre, ukupno preživljenje primatelja i presatka je značajno niže zbog univerzalne reinfekcije virusom C posttransplantacijski što dovodi do progresivne fibroze i posljedično disfunkcije presatka1. Uvođenjem interferon-free terapijskih opcija, direktno djelujući lijekovi (DAA), omogućava postizanje održivog virološkog odgovora (SVR) u >95% slučajeva što pridonosi povećanju ukupnog preživljenja primatelja i presatka posttrasplantacijski2. U ovom radu donosimo pregled liječenja transplantiranih bolesnika i kandidata za transplantaciju jetre s DAA terapijom na KB Merkuru.
METODE: Podatci su prikupljeni iz Bolničkog informatičkog sustava (BIS) i baze podataka Eurotransplanta za period od 2016. do srpnja 2018. Provedena je deskriptivna statistička analiza koristeći SPSS 22.0 software.
REZULTATI: Liječeno je ukupno 83 bolesnika od čega je 80% bolesnika je liječeno posttransplantacijski, a 20% predtransplantacijski (bolesnici s fibrozom F4/kompenziranom cirozom i s ekstrahepatalnim manifestacijama HCV infekcije). U obje skupine po jedan bolesnik je imao završni stadij kronične bubrežne bolesti (na intermitentnoj hemodijalizi). Većina bolesnika je bila genotip 1 (88%), 10% genotip 3 i jedan bolesnik je bio genotip 4. Liječenje je provedeno fiksnom kombinacijom lijekova ledipasvir/sofosbuvir + ribavirin (RV) kod 54% bolesnika uz postignuti SVR u 93% slučajeva. 3D terapija (ombitasvir/paritaprevir/ritonavir + dasabuvir) + RV je primijenjena kod 32% bolesnika uz postignut SVR12 od 97%. 11% bolesnika je liječeno sofosbuvir/velpatasvir + RV uz postignuti SVR12 100%. 2% bolesnika je liječeno pegiliranim interferonom + sofosbuvir uz SVR12 100%. Jedan bolesnik je liječen 2D terapijom (ombitasvir/paritaprevir) uz postignuti SVR12. Najznačajniji neželjeni događaj je bio smrtni ishod kod 4 pacijenta neovisno o DAA terapiji. 2 bolesnika su preminula posttransplantacijski u tijeku liječenja pod slikom multi-organskog zatajenja, a kod 2 bolesnik je smrtni ishod nastupio nakon postignutog end-of-treatment (EOT) negativnog PCR HCV RNA. Kod 1 bolesnika je terapija prekinuta nakon 4 tjedna zbog dekompenzacije jetrene bolesti. Ostale nuspojave su uglavnom bile vezane na primjenu RV te je kod 38.5% bolesnika bila potrebna redukcija doze

uslijed anemije (hemoglobin <100 g/L). Oko 15% bolesnika se žalilo na opću slabost, mučninu i glavobolju no bez potrebe za korekcijom terapije.
ZAKLJUČAK: Uvođenje DAA terapije je promjenilo koncept liječenja HCV infekcije u kontekstu transplantacije jetre. Primjena lijekova posttransplantacijski je sigurna, učinkovita s minimalno nuspojava za bolesnike uz visoki postotak postignutog SVR-a. Primjena DAA terapije predtransplantacijski je uglavnom limitirana težinom bubrežne bolesti i nuspojavama terapije RV.
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RECIDIV HEPATOCELULARNOG KARCINOMA NAKON TRANSPLANTACIJE JETRE - PROCJENA RIZIČNIH FAKTORA

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Abstract:
UVOD: Transplantacija jetre (TJ) je kod selekcioniranih bolesnika priznata metoda liječenja hepatocelularnog karcinoma (HCC) pri čemu petogodišnja stopa preživljenja iznosi 75-85%. Cilj ove studije je analiza HCC i prognostičkih čimbenika 5-godišnjeg ishoda preživljenja i recidiva nakon TJ.

METODE: Retrospektivna analiza podataka 198 HCC bolesnika od 2006. do 2018. godine. Analizirana su demografska i klinička obilježja bolesnika te procijenjeni faktori rizika 5-godišnjeg ishoda preživljenja i recidiva HCC nakon TJ.

REZULTATI:
Većina bolesnika bili su muškarci (80,3%) prosječne starosti 61 godinu (55,1%). Medijan čekanja na listi bilo je 23 dana. Alkoholna ciroza jetre (45,5%) bila je najčešća podliježeća bolest jetre. Kod 26% bolesnika vrijednosti AFP bile su povišene između 7 i 50 ng/mL, 4% između 400 do

1000 ng/mL, a 7,6% >1000 ng/mL. Transarterijska kemoembolizacija (TACE) provedena je kod 19,2% bolesnika. Unutar Milanskih kriterija (MK) bilo je 81% nalaza MSCT, 64% eksplantata, u skupini nakon provedenog TACE; 80% MSCT i 49% eksplantata. 37,4% tumora imalo je mikrovaskularnu invaziju(MiV), a 8,6% makrovaskularnu invaziju(MaV). Medijan broja tumorskih promjena (BTP) iznosio je 1 za MSCT i TACE skupinu, a 2 u eksplantatu. Medijan ukupnog promjera vijabilnog tumora (UPT) u MSCT iznosio je 39,5mm, za TACE skupinu 27mm, a 41,5mm u eksplantatu.
5-godišnja stopa preživljenja iznosila je 81%. Medijan praćenja iznosio je 37 mjeseci/3,9 godina. Faktori rizika 5-godišnjeg preživljenja univarijatnom analizom bili su: dob >60 godina, nalaz eksplantata izvan MK, BTP u eksplantatu, UPT u eksplantatu, AFP > 1000, MiV, MaV i recidiv HCC. Multivarijantnom analizom, nezavisni faktori rizika bili su: dob, BTP u eksplantatu i recidiv HCC.
5-godišnja stopa recidiva HCC bila je 11%. Faktori rizika povezani s recidivom u univarijatnoj analizi bili su: nalaz eksplantata izvan MK, BTP u eksplantatu, UPT nakon TACE na MSCT i u eksplantatu te MiV i MaV. Od sedam nezavisnih varijabli (značajnih u univarijatnoj) stepwise metodom je samo UPT >= 3cm dao značajan doprinos (OR 1,02). TACE nije utjecao na ishod preživljenja ili rizik recidiva HCC.

ZAKLJUČAK

Preživljenje bolesnika s HCC nakon TJ je zadovoljavajuće (iznad 80%). Dob > 61 godine je značajan predtransplantacijski prediktor preživljenja nakon TJ. Od post-transplantacijskih obilježja, nalaz eksplantata izvan MK značajno je povezan s rizikom recidiva HCC, dok je isti uz recidiv HCC prediktor smrtnog ishoda primatelja. Patohistološke značajke tumorskih promjena eksplantata i vrijednost AFP mogu se koristiti za predviđanje rizika smrtnog ishoda i recidiva HCC nakon TJ no potrebna su dalja istraživanja i kompozitni skorovi bazirani na više predtransplantacijskih obilježja bolesnika s HCC.

Prevalence and factors associated with sexual dysfunction and quality of life in patients with Inflammatory Bowel Disease

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Abstract:
Introduction:
Inflammatory Bowel Disease (IBD) has a negative impact on quality of life (QOL) with sexuality as one of its major determinants, with limited knowledge of determinants of sexual dysfunction (SD) in IBD patients. The main goal of the study was to determine the prevalence of SD, erectile dysfunction and association with quality of life (QOL), and to search for significant predictors.
Materials and methods:
In this cross-sectional study patients fulfilled questionnaire on their sexual function. In males, five domains were evaluated; erectile function, orgasmic function, sexual desire, intercourse satisfaction and overall satisfaction. In women were six domains assessed; desire, arousal, lubrication, orgasmic function, satisfaction and pain. Patients also fulfilled IBDQ-32, for assessing quality of life in IBD patients. Disease activity was defined according to CDAI and Partial Mayo score.
Results:
We have enrolled 95 patients (64 CD,31 UC,51 men, 44 woman) with average age of 38 years. In women, SD rates were 38.6% (N=17), and were significantly higher than 9.8% (N=5) in men ($p=0,001, \chi 2=10.19$). QOL was significantly lower in patients with SD and with erectile dysfunction. An erectile dysfunction was reported by 22%(N=11) of male IBD patients, and was significantly higher in patients with active disease (57.1%vs.16.7%,p=0,03). Significant predictors for SD were female gender (OR=6.3, 95% CI1.84-21,73) and perianal disease (OR=7.2,95% CI1.7-29.7).
Conclusion:
SD and erectile dysfunction are highly prevalent in IBD patients, and is associated with lower

QOL. Improvement of QOL is one of the main goals in treating IBD patients. Because of its strong connection with sexual function and satisfaction, it is important to identify those problems and to provide proper psychological support, medical treatment and educational information.

Visoka učestalost neliječene i nedovoljno liječene deficijencije i insuficijencije vitamina D u bolesnika s upalnim bolestima crijeva

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Abstract:
Uvod:
Vitamin D je hormon koji bi sa svojim imunomodulatornim svojstvima mogao potencijalno utjecati na patogenezu i aktivnost upalnih bolesti crijeva (IBD). Epidemiološki podaci pokazali su povećani rizik za razvojem IBD-a, hospitalizacijom, operacijama i gubitkom odgovora na biološku terapiju u bolesnika s nedostatkom vitamina D. S druge strane, Crohnova bolest (CB) i ulcerozni kolitis (UC) također mogu dovesti do nedostatka vitamina D. Ovaj dvosmjerni odnos između vitamina D i IBD-a sugerira potrebu za redovitim praćenjem i suplementacijom vitamina D. Naš je cilj bio ispitati prevalenciju nedostatka vitamina D među pacijentima s IBD-om, sa i bez suplementacije vitamina D.

Materijali i metode:
U ovoj presječnoj studiji mjerene su razine vitamina D u slučajnom uzorku bijele rase pacijenata s IBD-om tijekom zimskog razdoblja u Republici Hrvatskoj. Razina vitamina D niža od 50 nmol/L smatrala se deficijencijom, a između 50 i 75 nmol/L insuficijencijom, a zajedno su definirani kao nedostatak vitamina D. Bolesnici koji su primali supstituciju bili su definirani kao oni koji uzimaju suplementaciju vitamina D od 800-1600 IU dnevno. Neliječeni bolesnici bili su definirani kao oni koji imaju nedostatak vitamina D i koji ne dobivaju vitamin D, dok je nedovoljno liječena skupina definirana kao ona koja dobiva vitamin D i ima nedostatak vitamina D. Podaci iz medicinske povijesti zabilježeni su iz kliničkih i elektroničkih medicinskih zapisa. Aktivnost blesti je definirana kao Crohn's disease activity index (CDAI) <150 ili Partial Mayo score ≥ 3 za CD i UC.

Rezultati:
Razine vitamina D izmjerene su kod 83 bolesnika s IBD-om (64 CD, 19 UC). Postojala je statistički značajna razlika u raspodjeli pacijenata na supstitucijskoj terapiji vitaminom D i onih s nedostatkom vitamina D ($p = 0,01$, $\chi 2 = 6,45$). Prevalencija nedostatka vitamina D bila je 71,1% (N = 59), dok je prevalencija pacijenata koji su primali suplementaciju vitamina D bila je 16,9% (N = 14). Među analiziranim pacijentima primijetili smo relativno visok udio neliječenih (63,9%, N = 53) i nedovoljno liječenih (7,2%, N = 6) bolesnika. Medijan koncentracija vitamina D u bolesnika koji su uzimali suplemente vitamina D bio je 53,5 (36-111) nmol/L u skupini s nedostatkom vitamina D i značajno su različiti u odnosu na 36 (26-49) nmol/L u neliječenoj skupini ($p = 0,015$). Prevalencija insuficijencije vitamina D bila je 20,4% (N = 17). Multivarijatna analiza pokazala je da je nedostatak vitamina D povezan s resekcijom terminalnog ileuma (OR = 4,04, 95% CI (1,1-14,6), $p = 0,03$), a nije bio povezan sa spolom, fenotipom, aktivnosti bolesti, trajanjem bolesti, zahvaćanjem tankog crijeva ili pušenjem ($p> 0,05$).

Zaključak:
Ne samo da je nedostatak vitamina D uobičajen među bolesnicima s IBD-om, već je i udio neliječenih i nedovoljno liječenih bolesnika znatno visok. Niske koncentracije vitamina D mogu se djelomično objasniti nižom izloženošću suncu tijekom zime. Resekcija terminalnog ileuma najveći je čimbenik rizika za nedostatak vitamina D. Predlažemo redovito praćenje razina vitamina D u pacijenata s IBD-om bez obzira na terapiju suplementima vitamina D.

