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Covering the Cover

Microbiome alterations observed in liver diseases present opportunities for potential fecal transplantation

Heath et al. reviewed the data about normal human intestinal microbiome as well as intestinal microbiome alterations in liver cirrhosis, nonalcoholic fatty liver disease, and primary sclerosing cholangitis (PSC). They discussed some animal and human studies showing the importance of fecal transplantation for liver diseases. They conclude that there is promising yet scant evidence for the use of fecal transplantation in chronic liver disease by either altering the composition of the microbiome or its metabolism. However, it is clear that further studies will be needed to adequately assess the impact of dysbiosis on these disease processes. See page 495.

Stem cell transplantation for the treatment of liver diseases: A systematic review and meta-analysis

Little is known about the therapeutic efficacy of stem cell transplantation in liver diseases. Liu et al. conducted a meta-analysis to evaluate changes in liver function and clinical outcome following stem cell transplantation in patients with liver disease. They searched a literature review of NCBI, Cochrane Library, and MEDLINE. A total of 17 publications involving 21 original studies were included. They found that the levels of serum albumin significantly increased at 4, 8, 12, 24, and 48 weeks after stem cell transplantation compared with that at baseline. Serum alanine aminotransferase levels notably decreased at 1, 3, 4, 12, 24, and 48 weeks after stem cell transplantation. Aspartate aminotransferase levels significantly decreased at 4, 8, 12, and 48 weeks after transplantation. Total bilirubin levels significantly decreased at 4, 12, 24, and 48 weeks after transplantation. Prothrombin time decreased at 4, 12, 24, and 48 weeks after transplantation. The MELD score significantly decreased at 24 weeks after transplantation. Stem cell infusion through the hepatic artery had better biochemical outcomes than an injection through the portal vein. They concluded that their meta-analysis verified the presence of clinical and biochemical improvements in patients who suffered from liver diseases after stem cell transplantation, suggesting that stem cell transplantation might be a viable clinical solution for treating such patients. See page 499.

Best prognostic factor of neuroendocrine tumors: Grade or Stage? A multidisciplinary single-center study

A retrospective but well-designed single-center study by Özaslan et al. exist in this issue of Turkish Journal Of Gastroenterology. They evaluated the prognostic factors in 233 patients diagnosed as neuroendocrine tumor (NET) between 2000 and 2014. Primary NET sites were the lung (n=56), stomach (n=50), pancreas (n=39), colorectal (n=21), small intestine (n=19), and appendix (n=19). According to the NET classification by the WHO in 2010, 60% (n=140) of patients were grade-1, 15% (n=35) were grade-2, and 25% (n=58) were grade-3. According to TNM staging, 88 patients (37.8%) were stage I, 30 patients (12.8%) were stage II, 22 patients (9.5%) were stage III, and 93 patients (39.9%) were stage IV. Multivariate analysis revealed significant associations between age greater than 55 years, advancing grade and inoperable tumors with shortened survival. Five-year survival was 81% in grade-1, 34% in grade-2, and 9% in grade-3 NETs. They suggested that age, operability and especially grade rather than stage were the most important prognostic factors in NETs. See page 509.

Factors associated with elevated serum chromogranin A levels ın patıents with autoimmune gastritis

Chromogranin A is known to be elevated in autoimmune gastritis patients, and also an important tool in the diagnosis of neuroendocrine tumors. The authors compared chromogranin A levels in 188 autoimmune gastritis patients, 20 patients with type I gastric carcinoid, and 110 functional dyspepsia patients. They also analyzed the factors that might affect serum chromogranin A levels. They found that the mean serum chromogranin A level was 171.17±67.3 ng/mL in autoimmune gastritis patients without enterochromaffin-like cell hyperplasia, and 303.3±102.82 ng/mL in patients

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with enterochromaffin-like cell hyperplasia (p<0.001). The presence of corpus atrophy and enterochromaffin-like cell hyperplasia were found as risk factors associated with serum chromogranin A level. The factors influencing raised serum chromogranin A levels in autoimmune gastritis were the presence of ECL cell hyperplasia and serum gastrin levels. They concluded that serum chromogranin A levels might be helpful in distinguishing autoimmune gastritis patients and gastric carcinoid type I from the control group, but were not useful in the differentiation of individuals with autoimmune gastritis from patients with gastric carcinoids. See page 515.