Ključne riječi: upalne bolesti crijeva, nedostatak vitamina D

Opstrukcija tankog crijeva stranim tijelom u bolesnika s Crohnovom bolesti

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Abstract:
Uvod:
Strano tijelo u probavnom sustavu pripada rjeđim uzrocima crijevne opstrukcije. Većina stranih tijela spontano će proći kroz cijeli probavni trakt. Endoskopska intervencija biti će potrebna u otprilike 10-20%, a kirurški zahvat u manje od 1% slučajeva. Osobe povećanog rizika za zastoj stranog tijela su one s prethodnim operativnim zahvatom u abdomenu, hernijom, tumorom, Crohnovom bolesti, ili urođenim malformacijama crijeva.
Prikaz slučaja:
Prikazali smo bolesnicu s Crohnovom bolesti i stenozama terminalnog ileuma s prestenotičkom dilatacijom koja nije bila sklona elektivnom kriruškom liječenju i koja je bila u remisiji tijekom nekoliko godina. Pacijentica je hospitalizirana zbog razvoja opstruktivnih simptoma; bol u abdomenu i povraćanje, bez proljevastih stolica u povišene tjelesne temperature. CT je pokazao prisutnost stranog tijela zaglavljenog u području ileocekalne valvule s prestenotičkom dilatacijom i zadebljanjem terminalnog ileuma. Strano tijelo pokazalo imalo je radiološke karakteristike ovalne hiperehogene tvorbe s hipoehogenim središtem, te je postavljena sumnja na ileus uzrokovan žučnim kamencem (engl. gallstone ileus). Intraoperativni nalaz pokazao je upaljenu i zadebljanu stijenku terminalnog ileuma bez znakova perforacije koja je resecirana, a unutar lumena uočena je koštica breskve uglavljena u ileocekalnoj valvuli.
Zaključak:
Ovim neobičnim prikazom slučaja htjeli smo prikazati da je osim najčešćih uzroka opstrukcije tankog crijeva potrebno imati na umu rijetke i neuobičajene uzroke opstrukcije i uzeti ih u obzir u diferencijalno-dijagnostičkom razmišljanju, osobito u bolesnika s Crohnovom bolesti i

stenozirajućim fenotipom, kako bi se pravodobno interveniralo i otklonila mogućnost komplikacija poput perforacije, krvarenja ili razvoja fistula.

Ključne riječi: strano tijelo, opstrukcija tankog crijeva, Crohnova bolest

Fekalna transplantacija - iskustvo jednog centra

Krznarić Zrnić I.[1], Abram M.[2], Škrobonja I.[2], Mijandrušić- Sinčić B.[1], Hauser G.[1], Milić S.[1], Knežević S.[3], Štimac D.[1]

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Abstract:
Uvod: Transplantacija (transfer) fekalne mikrobiote ima za cilj restituciju narušene crijevne mikrobiote pacijenta prijenosom mikrobiote zdravog davatelja. Prijenos se najčešće realizira instilacijom filtrata stolice zdravog donora u debelo crijevo primatelja putem kolonoskopa ili instilacijom putem nazoduodenalne/nazojejunalne sonde u gornji dio probavne cijevi. Indikacija za ovu metodu liječenja je refrakterna/rezistentna infekcija bakterijom Clostridium difficile (CDI). CDI je danas najčešći uzročnik nozokomijalne dijareje koja je posljedica primjene antibiotika. Poslijednjih nekoliko godina incidencija CDI je u značajnom porastu. Javlja se češće u starijih i pacijenta s kroničnim komorbiditetima. U 20 % razvija se refrakterni oblik rezistentan na primjenu standardnih antibiotika (vankomycin, metronidazol). Iako su brojne studije dokazale učinkovitost FMT-a u refrakternoj i rekurentnoj CDI te je ova metoda liječenja u navedenim indikacijama preporučena od strane Europskog (ESCMID) i Američkog društva za kliničku mikrobiologiju i infektivne bolesti, još uvijek se primjenjuje u relativno ograničenom broju centara.
Prikazi slučajeva: U KBC Rijeka na Zavodu za gastroenterologiju i hepatologiju u razdoblju od svibnja 2017. do listopada 2018, FMT je učinjen u pet bolesnika. Svi donori stolice testirani su prema preporukama ESCMID-a. U dvije bolesnice FMT je učinjen jednom zbog rekurentne CDI i rezultirao je izlječenjem. U jedne bolesnice FMT je učinjen zbog refrakterne CDI u dva navrata i također je postignuto izlječenje teškog oblika bolesti (pseudomembranoznog enteokolitisa). U jedne bolesnice radilo se o refrakternom obliku CDI i egzacerbaciji dugogodišnjeg ulceroznog kolitisa. Unatoč višekratnom FMT-u (više donora) u kombinaciji s biološkom terapijom, u bolesnice nije postignuto izlječenje CDI niti klinički odgovor na terapiju za UC te je indicirana kolektomija. U jednog bolesnika s multiplim komorbiditetima radilo se o teškom obliku CDI (pseudomembranozni enterokolitis i C. diff. sepsa) koji je unatoč FMT-u i ostaloj primjenjenoj terapiji preminuo.

Zaključak: FMT je vrlo učinkovita metoda u liječenju rekurentne i refrakterne CDI. Prema meta analizama odgovor na terapiju kreće se između 50-90%. Rijetki izvještaji o teškim nus-pojavama ili smrtnim ishodima svrstavaju ovu metodu liječenja u sigurne i dobro podnošljive čak i u imunokompromitiranih i starijih bolesnika. U malom broju pacijenata koji su liječeni na Zavodu za gastroenterologiju KBC-a Rijeka primjenjivali smo svježe i smrznute filtrate stolice zdravih donora u cekum ili silazni/sigmoidni kolon. Po FMT-u nisu zabilježene teže nus-pojave. Jedan pacijent je preminuo. Iako se radi o maloj seriji pacijenta s rezistentnom/refrakternom CDI liječenih FMT-om, rezultati našeg centra kompatibilni su s onima u literaturi.

EX VIVO INTESTINAL BIOPSY CULTURES IN TRANSLATIONAL RESEARCH

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Abstract:
Aim of this study was to measure mucosal cytokines participating in IBD inflammatory process using ex vivo tissue assay and correlate their concentrations with the clinical picture of the corresponding donors.

Methods: Study was approved by Ethics Committee of KBC Rijeka and KB Dubrava. Colon and terminal ileum mucosa samples were collected during regular colonoscopy of 22 IBD patients: 11 Crohn's disease (CD) and 11 ulcerative colitis (UC). The biopsies were submerged in completed CMRL medium and incubated at 37°C in 5% CO2 and 90% O2 for 24 hours. Concentrations of IL1β, IL6, IL8, TNFα, CCL2, CXCL1, CXCL2 and CXCL5 in culture supernatants were measured by ELISA. CDAI and Mayo scores were used to evaluate clinical state of the disease, whereas endoscopic appearance of mucosa was expressed via SES-CD, Mayo endoscopic subscore and UCEIS.

Results: All recruited donors had endoscopically active disease. No significant correlation between endoscopic scores and ex vivo spontaneously excreted cytokine concentrations was found.
In CD patients, TNFα, IL1β, IL6 and IL8 concentrations were significantly higher in patients with clinically active disease than those in remission, whereas CXCL1 and CXCL5 were not

significantly different. Endoscopic finding of ulcerations in the gut region which the samples were taken from was associated with greater ex vivo secretion of majority of measured cytokines, reaching statistical significance with IL8.
All enrolled UC patients had clinically active disease. Positive correlation between CRP concentrations and measured concentrations of IL1β, TNFα and IL8 were observed, whereas correlation with CCL2 was negative.
Significant positive correlation among large set of cytokines (IL1β, IL6, IL8, TNFα and CXCL5) was observed in samples from CD donors, and only between some of them in samples from UC patients.

Conclusion: Using ex vivo colon biopsy assays, we have demonstrated a distinct difference in mucosal cytokine expression of CD patients in clinical remission when compared to patients in state of active disease. Such comparison for UC patients was not possible since all enrolled UC patients had active disease. In both groups, endoscopic scores did not correlate with measured cytokine concentrations. Correlation between measured cytokines was greater in CD samples than in UC samples.

Dijagnostička pouzdanost bodovnih sustava za predikciju mortaliteta u bolesnika s alkoholnim hepatitisom

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Abstract:
CILJ: Cilj rada bio je analizirati prognostičku valjanost bodovnih sustava za predikciju mortaliteta u bolesnika s alkoholnim hepatitisom (Maddrey diskriminantna funkcija (MDF); Glasgow alcoholic hepatitis score (GAHS), Model of end stage liver disease (MELD), Age, Bilirubin, INR, creatinin (ABIC), Neutrophile/lymphocite ratio (NLR) i Lille score).

MATERIJALI I METODE: Retrospektivnom analizom identificirani su bolesnici liječeni u Kliničkoj bolnici Dubrava zbog alkoholnog hepatitisa (AH) u periodu od siječnja2014. do svibnja 2018. godine, kojima su se mogli izračunatinavedeni bodovni sustavi kod postavljanja dijagnoze te nakon 7 dana. Dijagnoza AH postavljena je temeljem anamnestičkih podataka o dugotrajnoj konzumaciji rizičnih količina alkohola (>30 g/d za muškarce i >20 g/d za žene), u odsutnosti drugih uzroka bolesti jetre uz tipičan profil jetrenih enzima s AST/ALT>2, te visoku bilirubinemiju (>50 umol/L). Iz studije su isključeni bolesnici s drugom bolesti jetre te oni s evidentnom sepsom kod prijema. Analizirana je stopa smrtnosti nakon 28 i 90 dana od prijema.

REZULTATI: Analizirano je ukupno 70 bolesnika, 52 (74.3%) muškaraca i 18 (25.7%) žena, prosječne dobi 55.8±10.7 godina. Medijan bilirubina iznosio je 176.5 umol/L, AST 158.5 IU/L, ALT 60 IU/L, GGT 407.5 IU/L. Medijani vrijednosti prognostičih indeksa iznosili su: MDF 45, GAHS 8, MELD 21.6, ABIC 8.2, NLR 5 i Lille 0.4. Kortikosteroidima je liječeno 37.1% bolesnika. Kod hospitalizacije detektirana je infekcija u 13.6% bolesnika, a tokom hospitalizacije infekcija se razvila u 18.8% bolesnika, češće u žena(P=0.028). Ukupno 15.7% bolesnika doživjelo je smrtni ishod unutar 28 dana, a 26.2% unutar 90 dana od prijema u bolnicu. Najbolja diskriminatorna svojstva na dan prijema pokazali su ABIC > 9.92 (AUC 0.727; 95% C.I. [0.608 - 0.827], P=0.0119) za 28-dnevni te GAHS > 7 (AUC 0.765; 95% C.I. [0.639 - 0.864]; P<0.0001) za 90-dnevni mortalitet. Najbolja diskriminatorna svojstva na dan 7 od prijema u bolnicu pokazali su Lille > 0.78 (AUC 0.897; 95% C.I. [0.798 - 0.958]; P<0.0001) za 28-dnevni te GAHS > 8 (AUC 0.835; 95% C.I. [0.716 - 0.918]; P<0.0001) za 90-dnevni mortalitet. Većina skorova imala je bolje performanse na dan 7 od prijema, u odnosu na dan 0, no razlike nisu bile statistički značajne.

ZAKLJUČAK: Noviji bodovni sustavi poput ABIC i GAHS pokazuju bolja prognostička svojstva glede 28- i 90-dnevnog mortaliteta od MDF. Iako zbog veličine uzorka nije bilo moguće demonstrirati statističku značajnost razlike, većina skorova pokazuje bolja svojstva ako se skoriraju na dan 7 od prijema do kada je klnički tijek bolesti razvijen, a potencijalne komplikacije evidentne.

EUS ELASTOGRAFIJA ZA NEINVAZIVNU KARAKTERIZACIJU TUMORA GUŠTERAČE

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Abstract:
Cilj: Endoskopski ultrazvuk (EUS) je pouzdana metoda za detekciju i staging tumora gušterače. Uz dodatak tkivnog uzorkovanja metodom tankoiglene aspiracijske biopsije (engl. fine needle aspiration, FNA) postiže se visoka specifičnot (>95%) u razlikovanju benignih od malignih tumora, uz nešto slabiju osjetljivost (89%) i mogućnost razvoja komplikacija. Zbog toga se istražuju komplementarne metode neinvazivne dijagnostike kao što je EUS elastografija. Cilj studije bio je utvrditi dijagnostičku vrijednost EUS elastografije u stvarnom vremenu za razlikovanje benignih od malignih tumora gušterače.

Metode: U studiju su uključeni bolesnici kojima je zbog sumnje na tumor gušterače učinjena EUS-elastografija u našem Zavodu od svibnja 2017. do srpnja 2018. Elastografska analiza tvrdoće tumora provedena je određivanjem strain ratio (SR) pri čemu je kao referentno područje analizirano tkivo neinfiltriranog dijela gušterače. Provedena su po 3 SR mjerenja te je izračunata prosječna vrijednost za svaki tumor. Kao metoda zlatnog standarda u definiranju vrste tumora korištena je citološka analiza tkivnog uzorka dobivenog pomoću FNA ili patohistološki nalaz reseciranog tumora. U benignim ili dvojbenim slučajevima bolesnici su praćeni najmanje 3 mjeseca nakon indeksnog pregleda te je svima ponovljen EUS-FNA i jedna od slikovnih metoda (MR ili MSCT gušterače). Ukoliko je tkivni nalaz i dalje bio benigan, a slikovni nalaz stacionaran smatrali smo kako je isključena maligna bolest gušterače.

Rezultati: U studiju je uključeno 66 bolesnika (34 muškarca i 32 žene, prosječne dobi 66,7±10

godina). Prosječna veličina tumora iznosila je 31,5±13,5 mm, a većina (59%) bila je lokalizirana u glavu gušterače. Maligni tumor utvrđen je u 49 (74%) bolesnika (duktalni adenokarcinom u 38, metastaze u 6, NEC u 5 bolesnika), dok je u 17 bolesnika nalaz bio benigne prirode (pankreatitis u 12, uredno tkivo pankreasa u 5 bolesnika). Maligni tumori imali su statistički značajno viši SR u usporedbi s benignima (16,3 (95% CI 12,7-19,8) vs. 4,8 (95% CI 1,4-8,2), p=0,006). Prijelomna vrijednost SR=2,2 imala je točnost 88% za razlikovanje benignih od malignih tumora uz osjetljivost 98%, specifičnost 59%, PPV 87% i NPV 91%, dok je prijelomna vrijednost SR =13,75 optimizirana za dokazivanje malignosti uz PPV 96%. U logističkoj regresiji koja je uključila dob, spol bolesnika, veličinu i lokalizaciju tumora SR pokazao se kao neovisan prediktor malignosti (AUC=0,85).

Zaključak: Metoda EUS elastografije mjerenjem SR-a je pouzdana i može poslužiti kao komplementarna metoda u razlikovanju benignih od malignih tumora gušterače.

DIAGNOSTIC PERFORMANCE OF TRANSIENT ELASTOGRAPHY AND 2D SHEAR WAVE ELASTOGRAPHY FOR NONINVASIVE DETECTION OF CLINICALY SIGNIFFICANT PORTAL HYPERTENSION

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Abstract:
AIM: To test performance of quantitative elastographic methods as potential non-invasive tools for assessment of clinicaly signifficant portal hypertension (CSPH).

METHODS: Patients suspected to have compensated advanced chronic liver disease (cACLD) based on previous clinical diagnostic work-up were candidates for invasive approach in order to assess for the aetiology and stage of liver disease and the presence of CSPH. Patients with history of liver decompensation were not included. Hepatic venous pressure gradient (HVPG) served as a reference method for assessment of PH and was measured by standardized transjugular approach. CSPH was defined as HVPG≥10 mmHg. All patients were scanned by transabdominal ultrasound prior to HVPG measurement including elastographic assessment of liver and spleen stiffness measurements (LSM and SSM) by 2 different methods: Transient elastography (TE; Fibroscan®, Echosense) and 2-dimensional shear wave elastography (2DSWE; Aixplorer® US system, Supersonic imagine).

RESULTS: Thirthy nine (39) patients (29 (74.4%) male; median age 62 (34-76) years; 9 Non Alcoholic Fatty Liver Disease, 12 Alcoholic Liver Disease, 5 HCV, 5 AIH, 8 other aethiologies; median fibrosis stage 6 (0-6), mean 4.69±0.3 according to Ishak) underwent HVPG measurement (median value 10,5 mmHg (1,5-22,4)). Liver cirrhosis was histologically confirmed in 22/39 (56.4%) patients, and CSPH in 20/39 (51.3%). LSM correlated significantly to HVPG (Spearmann ρ=0,812 p<0,0001 for 2DSWE and ρ=0,738, p=0,0001 for TE). SSM showed significant correlation with HVPG as well (Spearmann ρ=0,78; p=0,0001 for RT-2D-SWE and ρ=0,791, p<0,001 for TE). Assessment of LSM by 2DSWE and TE had excellent performance for differentiation between patients with or without CSPH (2DSWE LSM cut-off 23.3 kPa; Se 75%, Sp 94%, PPV 94%, NPV 77%, AUC 0,88 and TE LSM cut-off 17.3 kPa, Se 74%, Sp 83%, PPV 82%, NPV 75% AUC 0,85). The similar was observed for SSM (2DSWE SSM cut-off 32.1 kPa; Se 84%, Sp 92%, PPV 94%, NPV 79%, AUC 0,92 and TE SSM cut-off 41,8 kPa, Se 82%, Sp 100%, PPV 100%, NPV 81.2% AUC 0,91). LSM by 2DSWE was able to rule-out high-risk esophageal varices (HRV) with 100% NPV at cut-off values 23.3 kPa (p=0.0001, AUC 0,88) whereas cut-off value of SSM by 2DSWE for ruling-out HRV was 39.3 kPa with 95% NPV (p=0.0006, AUC 0.84).

CONCLUSION: Both elastographic methods demonstrated very strong correlation to portal hypertension as assessed by HVPG measurement. Both LSM and SSM showed very good performance for non-invasive diagnosis of CSPH and HRV.

Liver Stiffness as measured by 2D Shear Wave Elastography is an independent predictor of adverse clinical outcomes of patients with chronic liver disease

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Abstract:
AIM: The aim of this study was to evaluate potential impact of liver stiffness measurements (LSM) and spleen stiffness measurements (SSM) using two dimensional shear wave elastography (2DSWE) on the development of complications of liver disease and patients' survival.

METHODS: We have conducted a database search for patients with chronic liver disease who underwent LSM and/or SSM by using 2DSWE (Aixplorer® US system, Supersonic imagine) between 2011 and 2013, whose clinical outcomes including liver decompensation, HCC development, liver transplantation or death could have been traced up to 2018. Patients with biliary obstruction, congestive heart failure and malignant disease were excluded from the study. Enrolled patients were categorized based on liver disease etiology, co-morbidities and clinical outcomes.

RESULTS: In total 154 patients were analyzed, 63.6% male and 36.4% female, median age was 59 years (IQR 51 – 65.8). Alcohol and chronic viral hepatitis B/C were identified as causes of liver disease in 17.5% and 22.1% of patients respectively. Median LSM was 10.3 kPa, IQR (7.2-20 kPa), and median SSM was 27 kPa, IQR (23-33 kPa). Both LSM and SSM differed significantly among subgroups of patients with different etiology of liver disease. Patients with alcoholic liver disease had the highest LSM and SSM. Median follow up was 77 months. Patients with initial LSM values > 9.5 kPa had significantly lower survival rates (HR 3.28; P=0.001) and shorter event-free periods for liver decompensation or death (HR 29.8; P<0.001). Furthermore, they had higher number of hospitalizations per year during follow up (median 0.07 vs 0 per year; P<0.001). LSM and presence of chronic renal failure (CRF) remained independent predictors of shorter survival (HR 3.35; P=0.001 for LSM and HR 2.17; P=0.036 for chronic renal failure) in multivariate analysis after adjustment for age, sex, comorbidities and alcoholic etiology.

Furthermore, LSM, CRF and alcoholic etiology were independent predictors of shorter event-free periods for liver decompensation or death (HR 23.7; P=0.002 for LSM; HR 2.75; P=0.023 for CRF and HR 2.82; P=0.010 for alcoholic etiology). Contrastingly, patients who had SSM values > 30 kPa had significantly shorter survival rates (HR 2.27; P=0.048), albeit SSM did not influence time to decompensation nor did it affect the number of hospitalizations during follow up. In a multivariate survival analysis SSM did not hold up as an independent predictor of adverse outcome.

CONCLUSION: Liver stiffness as measured by 2DSWE can identify patients with risk of liver decompensation and shorter survival

EPIDEMIOLOŠKE ZNAČAJKE PRIMARNOG BILIJARNOG KOLANGITISA : REZULTATI KOHORTE BOLESNIKA IZ KLINIČKE BOLNICE DUBRAVA

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Abstract:
CILJ: U Hrvatskoj nema objavljenih podataka o incidenciji, prevalenciji ni demografskim karakteristikama bolesnika s primarnim bilijarnim kolangitisom (PBC). Cilj ovog rada je prikazati epidemiološke i demografske karakteristike PBC bolesnika obrađivanih u Kliničkoj bolnici Dubrava (KBD).

ISPITANICI I METODE: Retrospektivno su analizirani bolesnici s PBC obrađivani u KBD u periodu od 2007-2017. Dijagnoza PBC-a postavljena je u bolesnika s kronično povišenim vrijednostima ALP i/ili GGT uz pozitivna antimitohondrijska protutjela (AMA), odnosno biopsijom jetre u AMA negativnih bolesnika. Bolesnici su kategorizirani u rani i kasni klinički stadij bolesti. Rani stadij je definiran urednim vrijednostima bilirubina i albumina kod uključivanja, odnosno kao histološki stadij I i II po Ludwig i Scheuer klasifikaciji. Za bolesnike s dostupnim podatcima izračunat je odgovor na terapiju ursodeoksikolnom kiselinom (UDCA) koristeći Paris II kriterije. Stope incidencije i prevalencije su izražene za bolesnike s prebivalištem na gravitacijskom području KBD (Istočni dio Zagreba i Zagrebačke županije; cca 320.000 stanovnika).

REZULTATI: Pretragom bolničkog informacijskog sustava identificirali smo 46 bolesnika s PBC (od toga 6 bolesnika sa preklapajućim sindromima (PBC/AIH); medijan dobi 57.5 (IQR 52.3-63) godina; 87% žena; 82.6% AMA pozitivnih; 37% bolesnika imali su i drugu autoimunu bolest;

osteoporoza u 17.4% ispitanika. Mučnina je bila najčešći simptom s pojavnošću od 50%, potom umor s 34.8% te pruritus s 23.9%. Biopsija jetre učinjena je u 15 bolesnika (73.3% histološki stadiji I-II). Prebivalište na gravitacijskom području KBD imalo je 28 iz čega je izračunata stopa prevalencije od 8.75/100.000 stanovnika, te incidencija 0.75/100 000 stanovnika/godinu. 7/32(21%) bolesnika s dostupnim podatcima u praćenju nije odgovorilo na UDCA prema Paris II kriterijima. Prediktori uspjeha terapije bili su niža koncentracija IgM na početku terapije (P=0.009) i adherencija za terapiju (P=0.007). "Event-free" stopa preživljenja (EFS) nakon 5 godina iznosila je 90.1%. Tijekom praćenja jedan bolesnik je preminuo od uzroka nevezanog za jetru. Univarijatni faktori rizika za kraće preživljenja su bili izostanak odgovora na UDCA (HR=9; P=0.028), osteoporoza (HR=6.8; P=0.015), kasni stadij bolesti (HR=19.1; P=0.016), IgM >4 g/L (HR=131; P=0.005), kolesterol ≤4.7 mmol/L (HR=5.9; P=0.087), trigliceridi ≤1.22 mmol/L (HR=14; P=0.028), trombociti ≤166 x109/L (HR=20.5; P<0.001), albumin ≤37 g/L (HR=13.7; P=0.003). U multivarijatnoj analizi osteoporoza je ostala značajan faktor preživljenja (HR=9.27; P=0.031) nakon korekcije za dob.

ZAKLJUČAK: Ovi rezultati uklapaju se u postojeći geografski gradijent smanjenja incidencije i prevalencije PBC od sjeverozapada prema jugoistoku. U našoj populaciji bolesnika prevladavaju žene, u ranom kliničkom stadiju bolesti. Petogodišnje preživljenje je ukupno dobro, a uspjeh terapije određuju adherencija i težina bolesti.