Screening of patients with juvenile idiopathic arthritis and those with rheumatoid arthritis for celiac disease in southwestern Iran

Celiac disease (CD) is frequently found in conjunction with other autoimmune diseases. Moghtaderi et al. aimed to investigate the prevalence of CD in patients with juvenile idiopathic arthritis (JIA) and those with rheumatoid arthritis (RA) in southwestern Iran. A total of 53 children with JIA and 55 adults with RA were enrolled. One child with JIA (1.8%) and six adults with RA (11.3%) were positive for the anti-tTG IgA antibody, but the histopathological evaluations of the duodenal biopsies in these patients revealed no evidence of CD-related enteropathy. In conclusion, they found no cases of CD among their patients with JIA and RA. However, they suggest that the periodic screening of rheumatologic patients with positive anti-tTG IgA for CD can be helpful in making an early diagnosis of CD in these patients. See page 521.

Investigation of IL23R, JAK2, and STAT3 gene polymorphisms and gene–gene interactions in Crohn's disease and ulcerative colitis in a Turkish population

Inflammatory bowel diseases have a genetic backround resulting in patient susceptibility. In this study, the authors investigated the involvement of IL23R, JAK2, and STAT3 polymorphisms in inflammatory bowel diseases in a Turkish population. Polymorphisms in IL23R, JAK2, and STAT3 were genotyped in 69 Crohn's disease patients, 157 ulcerative colitis patients, and 89 healthy controls. They found that there were significant associations between gene polymorphisms and the susceptibility to inflammatory bowel diseases, age-at-diagnosis, subphenotype in Crohn's disease, an extension in ulcerative colitis, perianal location of Crohn's disease, and disease-related operation in both diseases. They concluded that studied polymorphisms might be effective in the etiology of inflammatory bowel disease in this Turkish population. See page 525.

Effects of zinc or synbiotic on the duration of diarrhea in children with acute infectious diarrhea

In this single-center, randomized, and controlled clinical trial, the authors compared the effect of a synbiotic preparation (*Lactobacillus casei, L. plantarum, L. rhamnosus, Bifidobacterium lactis* and prebiotics) with a zinc suspension on the duration of diarrhea in children for 5 days in addition to oral rehydration solution (ORS) and/or intravenous therapy. The third group received ORS and/or intravenous therapy (control group). The primary endpoint was the duration of diarrhea (in hours). The secondary endpoint was the percentage of children with diarrhea during each day of intervention. They found that the duration of diarrhea was significantly reduced in the synbiotic and the zinc groups compared to the control group (p<0.001). There was no significant difference in the duration of diarrhea between the synbiotic and zinc groups (p>0.05). At 72nd and 96th hours, the percentage of children with diarrhea was lower in the zinc group than in the synbiotic group (p<0.05 for both). They suggested that zinc or synbiotic supplementation reduced the duration of diarrhea, and both could be used in children with acute diarrhea. See page 537.

Predictive factors for technically difficult endoscopic submucosal dissection in large colorectal tumors

In this article, authors investigated the predictive factors for technically difficult endoscopic submucosal dissection (ESD) in large (>10 cm^2) colorectal tumors. The study was performed with 36 consecutive large colorectal tumors which were resected by ESD at the endoscopic center of Beijing Military General Hospital, Beijing, China. Inclusion criteria were lesions with large elevated type, granular-type laterally spreading tumors, and nongranular-type laterally spreading tumors and a tumor size of >10 cm^2. Lesions suggestive of a deep submucosal invasion by magnification chromoendoscopy were excluded. Dissection speed (min/cm^2), perforation, and en bloc resection were chosen as variables of technical difficulty for large-sized colorectal-ESD. They found that en bloc resection, R0 resection, and curative resection rates were 83.3% (30/36), 80.6% (29/36), and 77.8% (28/36), respectively. They found that tumor location in a flexure was the main risk factor for difficult ESD in the colorectum. When tumor size increased, the perforation rate also increased. See page 541.

Prevalence of IgG-4-associated cholangiopathy based on serum IgG-4 levels in patients with primary sclerosing cholangitis and its relationship with inflammatory bowel disease

In this retrospective study, the authors evaluated the prevalence of IgG-4-associated cholangiopathy (IAC) in patients diagnosed with primary sclerosing cholangitis (PSC) and its relationship with inflammatory bowel disease (IBD). Serum IgG-4 levels were measured in 73 patients. Laboratory data and imaging and endoscopic results were collected from patients' medical records. They found that there were no significant statistical differences between PSC patients with normal and elevated serum IgG-4 levels in terms of age, smoking, presence of IBD, extension and severity of IBD, esophageal and gastric varices, Child and the model for end-stage liver disease (MELD) scores, and anatomical location of the biliary stricture (p>0.05). They concluded that there were no clinical or imaging characteristics that could differentiate PSC patients with normal IgG-4 levels from PSC patients with higher IgG-4 levels. See page 547.

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