PREVALENCE OF FATTY LIVER AND FIBROSIS IN PATIENTS WITH TYPE 2 DIABETES MELLITUS AND PREVIOUSLY UNDETECTED LIVER DISEASE AS ASSESSED BY TRANSIENT ELASTOGRAPHY AND ULTRASOUND

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Abstract:
Aims: To assess the prevalence of fatty liver and significant liver fibrosis in patients with type 2 diabetes mellitus type (T2DM) and previously unknown liver disease.

Methods: Patients with T2DM from outpatient diabetes clinic without known liver disease were prospectively included in the study. All patients underwent liver stiffness (LSM in kPa) and controlled attenuation parameter (CAP in dB/m) measurements by transient elastography (FibroScan® 502 Touch, Echosens, FR) in order to quantify severity of liver fibrosis (LSM<7.9 kPa for F≤2 and >9.6kPa for F≥3; Wong et al. Hepatology 2010) and steatosis respectively. Steatosis grade was semiquantitatively (S0-S3) assessed by conventional ultrasound (US) as well. Anthropometric and relevant biochemical parameters were recorded, and FIB-4 score was calculated for each patient.

Results: Successful TE measurements were obtained in 460/521 (88.3%) patients (complete failure in 14/521 (2.7%), unreliable in 47/521(9.0%)) comprising the cohort for subsequent analysis: average age 62.5±0.6 years, 221 (48%) females, BMI 30.4±0.4kg/m², HbA1c 79.5±16.0 mmol/mol, ALT 32.3±1.5, FIB-4=1.30±0.04, LSM 6.51±0.18 kPa and CAP 298±3.1 dB/m. Of

the included 460 patients, 82% had BMI>25 kg/m², 80.2% had liver steatosis by US and 80.7% by CAP (S≥1, CAP≥238 dB/m), advanced fibrosis (F≥3, TE≥9.6 kPa) was detected in 10.0%, whereas in 81.3% patients LSM was ≤F2 (<7.9 kPa). Patients within the higher BMI category (>30 vs 25-30 vs <25 kg/m²) had significantly worse liver steatosis (by US and CAP; p<0.0001 for both), whereas no difference existed in terms of age, gender, LSM, FIB4 and HbA1c values. Patients within higher steatosis grade as defined by US had significantly higher LSM (5.52 kPa for S0, 5.86 kPa for S1, 7.04 kPa for S2, and 7.98 kPa for S3; ANOVA p<0.001). Patients with advanced fibrosis (LSM>9.6kPa) had significantly higher ALT values (p=0.001), higher CAP (p=0.02), higher FIB-4 (p=0.006) and higher steatosis grade by US (p=0.001) whereas age, gender and HbA1c were not different as compared to patients with lower LSM values. A weak but significant correlation was demonstrated between CAP and LSM (Pearson r=0.156; p=0.001).

Conclusion: T2DM patients are obese, with 80% having fatty liver and 10% LSM in the range of advanced liver fibrosis. Patients with a higher grade of steatosis detected by US have significantly higher values of LSM implying possibly higher stages of liver fibrosis. These patients might be under increased risk of complications from liver disease and should be evaluated and tightly followed by hepatologists.

NEINVAZIVNA PROCJENA STADIJA FIBROZE METODOM ELASTOGRAPHY POINT QUANTIFICATION (ELASTPQ) U BOLESNIKA S NEALKOHOLNOM MASNOM JETROM

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Abstract:
UVOD: Nealkoholna bolest masne jetre (engl. non-acoholic fatty liver disease, NAFLD) ima prevalenciju oko 25% u europskoj populaciji. Najvažniji prediktor ishoda bolesti je stadij fibroze jetre. ElastPQ je neinvazivna dijagnostička metoda koja se temelji na point Shear Wave elastografiji te je ugrađena u klasični ultrazvučni uređaj. Postoje tek preliminarni podatci o vrijednosti ElastPQ u procjeni fibroze kod bolesnika s NAFLD.

ISPITANICI I METODE: U istraživanje su uključeni ambulantni bolesnici kojima je u ultrazvučnoj jedinici našeg Zavoda utvrđena masna jetra (ehogenija u odnosu na korteks bubrega). Kod takvih bolesnika isključen je abuzus alkohola (>30 g/dan za muškarce i >20 g/dan za žene), druge kronične bolesti jetre i tumori jetre. U istraživanje nisu uključeni niti bolesnici s bilijarnom opstrukcijom, kongestivnom bolesti jetre i visokom upalnom aktivnosti jetre (ALT>5xULN). Svim bolesnicima je izmjerena tvrdoća jetre (engl. liver stiffness measurement, LSM) metodom ElastPQ (na uređaju Epiq7, Philips Healthcare), te uspoređeno s LSM izmjerenim tranzijentnom elastografijom (TE) uređajem Fibroscan (Echosens, France) koji je služilo kao referentna metoda za određivanje stadija fibroze. Kao prijelomne vrijednosti uzete su 7 kPa za F≥2, 9,5 kPa za F≥3 i 12 kPa za F=4 prema METAVIR klasifikaciji.

REZULTATI: Uključeno je 170 bolesnika (60,6% muškaraca i 39,4% žena, prosječne dobi 54,8±13,6 godina, BMI 28,7±5 kg/m2). Demografske karakteristike uključujući nalaze

laboratorijske obrade prikazane su u Tablici 1. Stadij fibroze F0-1 nađen je u 127 (74,7%), F2 u 20, F3 u 7 i F4 u 18 bolesnika. Prosječna vrijednost LSM metodom TE u cijeloj kohorti bila je 7,2±6,7 kPa, a metodom ElastPQ 6,2±3,9 kPa uz vrlo dobru korelaciju između metoda (Spearman rho 0,74, $p<0,01$). Dobivene su slijedeće prijelomne vrijednosti LSM-a metodom ElastPQ za razlikovanje stadija fibroze: 5,95 kPa za F≥2 (senz 90,7%, specif 92,1 %, AUROC 0,97); 6,01 kPa za F≥3 (senz 100%, specif 83,7%, AUROC 0,97) i 8,1 kPa za F=4 (senz 94,1% , specif 92,8 , AUROC 0,97). LSM bila je u dobroj korelaciji s biokemijskim indeksom fibroze FIB4 (Pearson r=0,5 za ElastPQ i 0,74 za TE; $p<0,01$ za obje). Neinvazivno procijenjen stupanj steatoze (controlled attenuation parameter) ima slabu korelaciju s LSM izmjerenim TE (Spearman $\rho=0,18$; $p=0,02$) i izostanak korelacije s LSM metodom ElastPQ (Spearman $\rho=0,08$; $p=0,33$).

ZAKLJUČAK: ElastPQ je pouzdana metoda za neinvazivno utvrđivanje stadija fibroze u bolesnika s NAFLD, što se posebno odnosi na razlikovanje bolesnika sa značajnom fibrozom (F≥2) u ambulantnom probiru.

Deset godina Referentnog centra Ministarstva zdravstva za bolesti pankreato-bilijarnog kanalnog sustava u Kliničkoj bolnici Dubrava: 2008-2017

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Abstract:
UVOD: U ovom radu donosimo pregled učinjenih ERCP zahvata tijekom prvih deset godina djelovanja Referentnog centra Ministarstva zdravstva za bolesti pankreato-bilijarnog kanalnog sustava u periodu od 2008. oo 2017. godine.

METODE: Ovo je retrospektivna studija u kojoj su podaci ekstrahirani iz dostupne medicinske dokumentacije u Bolničkom informatičkom sustavu te iz elektroničke baze ERCP nalaza pri Referentnom centru. Kod bolesnika koji su na zahvat u KB Dubrava došli iz drugih ustanova te su nakon zahvata vraćeni na nastavak liječenja u matičnu ustanovu moguće je bilo ekstrahirati samo podatke vezane uz dob i spol te samu proceduru, te stoga ovi zahvati nisu uključeni u finalnu analizu.

REZULTATI: U periodu od 2008 do 2017. godine u KB Dubrava učinjeno je ukupno 6385 ERCP zahvata na 5452 pacijenta (M 48%, Ž 52%), dok su detaljni podaci za analizu bili dostupni za ukupno 2006 zahvata, a za ostale zahvate ili nije bila dostupna kompletna elektronička dokumentacija ili se radilo o pacijentima iz vanjskih ustanova (2979 zahvata). Najčešće

indikacije za ERCP bila su koledokolitijaza (38,46%), kolangitis (12,94%) i distalna maligna bilijarna opstrukcija uzrokovana karcinomom gušterače (11,39%), a ukupno 113 (5.97%) zahvata je bile hitno, dok je 1894 (94,03%) bilo elektivnih. Primokanulacija je bila uspješna u 93,6%: vodećim kateterom ili sfinkterotomom preko žice vodilje kod 89,39%, uz prethodnu "pre-cut" sfinkterotomiju kod 6,4%, nakon transpankreasne sfinkteretomija kod 2,15%, a "randezvous" tehnika učinjena je kod 0,67%. Periampularni divertikul bio je prisutan kod 15.1% zahvata. Najčešće rađene procedure su: ekstrakcija konkremenata iz bilijarnog stabla (ekstrakcijskim balonom ili kožaricom) 43,2%, plasiranje plastičnog bilijarnog stenta kod maligne bolesti 19,11% te plasiranje plastičnog bilijarnog stenta kod benigne strikture 7,87%. Postproceduralna hiperamilazemija je bila prisutna nakon 34,77% zahvata, dok su komplikacije bile redom: post-ERCP pankreatitis nakon 77 procedura (3,44%), od čega 66 (5.54%) nakon prvog ERCP-a (kod 90,91% blagi, 5,19% umjereni te kod 3 (3,90%) bolesnika teški oblik); krvarenje kod 61 (3,04%) zahvata, od čega je 95,08% bilo intraproceduralno, 96,72% je kontrolirano endoskopski, dok je kirurška intervencija bila potrebna kod 2 bolesnika; bilo je 43 (2,14%) smrtnih ishoda unutar 30 dana od zahvata, od čega je 34 (79,07%) bilo zbog osnovne bolesti; u promatranom periodu ukupno 21 (1,05%) zahvat je kompliciran perforacijom: tip 2 kod 10, tip 3 kod 7 i tip 1 kod 4 zahvata, od čega je 9 liječeno kirurški.

ZAKLJUČAK: Rezultati rada Referentnog centra za bolesti pankreato-bilijarnog kanalnog sustava usporedivi su sa rezultatima publiciranim od strane drugih velikih centara izvrsnosti.

TRANSPAPILARNA DRENAŽA KOLEKCIJE NAKON TRANSEKCIJE GUŠTERAČE TIJEKOM KIRURŠKOG LIJEČENJE ANEURIZME ABDOMINALNE AORTE

Bokun T.[1], Zelenika M.[1], Božin T.[1], Tadić M.[1], Radić B.[1], Kardum D.[1], Grgurević I.[1], Rob Z.[1], Petrović J.[2], Huzjan-Korunić R.[2], Cvetko D.[2], Stipančić I.[3], Kujundžić M.[1]

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Abstract:
UVOD: Kirurške lezije gušterače tijekom vaskularne kirurgije u abdomenu vrlo su rijetka komplikacija.

PRIKAZ SLUČAJA: Donosimo prikaz 79-godišnjeg bolesnika kojemu je učinjena resekcija infrarenalnog segmenta abdominalne aorte sa aortobiilijarnom rekonstrukcijom radi aneurizme abdominalne aorte. Postoperativni tijek komplicirao se bolovima u gornjem dijelu abdomena i leđima te je učinjen MSCT abdomena kojim se verificirala kolekcija u trupu pankreasa veličine 47x37 mm koja se na kontrolnom MSCT-u povećala na 83 x 55 mm. Na konziliju gastroenterologa, radiologa i abdominalnih kirurga nakon uvida u slikovne pretrage zaključeno je da se radi o komplikaciji recentnog kirurškog liječenja - kompletnoj transekciji pankreasa u području trupa sa formiranjem kolekcije koja progresivno raste. S obzirom na poziciju i karakteristike kolekcije, otklonjena je mogućnost transgastrične drenaže kolekcije u tom trenutku, dok bi kirurško liječenje bila vrlo rizična opcija. Zbog toga je odlučeno da se pokuša transpapilarna drenaža kolekcije. Pristupilo se ERCP-u tijekom kojeg je endoskopski prikazana papila smještena u lateralnom zidu velikog divertikla širokog vrata te je kanulacija pankreatikusa

bila je vrlo otežana. Kod injiciranja kontrasta dobiven je vrlo heterogeni kontrastni prikaz u projekciji trupa pankreasa što je odgovaralo slikovnim metodama opisanoj kolekciji, uz uredan tijek duktusa pankreatikusa u dijelu trupa i u glavi, bez kontrastnog prikaza kanalnog sustava repa gušterače. U nastavku je učinjena transpankreatična sfinkterotomija te je po žici vodilji plasiran pankreatični 'single-pigtail' stent 7 Fr / 9 cm, sa zaštitnim krilcem na duodenalnoj strani, koji je drenirao sadržaj kolekcije. Tjedan dana nakon postavljanja drenažnog stenta kolekcija se smanjila na 24x52 mm, a šest tjedana nakon postavljanja drenaže prikazala se gotovo potpuna regresija kolekcije uz vidljiv manji mjehurić plina promjera 6 mm, dok je položaj stenta ostao nepromijenjen, vrhom u kolekciji.

DISKUSIJA: Transpapilarna drenaža pankreasnih kolekcija i pseudocista pankreasa može biti opcija zbrinjavanja kada kolekcija/pseudocista komunicira sa pankreasnim glavnim vodom. U ovom kliničkom slučaju tijekom ERCP zahvata nije se uspjelo postaviti žicu vodilju u rep pankreasa, prvenstveno jer je kolekcija razdvojila glavu i dio trupa od repa gušterače, zbog čega je postavljen stent čiji je vrh bio u kolekciji što je rezultiralo uspješnom drenažom. No s obzirom da je nakon šest tjedana ekstrahiran pankreatični stent zbog potencijalnih rizika od strane prolongiranog držanja stenta u pankreatikusu, postavlja se pitanje što će se dogoditi s obzirom da je rep pankreasa i dalje vijabilan te je moguće da će se zbog lučenja pankreasnih sokova u repu gušterače ova kolekcija ponovno puniti.

Impact of sleep duration on NAFLD

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Abstract:
Background and aim: nowadays there are conflicted data about relationship between degree of nonalcoholic fatty liver disease (NAFLD) and sleep duration. Our aim was to investigate the association among sleep duration and severity of NAFLD, and degree of inflammation in our cohort of patients. Also we were interested if gender have impact on degree of NAFLD in relation to sleep duration.
Patients and methods: we have analyzed 573 patients mean aged 59.1±13.2 years. There was 300 (52.4%) male patients. NAFLD was detected by liver enzymes, controlled attenuation parameter (CAP) and liver stiffness measurements (LSM) assessed by transient elastography (TE). In part of the patients (113) the liver biopsy was done as well. Sleeping duration was recorded using quantitate questionnaire and categorized in three groups: short (S) (<6h), moderate (M) (6-8h) and long (L) (>8h) sleep duration.
Result: In the first group there were 72 patients, in second 326 and in the third group there were 173 patients. There was no significant difference due to gender between three groups of patients, as well as due to anthropometric parameters of obesity (body weight, waist circumference, hip circumference and upper arm circumference), diabetes mellitus type 2 and dyslipidemia. Group of patients with S sleeping more often had hypertension ($p<0.05$). Firstly we have analyzed the influence of sleeping duration on the elastographic parameters of liver steatosis and fibrosis (CAP and LSM). We did not find statistically significant difference among three groups of patients. Next we have investigated the influence of sleeping duration on biopsy findings. There was no significant difference in the biopsy finding between three groups of patients, although group of patients who slept moderately (second group of patients) had the lowest percentage of nonalcoholic steatohepatitis (NASH) and NASH with liver fibrosis. On the other hand those who had short sleep duration had the lowest stage of fibrosis, although this difference is not statistically significant. Patients with short and long sleeping duration didn't' not have any patients with simple steatosis on biopsy findings in comparison to the group of patients with

moderately sleeping duration. Interestingly, although there was no significant difference among three groups of patients due to transaminases levels, group of patients who had moderate sleep duration had the highest values of alanine-aminotransferase and aspartate-aminotransferase. Finally, group of patients with short sleep duration had the highest ferritin levels ($p=0.004$ for trend), while patients with moderate sleep duration had the highest C-reactive protein levels. These difference did not reach statistical significance.
Conclusion: According to our results, short and long sleep duration has the negative impact on the presence of NASH and NASH with liver fibrosis. On the other word, moderately sleeping (6-8h) has beneficial effect on the degree of NAFLD on biopsy findings. Duration of sleeping has no any effect on elastographic parameters of liver steatosis and fibrosis. Short sleeping has negative impact on inflammation state assessed by ferritin levels.

Nonalcoholic fatty liver disease (NAFLD) and gastroesophageal reflux disease

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Abstract:
BACKGROUND AND AIM: According to current data connection between nonalcoholic fatty liver disease (NAFLD) and gastroesophageal reflux disease (GERD) is controversial. Our aim was to analyze relationship between GERD and NAFLD.
METHODS: In this cross-section study we have analyzed 436 patients mean age 63.3±13.5 in whom upper gastrointestinal endoscopy (GE) was done. There were 215 (49.3%) male patients. On upper GE endoscopy we were interested to analyze presence of hiatal hernia, cardiac insufficiency and the presence and degree of GERD. NAFLD was diagnosed by liver enzymes and transient elastography [controlled attenuation parameter (CAP) for detection of liver steatosis and liver stiffness measurements (LSM) for liver fibrosis detection]. In part of the patients the liver biopsy was done.
RESULTS: Firstly we have analyzed difference between patients with mild steatosis (first group had CAP<268 db/m) and advanced steatosis (second group had CAP≥268 db/m). As we expected patients with advanced steatosis had higher values of anthropometric parameters of obesity, the XL probe was dominantly used and they had higher incidence of dyslipidemia (table 1.). There was no significant difference due to GERD frequency and degree as well as frequency of hiatal hernia between two group of patients, but patients with advanced steatosis had higher incidence of cardiac insufficiency (p=0.04). Next, we were interested to analyze is there a difference in upper GI endoscopy findings between NAFLD patients with normal and elevated LSM values. There was no difference in anthropometric parameters of obesity between NAFLD patients with normal LSM values and those with elevated LSM values, while second group of patients had higher incidence of other components of the metabolic syndrome. Interestingly we didn't find any significant difference in upper GI endoscopy between two groups of patients (table 2.). Finally we have analyzed what are the difference in liver enzymes, elastographic and liver biopsy findings between patients with GERD and those without GERD. We didn't find any significant difference in liver enzymes, elastographic parameters of steatosis (CAP) and fibrosis (LSM) and liver biopsy findings among two group of patients (table 3.).
CONCLUSION: according to our results and in contrary to recent data, we didn't find the

connection between frequency and degree of GERD and degree of NAFLD diagnosed by liver enzymes, elastographic parameters of steatosis (CAP) and fibrosis (LSM) and liver biopsy findings, except patients with advanced steatosis defined by CAP values had higher incidence of cardiac insufficiency

SMOKING AND NONALCOHOLIC FATTY LIVER DISEASE

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Abstract:
Background and aim: The effect of cigarette smoking on the degree of nonalcoholic fatty liver disease (NAFLD) is unclear. We conducted a cross-sectional study to investigate the relationship between cigarette smoking and degree of NAFLD diagnosed by liver enzymes, elastographic parameters and liver biopsy.
Patients and methods: In this cross-sectional study we have analyzed 552 patients with NAFLD, mean age was 59.4±13.3 years. There were 290 (52.9%) male patients. NAFLD was detected by controlled attenuation parameter (CAP) and liver stiffness measurements (LSM) assessed by transient elastography. In part of the patients (111) the liver biopsy was done as well. Smoking was recorded using semi-quantitate questionnaire and categorized as yes vs. no, and if the answer was no, the question as past smoker was categorized as yes vs. no. Patients were divided into three groups according to smoking status; first group were current smokers, second non-smokers, and third group of patients were past smokers.
Results: In the first group there were 72 patients, in second 326 and in the third group 173 patients. There was no significant difference due to anthropometric parameters of obesity (body mass index, waist circumference, hip circumference and upper arm circumference), diabetes mellitus type 2 and hypertension. Smokers had statistically significant more often dyslipidemia in comparison to the non-smokers (p=0.01). Firstly, we have analyzed the influence of smoking status on the elastographic parameters of liver steatosis and fibrosis (CAP and LSM). We didn't find statistically significant difference among three groups of patients, although past-smokers had the highest values of CAP and LSM. Next, we have investigated the influence of smoking status on biopsy findings. There was no significant difference in the biopsy finding between three groups of patients, although past smokers had the highest percentage of NASH and NASH with fibrosis on liver biopsy findings. Interestingly, none of the smokers didn't have only simple steatosis on biopsy findings. Although, there was no significant difference among three groups of

patients due to liver enzymes levels, current smokers had the highest GGT levels. Finally, group of patients who were current smokers had the highest C-reactive protein levels (p=0.04). Conclusion: According to our results, past smokers had the highest percentage of NASH and NASH with liver fibrosis on biopsy findings, as well as highest values of elastographic parameters of liver steatosis and fibrosis (CAP and LSM), although this differences were not statistically significant. Current smokers had the highest degree of inflammation.

Lean and obese nonalcoholic fatty liver disease

Delija B.[1], Skenderević N.[2], Mijić A.[1], Stevanović T.[1], Klapan M.[1], Jakopčić I.[1], Milić S.[1,2], Štimac D.[1,2], Mikolašević I.[1,2]

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Abstract:
Background/aim: Most patients with nonalcoholic fatty liver disease (NAFLD) are overweight or obese. But, a proportion of patients have a normal body mass index (BMI), denoted as lean NAFLD. We investigated the difference between lean and obese NAFLD diagnosed by liver enzymes and transient elastography.
Methods: We have analyzed 1431 patients mean aged 60.9±14.2 years. There was 773 (54%) male patients. NAFLD was detected by liver enzymes, controlled attenuation parameter (CAP) and liver stiffness measurements (LSM) assessed by transient elastography (TE). Patients were defined as lean (BMI<25.0), overweight (BMI 25.0-29.9) and obese (BMI≥30).
Results: In the first group (lean) there were 227 patients, in second (overweight) 555 and in the third group (obese) there were 649 patients. There was significantly more male patients in the second group in comparison to the first group (p=0.0003). Obese patients were significantly older in comparison to the lean group (p=0.0008). As we were expected, overweight and obese patients had significantly higher values of anthropometric parameters of obesity (waist circumference, hip circumference and upper arm circumference). Also, obese and overweight patients had significantly more often all three components of metabolic syndrome (hypertension, diabetes mellitus tape 2 and dyslipidemia) in comparison to the lean group of patients. The exception was no significant difference due to diabetes mellitus type 2 occurrence among lean and overweight group of patients (table 1.). Interestingly, there was no significant difference among three groups

of patients due to liver enzymes levels (table 2.). Next, we have analyzed the influence of obesity on the elastographic parameters of liver steatosis and fibrosis (CAP and LSM). Lean patients had significantly lower CAP values in comparison to the other two groups of patients ($p<0.0001$). There was no statistically significant difference due to LSM values between the lean and overweight patients, while obese patients had higher LSM values in comparison to the lean patients ($p=0.02$) (table 3.). Finally, obese group of patients had higher C-reactive protein levels ($p=0.0009$) in comparison to the lean patients, while there was no difference due to CRP levels between lean and overweight patients, as well there was no significant difference due to ferritin levels among three groups of patients (table 2.).

Conclusion: Lean patients had lower values of elastographic parameter of liver steatosis and fibrosis in comparison to the overweight and obese patients. Interestingly, there was no significant difference among three groups of patients due to liver enzymes levels.

Association between serum hemoglobin levels and degree of nonalcoholic fatty liver disease diagnosed by liver enzymes, transient elastography and liver biopsy

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Abstract:
Background and aim: liver biopsy remains the gold standard for nonalcoholic fatty liver disease (NAFLD) diagnosis, but it is not the best method due to possible complications and its limitations. It is important to find noninvasive marker of liver steatosis and fibrosis. Preliminary data suggest that hemoglobin (Hb) levels correlate with liver steatosis and fibrosis. Our aim was to investigate the association among serum hemoglobin (Hb) levels and degree of NAFLD diagnosed by liver enzymes, elastographic parameters and liver biopsy.
Patients and methods: we have analyzed 2050 NAFLD patients mean aged 61.4±14.7 years. There were 1099 (53.6%) male patients. NAFLD was detected by liver enzymes, controlled attenuation parameter (CAP) and liver stiffness measurements (LSM) assessed by transient elastography (TE). In part of the patients (134) the liver biopsy was done as well.
Result: Firstly we have analyzed the correlation among liver enzymes and Hb levels. There was significant positive correlation between all liver enzymes and Hb levels; Hb levels and AST ($r=0.102$; $p=0.0003$), Hb levels and ALT ($r=0.147$; $p<0.0001$) as well as between Hb levels and GGT ($r=0.104$; $p=0.0002$). In the next step we have analyzed the correlation between Hb levels and elastographic parameters of liver steatosis and fibrosis. There was a significant positive correlation between CAP (an elastographic parameter of liver steatosis) and Hb levels ($r=0.222$; $p<0.0001$). On the other hand, the correlation between LSM (an elastographic parameter of liver fibrosis) and Hb levels was not significant. Finally, we have analyzed the correlation between Hb levels and histology findings. There was no significant correlation between Hb levels and degree of steatosis, degree of NASH (as well as degree of inflammation and ballooning). Also, there was

no significant correlation between Hb levels and degree of fibrosis on liver histology. Conclusion: According to our results, Hb levels increase significantly with the levels of liver enzymes (AST, ALT and GGT). Also, there was a significant positive correlation of Hb and elastographic parameter of liver steatosis (CAP), but not with elastographic parameter of fibrosis (LSM). On the other hand, the correlation between liver biopsy findings and Hb levels was not significant.

Association between platelet count and degree of nonalcoholic fatty liver disease diagnosed by liver enzymes, transient elastography and liver biopsy

Klapan M.[1], Skenderević N.[2], Mijić A.[1], Delija B.[1], Stevanović T.[1], Jakopčić I.[1], Milić S.[1,2], Fučkar-Čupić D.[1,3], Krznarić-Zrnić I.[2], Štimac D.[1,2], Mikolašević I.[1,2]

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Abstract:
Background and aim: liver biopsy remains the gold standard for nonalcoholic fatty liver disease (NAFLD) diagnosis, but it is not the best method due to possible complications and its limitations. It is important to find noninvasive marker of liver steatosis and fibrosis. Preliminary data suggest that NAFLD is associated with thrombocytopenia. Our aim was to investigate the association among platelet count (PLT) and degree of NAFLD diagnosed by liver enzymes, elastographic parameters and liver biopsy.
Patients and methods: we have analyzed 2050 NAFLD patients mean aged 61.4±14.7 years. There were 1099 (53.6%) male patients. NAFLD was detected by liver enzymes, controlled attenuation parameter (CAP) and liver stiffness measurements (LSM) assessed by transient elastography (TE). In part of the patients (134) the liver biopsy was done as well.
Result: Firstly we have analyzed the correlation among liver enzymes and PLT count. There was no significant correlation between all liver enzymes and PLT count. In the next step we have analyzed the correlation between PLT count and elastographic parameters of liver steatosis and fibrosis. There was no any correlation between CAP (an elastographic parameter of liver steatosis) and PLT count as well as between LSM (an elastographic parameter of liver fibrosis) and PLT count. Finally, we have analyzed the correlation between PLT count and histology findings. There was no significant correlation between PLT count and degree of steatosis, degree of NASH (as well as degree of inflammation and ballooning). Also, there was no significant correlation between PLT count and degree of fibrosis on liver histology.
Conclusion: According to our results, and in contrary to preliminary data, PLT count are not

associated to the degree of NAFLD defined by liver enzymes, elastographic parameters of liver steatosis and fibrosis (CAP and LSM) and liver biopsy findings.

Overlap syndrome of autoimmune hepatitis and HELLP syndrome

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Abstract:
INTRODUCTION

HELLP syndrome is a life-threatening complication of pregnancy. It is a variant of preeclampsia which can occur during the later stages of pregnancy or in postpartum period. The combination of hemolysis, trombocytopenia and elevated liver enzymes suggested HELLP syndrome. Because of nonspecific symptoms it can be often mistaken for flu, gastritis, gall bladder disease or other conditions.

CASE REPORT

A 33 year old female patient was admitted to the GE intensive care unit in early postpartum period because of clinical and laboratory signs of acute liver failure. She presented with jaundice, pain in upper abdomen, nausea, vomiting and malaise. Laboratory tests showed severe liver insufficiency; antithrombin III 2%, serum bilirubin 138 mmol/L (conjugated 93 mmol/L), prothrombin time 0.26, NH3 71 nmol/L, serum albumin 25 g/L. Disseminated intravascular coagulation was excluded with extended coagulation analysis, serology tests for hepatoropic viruses were negative, hemocultures and urinoculture were sterile, thyroid gland hormones were in respective reference intervals. In peripheral blood smear we didn't find schistocyte, LDH was lower (<490 IU/ml), serum creatinin was normal so we excluded thrombocytopenic purpura. Immunological study reported the antibody titer 1:160 ANA. According to laboratory results most likely diagnosis is pre-existing liver disease, autoimmune hepatitis, with superposition of

HELLP syndrome. During the admission patient got 15 units of fresh frozen plasma, 8000 IU of antithrombin II, human albumin 20%, metilprednisolon, intravenous immunoglobulins, ursodeoxycholic acid, vitamin K and empiric parenteral antibiotic treatment with piperacilin/tazobactam and metronidazole. Despite all the conservative therapy there was a jaundice progression with no recovery of coagulation factors so the patient was referred to Referral Center for Liver Transplantation.

CONCLUSION

Women with autoimmune conditions, especially pre-existing liver disease such as autoimmune hepatitis, are at higher risk for HELLP syndrome which is a life-threatening liver disorder. The global mortality rate of HELLP syndrome has been reported to be as high as 25%.

FIRST CASE OF TRETAMENT OF PRIMARY BILIARY CHOLANGITIS WITH OBETICHOLIC ACID IN CROATIA

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Abstract:
INTRODUCTION
Variant form of three major autoimmune disorders of the liver (autoimmune hepatitis, primary biliary cirrhosis and primary sclerosing cholangitis) are generally called overlap syndromes. The most common is AIH-PBC overlap syndrome which affects almost 10% of adults with AIH or PBC. Therapy is empiric; anticholestatic therapy with ursodeoxycolic acid is usually combined with immunosuppressive therapy.

CASE REPORT
A 36 years old female patient was referred to the gastroenterologist for suspicion of autoimmune liver disease. Her condition began at the age of 27 when elevated serum liver tests, dominantly cholestatic, were detected for the first time. She presented with weakness and pruritus during the last two years. Infectious hepatitis was earlier excluded with serology tests, abdominal ultrasound done two years previously showed splenomegaly and the immunological study reported antibody titer AMA 1:320, ANA 1:640, while ASMA and APCA were negative. Upper gastrointestinal endoscopy showed no esophageal varices and the MRCP was normal. A percutaneous liver biopsy showed mixed inflammatory infiltrate in all portal tracts with intracytoplasmic cholestasis and interface activity so the autoimmune hepatitis-primary biliary cirrhosis overlap syndrome was diagnosed. Treatment started with ursodeoxycholic acid and prednisone. Because of progression of pruritus after one month of therapy, we started with the second line of treatment

which included cholestyramine, diazepam and rifampicin. Despite all therapy measures intense pruritus did not yield so obeticholic acid was initiated and the patient was referred to Referral Center for Liver Transplantation in Zagreb for second opinion. At the last follow-up visit she reported an improved general condition.

CONCLUSION

Optional treatment for autoimmune hepatitis-primary biliary cirrhosis overlap syndrome is still unknown, but empiric treatment includes ursodeoxycholic acid and immunosuppressive therapy. Liver transplantation is indicated for patients in end-stage liver disease. Obeticholic acid, a farnesoid X receptor agonist, has shown potential benefit in patients with this disease.

Acute fat liver in pregnancy

Roža-Macan N.[1], Stevanović T.[2], Delija B.[2], Filipec Kanižaj T.[4], Sobočan N.[4], Milić S.[2,3], Štimac D.[2,3], Mikolašević I.[2,3]

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Abstract:
Introduction
Acute fat liver in pregnancy (AFLP) is a serious condition that occurs in the third trimester of pregnancy and it occurs in 1 of 13,000 pregnancies. It is characterized by microvesicular steatosis in the liver. The usual symptoms include nausea, vomiting, anorexia and abdominal pain. Jaundice and fever may occur in more than 70% of patients.
Case report
This case report is about 42-year-old pregnant woman, with symptoms of vomiting, headache, dizziness and at the end with disorder of state of consciousness. All the symptoms were due to acute liver and renal insufficiency for which emergency caesarean section was performed with a stillbirth. The family history was positive for preeclamsia. Initially she was treated in an intensive care unit. Tests for hepatotropic viruses, autoimmune and metabolic liver disease were all negative and all the hemocultures were sterile. The extended coagulogram analysis excluded disseminated intravascular coagulation but indicated a markedly insufficiency of liver. Apart from the supporting measures, empirical treatment with corticosteroids and ursodeoxycholic acid were initiated.
According to clinical, laboratory and other diagnostic methods, the most likely diagnosis was acute fat liver in pregnancy associated with impaired synthetic and excretory function of liver and the development of acute renal damage. After full recovery of the coagulation factors, the diagnosis was definitely confirmed by percutaneous biopsy of the liver.
In follow up the recovery of synthetic and excretory function is monitored as well as recovery of renal parameters.

Conclusion

As with preeclampsia and HELLP syndrome, AFLP may present in a variety of ways depending on the individual patient, which may increase the difficulty of diagnosis. If it is not diagnosed and treated promptly, AFLP can result in high maternal and neonatal mortality. Recent studies have shown that the mortality rate of mothers with acute fat liver in pregnancy is 10-20%.

Acute-on-chronic liver failure (ACLF) in pregnancy

Roža-Macan N.[1], Stevanović T.[2], Delija B.[2], Filipec Kanižaj T.[4], Sobočan N.[4], Milić S.[2,3], Štimac D.[2,3], Mikolašević I.[2,3]

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Abstract:
Introduction:
Acute-on-chronic liver failure (ACLF) is a syndrome characterized by acute decompensation of chronic liver disease associated with organ failure and high short-term mortality. Alcohol and chronic viral hepatitis are the most common underlying liver disease. An excessive systemic inflammatory response seems to play a crucial role in the development of ACLF.

Case report:

41-year old female patient, at the 36th week of pregnancy, was presented with fever, nausea and vomiting. Laboratory tests showed markedly reduced liver function (synthetic and excretory components). Serological analysis verified existence of chronic B hepatitis so in the therapy was immediately included tenofovir. The course was complicated by the appearance of fetal suffering and an emergency caesarean section was performed followed by correction of synthetic, excretory and metabolic liver function. The patient was transferred to Referral Center for Liver Transplantation; KB Merkur where a percutaneous liver biopsy was done (mHAI 8-9/18, Metavir A3, F1-2). Applied supportive therapy was accompanied by recovery of coagulation factors, decrease in aminotransferase levels and withdrawal of encephalopathy so there was no need to perform liver transplantation. Hypoglycemia and decreased function of liver there were still present. Other diagnostic methods didn't show any other pathology apart from cholelithiasis. The elevation of alpha fetoprotein was explained by necrosis of liver and recent birth. Along the extension of tenofovir, ursodeoxycholic acid was included in the therapy. In follow-up regression

of icterus along with normalization of glycaemia were verified. Due to persistent hyperbilirubinemia, Crigler – Najjar and Gilbert syndrome are being planned to test.

Conclusion:

The course of ACLF is dynamic and changes over the course of hospital admission. Most of the patients will have a clear prognosis between day 3 and 7 of hospital admission and clinical decisions such as evaluation for liver transplant or discussion over goals of care could be tailored using clinical scores.

Assessment of nonalcoholic fatty liver disease using serum total cell death and apoptosis markers – comparison with the liver biopsy

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Abstract:
Background/aim: The diagnosis of non-alcoholic fatty liver disease (NAFLD), non-alcoholic steatohepatitis (NASH) and fibrosis relies on liver biopsy. Non-invasive assessments are urgently needed. Thus, our aim was to evaluate cell apoptotic marker cytokeratin-18 M30 and total cell death markers cytokeratin-18 M65 for the assessment of NAFLD.
Methods: A cohort of 136 patients mean age 58.3±11.3 with biopsy-proven NAFLD were enrolled. There was 69 (50.7%) male patients. NAFLD was by transient elastography [controlled attenuation parameter (CAP) for detection of liver steatosis and liver stiffness measurements (LSM) for liver fibrosis detection]. NASH diagnosis was based on Brunt's criteria and the NAFLD activity score (NAS) and the presence of fibrosis were determined. The diagnosis of NASH was based on NAS≥5. Biomarkers were determined by enzyme-linked immunosorbent assay.
Results: Of 136 analyzed patients, 67 patients had NAS≥5 defined as NASH (according to the NAS score). Interestingly, there was no significant correlation between the M30 and M65 levels and CAP measurements. On the other hand, there was significant positively correlation of M65 and LSM measurements (r=0.228; p=0.007), while the correlation between M30 and LSM didn't reach the significant level (r=0.156; p=0.06). There was significant positive correlation between NAS score and M30 (r=0.193; p=0.02) and M65 (r=0.300; p=0.0004). M30 levels were significantly higher in NASH group of patients in the comparison to the non-NASH patients according to the NAS score (351.2±655.6 vs. 90.1±62; p=0.001) (figure 1a). Also, M65 levels were significantly higher in NASH group of patients in the comparison to the non-NASH patients according to the NAS score (585.1±886.5 vs. 207.2±33.2; p=0.0006). M30 levels was a moderate predictor of NASH on biopsy with an area under the curve (AUC) of 0.722 (95% Cl 0.639 to

0.795). A M30 cut-off of >74 had a sensitivity of 52.2%, specificity of 90%in NASH diagnosis. Similar, M65 level was a moderate predictor of NASH on biopsy with an area under the curve (AUC) of 0.781 (95% Cl 0.595 to 0.759). A M65 cut-off of >274 had a sensitivity of 38.8%, specificity of 97.1% in NASH diagnosis. Interestingly, M30 levels were significantly higher and in patients with significant fibrosis (grade 2-4) in comparison to the patients without fibrosis and to those with mild fibrosis (grade 1) (303.6±658.4 vs. 143.3±197.4; p=0.05). Also, M65 levels were significantly higher in patients with significant fibrosis (grade 2-4) in comparison to the patients without fibrosis and to those with mild fibrosis (grade 1) (494.9±802.7 vs. 295.6±317.4; p=0.05).
Conclusion: Serum biomarkers M30 and M65 had a moderate accuracy in detecting NASH. Combination of non-invasive marker could improve the sensitivity.

THERAPEUTIC ERCP RELATED COMPLICATIONS An Analysis of 2,738 Procedures Performed in a Two Referral Tertiary Centers in Croatia

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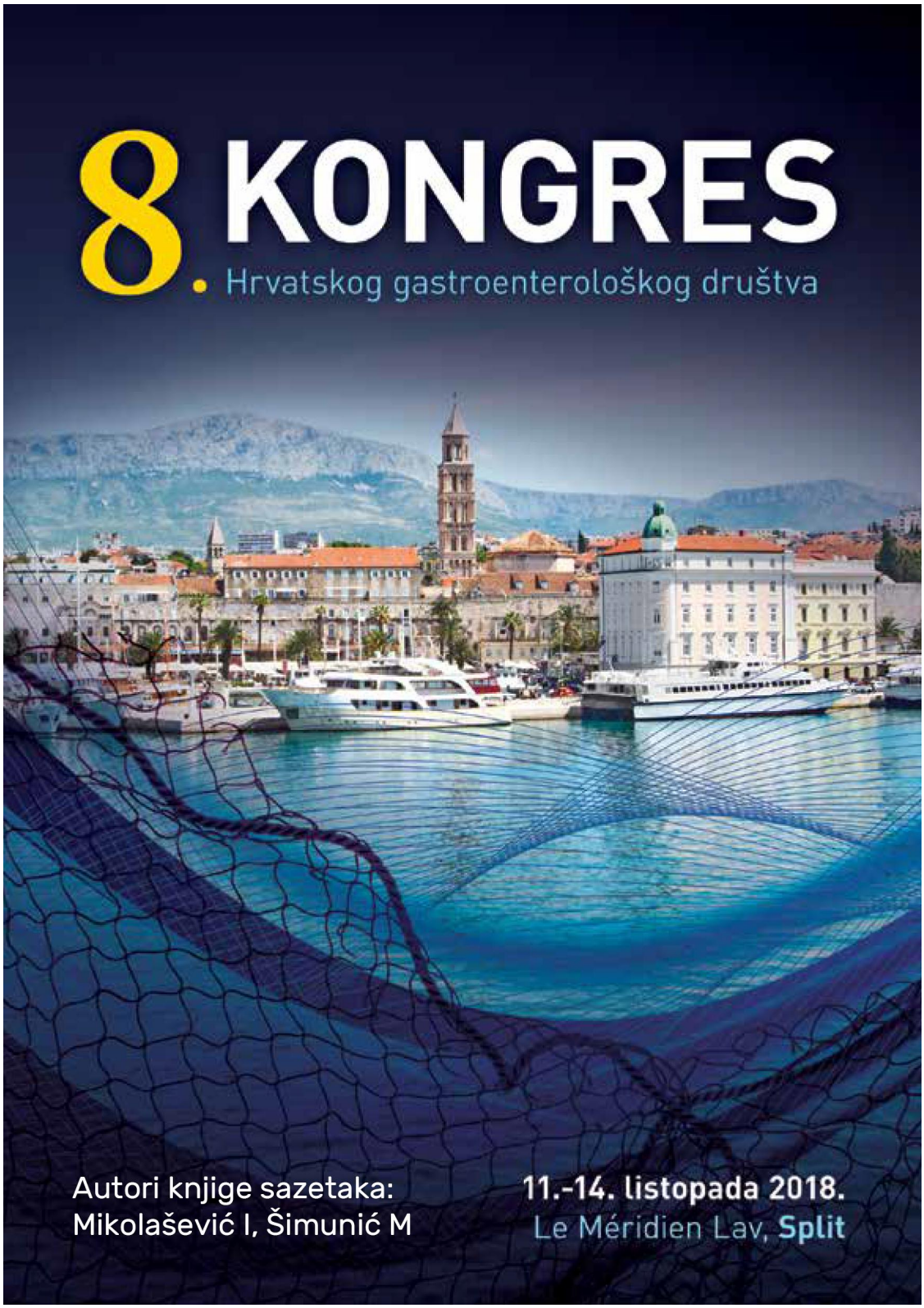

: An Analysis of 2,738 Procedures Performed in a Two Referral Tertiary Centers in Croatia

MEHMEDOVIĆ A.1, Ljubičić N.1, Bokun T.2, Kujundžić M.2, Bišćanin A.1, Bradić T.2,

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INTRODUCTION: Endoscopic retrograde cholangiopancreatography (ERCP) is an important therapeutic modality for pancreatic and biliary disorders associated with complications such as pancreatitis, post-sphincterotomy bleeding and perforation.
OBJECTIVE: The aim of the present study was to investigate the incidence, risk factors, and outcomes of procedure-related post-ERCP complications at two referral tertiary centers in Croatia.
PATIENTS AND METHODS: Medical records were recorded from 2,288 patients in whom consecutive therapeutic ERCP was performed at two referral tertiary centers in Croatia. Complications and mortality within 30 days after therapeutic ERCP were recorded and analyzed.
RESULTS: Between January 2013 through December 2016, 2,738 therapeutic ERCPs were performed. Following the first therapeutic ERCP, 265 patients (12.8%) suffered complications: pancreatitis was observed in 136 (6.6%) patients, clinically significant post-sphincterotomy bleeding in 24 (1.2 %) patients, whereas perforation was observed in 27 (1.3%). Multivariate analysis demonstrated that age and needle-knife sphincterotomy were the risk factors for post-ERCP pancreatitis, whereas higher age, needle-knife sphincterotomy and urgent procedure found to be the risk factors for perforation. Antiplatelet and anticoagulation therapy were not found to be risk factors for post-sphincterotomy bleeding. The overall mortality rate was 2,4%. ASA score and post-procedure complications were the risk factors for overall mortality.
CONCLUSION: Therapeutic ERCP is a procedure with considerable risk for complications. The percentage of complications such as pancreatitis, post-sphincterotomy bleeding and perforation as well as the mortality within 30 days after therapeutic ERCP performed in a two referral tertiary centers in Croatia are similar to those previously reported. Morbidity and mortality are strongly related to patient age and comorbidity.

RIJETKA PATOLOGIJA NA ERCP-u: POLIP KOLEDOKUSA UMJESTO KOLEDOKOLITIJAZE KOD TIPIČNE KLINIČKE SLIKE I TIPIČNIH NALAZA SLIKOVNE OBRADE

Bokun T.[1], Tadić M.[1], Božin T.[1], Zelenika M.[1], Radić B.[1], Grgurević I.[1], Pačić A.[2], Huzjan-Korunić R.[3], Vrabec B.[4], Narančić M.[4], Kujundžić M.[1]

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Abstract:
UVOD: MRCP je vrlo točna metoda za detekciju koledokolitijaze. No rijetko, uz tipičan slikovni nalaz te tipičnu kliničku sliku možemo pronaći rijetku patologiju.

PRIKAZ SLUČAJA: Donosimo prikaz slučaja muškarca u dobi od 59 godina koji je primljen u regionalnu bolnicu nakon kratkotrajne anamneze jakih bolova u gornjem dijelu abdomena uz izraženu mučninu te je povratio u jednom navratu, a obradom je postavljena dijagnoza akutnog pankreatitisa. S obzirom na blago povišene kolestatske parametre te transabdominalnim ultrazvukom detektiranu dilataciju koledokusa do 12 mm sa suspektnim sadržajem intraluminalno, učinjen je MRCP te je na nativnom MR prikazu (T2 kor i MRCP) bio vidljiv ovalni pad intenziteta signala u distalnom koledokusu koji je diferencijalno dijagnostički prvenstveno odgovarao konkrementu, zbog čega je bolesnik upućen na ERCP. Tijekom zahvata endoskopski se prikazala nježna papila, a kanulacija je bila otežana. Kod prikaza kontrastom intrahepatalni vodovi nisu bili dilatirani, dok je hepatokoledokus bio dilatiran do 17 mm, a

sasvim distalno se prikazao defekt punjenja u koledokusu nepravilne konture. U nastavku je učinjena papilotomija te eksploracija koledokusa balon ekstraktorom pri čemu su iz distalnog dijela koledokusa ekstrahirani komadići tkiva režnjate strukture pomiješani sa koagulumima, a nije se ekstrahiralo konkremenata ili detritusa. Nekoliko komadića tkiva skupljeno je i poslano na patohistološku analizu. Balon se uz otpor uspijevao izvući u lumen dvanaesnika gradualno napuhan na 3 i 4 ccm, no nije se pratila adekvatna spontana drenaža zbog čega je prvo uzet bris četkicom iz distalnog koledokusa te je na kraju radi osiguranja endobilijarne drenaže plasirana plastična endobilijarna potpornica 10 Fr / 5 cm. U citološkom razmazu brisa četkicom dominirale su morfološki benigne stanice, uz manje stanica koje su upućivale na izrazitu atipiju, moguće i karcinom. Patohistološkom analizom postavljena je dijagnoza intratubularne papilarne neoplazme (IPMN) sa displazijom intermedijarnog, a žarišno i teškog stupnja.

DISKUSIJA: Polipi koledokusa vrlo su rijetki te kod slikovne obrade mogu imitirati mnogo češće koledokolite, posebice kada se na MR sa MRCP-om napravi minimum sekvenci. U ovog bolesnika s obzirom na tipičnu kliničku sliku i slikovnu obradu, ERCP-u se pristupilo sa ciljem ekstrakcije koledokolita za koji se smatralo da je uzrokovao ataku akutnog bilijarnog pankreatitisa, dok je tek eksploracija balonom pokazala da se radi neoplastičnom tkivu. Bolesnik je raspravljen na konziliju sa hepatobilijarnim kirurzima te mu je s obzirom na dob i odsustvo značajnih komorbiditeta predloženo kirurško liječenje, dok bi radiofrekventna ablacija (RFA) bila metoda izbora kod starijih bolesnika sa komorbiditetima.

Kućna parenteralna prehrana u bolesnika s kompliciranim tijekom Crohnove bolesti

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Abstract:
UVOD

Crohnova bolest idiopatska je upalna bolest crijeva koja može zahvatiti bilo koji dio probavne cijevi. Upalna aktivnost, stvaranje stenoza, fistula i apscesa koji mogu zahtijevati kirurške intervencije, smanjujući površinu crijeva potrebnu za apsorpciju nutrijenata, mogu dovesti u oko 3% bolesnika do sindroma kratkog crijeva ili zatajenja crijevne funkcije, koji nerijetko zahtjevaju dugotrajnu kućnu parenteralnu prehranu.

PRIKAZ SLUČAJA

Prikazujemo slučaj 34-godišnjeg pacijenta kojemu je Crohnova bolest dijagnosticiana u dobi od 13 godina. Radi se o pacijentu sa stenozirajuće-fistulirajućim fenotipom bolesti ileokolonične ekstenzije, koji je u više navrata operativno liječen (resekcija sigme i descedentnog kolona, resekcija stenoze jejunuma i fistula, drenaža apscesa, dvije resekcije ileuma i strikturoplastike, desnostrana hemikolektomija s formiranjem ileostome). Obzirom da je bolesnik bio steroid ovisan, metotreksat rezistentan, azatioprin intolerantan, sa sekundarnim gubitkom odgovora na infliksimab, u ožujku 2018. godine započeta je terapija ustekinumabom.

Hospitaliziran je u lipnju 2018.god zbog bolova u abdomenu povezanih s peroralnim unosom hrane, inapetencije te posljedičnog gubitka na tjelesnoj masi (BMI 14,5 kg/m2). Radiološkom reevaluacijom verificiran je dilatiran duodenom ispred fibrozne stenoze promjera 3 mm, te dvije fibrozne stenoze ileuma promjera nekoliko milimetara sa rezidualnom duljinom tankog crijeva od 90 cm. Zbog progresivnog gubitka na tjelesnoj masi te nemogućnosti adekvatnog peroralnog unosa hrane i enteralne prehrane zbog sindroma kratkog crijeva, pacijentu je indicirana kućna parenteralna prehrana i postavljen port kateter. Parenteralna prehrana postupno je uvedena uz svakodnevni nadzor nutritivnog tima, zbog visokog rizika metaboličkih komplikacija, osobito «refeeding» sindroma uslijed teške pothranjenosti te nedovoljnog peroralnog unosa u posljednjih 6 mjeseci. Nakon edukacije o aseptičkoj njezi port katetera i primjeni parenteralne prehrane pomoću infuzijske pumpe pacijent je otpušten kući sa standardiziranim pripravkom «all-in-one» 23 kcal/kg/dan, 1.2 g aminokiselina/kg/dan (OlimelN9® 1070 kcal/L) ciklički kroz 15 sati uz svakodnevnu nadoknadu vitamina (Cernevit®) i elemenata u tragovima (Nutryelt®).

Pacijent je tijekom 14 tjedana kućne parenteralne prehrane dobio 5 kg na tjelesnoj masi, dobro tolerira propisani režim kućne parenteralne prehrane, uz redoviti nadzor multidisciplinarnog tima Dnevne bolnice Odjela za kliničku prehranu.

ZAKLJUČAK

Kućna parenteralna prehrana izgledna je opcija liječenja bolesnika s kompleksnim tijekom Crohnove bolesti te zahtjeva multidisciplinirani pristup visoko educiranog i «uigranog» tima. Pravovremena nutritivna intervencija pridonosi boljoj prognozi Crohnove bolesti, te može odgoditi komplikacije koje zahtijevaju ponovljeno kirurško liječenje.

Ključne riječi: Crohnova bolest, kućna parenteralna prehrana, sindrom kratkog crijeva

SURGICAL THERAPY OF PANCREATITIS AND ITS COMPLICATIONS

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Abstract:
Acute pancreatitis is still one the leading causes for hospitalization due to gastrointestinal disorders. The incidence of acute pancreatitis continues to climb in the Western countries. Most of cases of acute pancreatitis are mild to moderate and require no surgical interventions. A smaller percentage of patients will develop severe acute pancreatitis. The main indication for surgical treatment in severe acute pancreatitis is the infection of pancreatic or peripancreatic necrosis, especially if associated with organ failure. For these patients, surgical debridement is the treatment of choice. Surgical debridement of pancreatic necrosis can be achieved by open necrosectomy or minimally invasive approach. In recent years surgical treatment of infected pancreatic necrosis moved from open surgery to less invasive procedures. The strategy of a „Step – up“ approach is performing first percutaneous or endoscopic drainage of infected necrotic pancreatic collections, and continuing with surgical procedures in case of absence of improvement. These concepts require a multidisciplinary approach.
Chronic pancreatitis a benign inflammatory disease that leads to progressive and irreparable destruction of the pancreatic parenchym. European studies show incidence rates around 7 per 100,000. Two main surgical interventions are performed for chronic pancreatitis patients with the aim of improved drainage of the pancreatic duct: drainage and resection procedures.The primary goals are: long-term pain relief, resolving complications in pancreas-neighboring organs and quality of life. This should be approached multidisciplinary.

Clostridium difficile Pseudomembranous Colitis

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Abstract:
About 10% of hospitalised patients develop Clostridium difficile (C.difficile) infection, and 5-15% of them die. Hospital personnel's cloths, hands and instruments contaminated with C.difficile spores are the main mode of patient to patient transmission. Disease is usually associated with wide-spectrum antibiotics and overgowth of physilogical flora by C.difficile . C.difficile releases toxins A, B, and binary toxin in case of hypervirulent strains. They induce derangement of cytosceleton and intercellular junctions of colonic cells resulting in diarrhoea. In severe cases, cell death and intense inflammatory respose develop resulting in formation of mucose ulecrations and feature of pseudomembranous colitis. Clinical feature very from watery diarrhoea, through pseudomembranous colitis with bloody-mucous passages, to toxic megacolon with paralitic ileus, bowel perforation and septic shock. At present, two step diagnostic procedure is most commonly used: presence of C.dificile in stool is examined by glutamate dehidrogenase assay (GDH), and, if GDH positive, toxin A and B are detected using PCR-based test (LAMP-Loop Mediated Isothermal Amplification). The mainstay of therapy are antibiotics, primarily vancomycin and fidaxomicin, and to a lesser extent metronidazole. Fidaxomicin was as effective as vancomycin in treating an acute episode of diarrhoea, but with a lower relapse rate than vancomycin . Therapeutic recommendations are tailored according to the severity (mild to moderate, severe, severe complicated or fulminant) and number of episodes of the disease (first attack, first reccurence, second and more reccurence). Addition of fecal microbiota transplant (FMT) in patients with reccurent CDI the relapse rate can be reduced by up to 4 times

Postoperativna primjena ustekinumaba u bolesnika s teškom formom Crohnove bolesti

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Abstract:
Prikazujemo slučaj 21-godišnjeg bolesnika koji se od 12. godine života liječi zbog Crohnove bolesti, inicijalne ekstenzije u ileumu i kolonu, od početka teškog kliničkog tijeka. U prvu remisiju bolesnik je uveden totalnom enteralnom prehranom, nakon čega mu je kao terapija održavanja uveden azatoprin u dozi 2 mg/kg. Bolesnik je terapiju azatioprinom uzimao kroz 12 mjeseci, nakon čega je azatioprin zamijenjen metotreksatom uz koji bolesnik postiže kliničku remisiju u trajanju 4 godine. Nakon toga uslijedilo je liječenje prvom linijom antiTNF terapije infliksimabom u trajanju od 12 mjeseci, no s obzirom na teški relaps bolesti, bolesniku je 2013. učinjena resekcija dijela cekuma i terminalnog ileuma, postavljena je privremena ileostoma, te kroz nekoliko mjeseci formirana ileoascendentna anastomoza. U 05/2014. u bolesnika je započeta druga linija antiTNF liječenja adalimumabom. Endoskopska reevaluacija u 11/2015. ukazuje na aktivnu bolest u cijelom kolonu, te se kao sljedeća terapijska opcija odabire talidomid 100 mg/dan koji se u literaturi opisuje kao uspješan imunomodulatorni lijek u liječenju pedijatrijske populacije s Crohnovom bolesti. Uz talidomid bolesnik postiže dugotrajnu stabilnu remisiju. Bolesnik nije imao nuspojava na lijek, no u rutinskoj kontroli EMNG u 06/2018. opisuje se pad amplituda senzoričkih potencijala nervus suralisa. Prve subjektivne tegobe u vidu pojave trnaca u nogama bolesnik počinje imati u 08/2016. kada se ponovi EMNG i verificira jasan pad amplitude ali i brzine senzoričkih živaca više izraženo na donjim ekstremitetima, zajedno s padom amplitude motoričkih potencijala donjih ekstremiteta. S obzirom na navedeni nalaz doza talidomida se reducira na 50/mg dnevno. Sljedeći nalaz EMNG mjesec dana kasnije ukazuje na toksičnu aksonalnu polineuropatiju obje noge, više izražene desno, te je doza talidomida snižena na 25 mg/dan, a u 12/2016. talidomid je isključen iz terapije. Po isključenju talidomida u bolesnika nastupa brzi i vrlo teški relaps bolesti. Započeto je liječenje sistemskim kortikosteroidima, a u 02/2017. u terapiju se uvede vedolizumab. Nakon tri mjeseca liječenja vedolizumabom u bolesnika uslijedi pogoršanje bolesti te je u sljedećem tromjesečnom periodu bolesnik imao u dva navrata Clostridium difficile infekciju te u jednom navratu akutni pijelonefritis. Vedolizumab je potom isključen iz terapije, a bolesnik je u 09/2017. g. operiran, učinjena je strikturoplastika fibrozne stenoze 40 cm od anastomoze u duljini 4 cm. Postoperativno uslijedi boljitak, te se kao sljedeća i jedina preostala terapijska opcija bolesniku postoperativno uvede Stelara (ustekinumab), inicijalno u dozi 2x130 mg iv, te nakon 8 tjedana 90 mg sc. Već nakon 8 tjedana u bolesnika se prati jasan klinički i laboratorijski odgovor na terapiju ustekinumabom. U sljedećem razdoblju prati se značajno kliničko i laboratorijsko poboljašnje,

kao i brzi nutritivni oporavak.
S obzirom da ne postoje kontrolirane studije postoperativne primjene ustekinumaba u bolesnika s Crohnovom bolesti, koji je u ovom slučaju uveden kao jedina preostala terapijska opcija u bolesnika s teškom formom bolesti, bit će potrebno pažljivo praćenje bolesnika za vrijeme daljnjeg liječenja.

PROTECTIVE EFFECTS OF MET-ENKEPHALIN IN ACETAMINOPHEN INDUCED LIVER INJURY

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Abstract:
Met-enkephalin is a multifunctional neuropeptide with proven protective effects in different animal models of inflammatory and autoimmune diseases. Background: In this study we investigated the hepatoprotective effects of Met-enkephalin in acetaminophen induced liver injury in male CBA mice. This model is accompanied by liver necrosis and strong inflammatory response. The liver toxicity was evaluated by means liver histopathology score, and peripheral blood transaminase activity (AST, ALT). Results: Met-enkephalin was hepatoprotective, with the optimal protective dose of 7.5 mg/kg. Liver necrosis score and plasma transaminase values were significantly reduced in comparison to control animals treated with 0.9% NaCl ($p < 0.01$). Conclusion: Met-enkephalin exhibits statistically significant hepatoprotective effect, which is dose dependent. The results suggest potential role of Met-enkephalin in treatment of acute and chronic liver inflammatory diseases.

Pseudomembranozni kolitis kojeg uzrokuje Clostridium difficile

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Abstract:
Oko 10% hospitaliziranih bolesnika dobije infekciju koju uzrokuje Clostridium difficile (C.difficile), a 5-15% njih i umre. Odjeća, ruke i instrumentarij bolničkog osoblja kontaminirani sporama klostridija glavni su put prijenosa infekcije s bolesnika na bolesnika. Pojava bolesti obično je povezana s antibioticima širokog spektra i prerastanjem fiziološke flore od strane C.difficile. C.difficile luči toksin A i B, a hiperviruletni sojevi još i binarni toksin. Oni remete strukturu citoskeleta i međustaničnih veza stanica kolona s posljedičnim proljevom. U teškim slučajevima nastupa stanična smrt i jak upalni odgovor sa stvaranjem ulceracija sluznice i slike pseudomembranoznog kolitisa. Klinička slika je u rasponu od vodenastih proljeva, preko kolitisa s krvavo-sluzavim proljevima, do toksičnog megakolona s paralitičkim ileusom, perforacijom crijeva i septičkim šokom. Danas se dijagnoza najčešće postavlja testom u dva koraka: prisutnost C.difficile ispita se pomoću testa glutamat dehidrogenaze (GDH), i , ako je GDH pozitivan, dokazuju se toksin A i B pomoću PCR testa (LAMP- Loop Mediated Isothermal Amplification). Osnovu liječenja čine antibiotici, prvenstveno vankomicin i fidakosmicin, a u manjoj mjeri i metronidazol. U liječenju akutne epizode proljeva fidaksomicin je jednako učinkovit kao i vankomicin, ali ima manji postotak relapsa nego vankomicin. Terapijske preporuke skrojene su prema težini bolesti (blaga do umjerena, teška, teška kompliciran ili fulminantna) i prema broju epizoda (prva epizoda, prvi relaps, drugi i slijedeći relapsi). Dodavanje transplantata fekalne mikrobiote (FMT) može i do 4 put smanji učestalost relapsa u bolesnika s rekurirajućom infekcijom.