



Covering the Cover

Outpatient treatment in uncomplicated acute diverticulitis: 5-year experience

This is an interesting retrospective revision study showing outpatient treatment in acute diverticulitis. They included all patients under 90 years of age, immunocompetent, tolerated oral intake, with no sepsis symptoms, and with an adequate family and social support network. They used the diagnostic criteria according to the classification by Ambrosetti/Doringer–Neff for acute diverticulitis in the abdominopelvic CT scan. Outpatient treatment consisted of oral antibiotics metronidazole 500 mg TID and ciprofloxacin 500 mg BID for 10 days with a liquid diet and oral analgesics, acetaminophen 1 g qID. Colonoscopy was scheduled at 1 month in the outpatient department to confirm the diagnosis of diverticulitis and to rule out the presence of tumour. Of their total 262 patients, 235 presented with uncomplicated acute diverticulitis. Overall, 224 satisfied the inclusion criteria for outpatient treatment. Eleven patients did not satisfy the criteria because of intolerance to oral intake in seven cases and because the family rejected the proposal for antibiotic treatment at home in the other four cases. In 212 patients (94.64%), the descending colon–sigmoid colon was affected; in three (1.34%), the transverse colon and in nine (4.02%), the ascending colon. Twelve patients (5.35%) were classified as grade Ia, 188 (83.93%) as grade Ib and 24 (10.72%) as grade Ic. In 168 patients (75%), this was the first episode, whereas in the remaining 56 (25%), it was a second or later episode. Hospital admission was required for 18 patients (8.04%). In 10 cases, hospitalisation was performed by oral intolerance or vomiting, in five cases by abdominal pain without objectifying the complication of acute diverticulitis and, finally, in three. Moya et al. recommended that the majority of patients diagnosed with uncomplicated acute diverticulitis can be treated safely and effectively by oral outpatient anti-biotic regimens like ciprofloxacin metronidazole and amoxicilline clavulanic acid. See page 330.

Endoscopic evaluation of acute intestinal graft-versus-host disease after allogeneic haematopoietic cell transplantation

The gastrointestinal (GI) tract, skin and liver are main targets in patients with acute graft-versus-host disease GVHD. Altun et al. retrospectively reviewed their data of 111 patients with allogeneic haematopoietic cell transplantation (HCT) of whom 27 (24.3%) developed acute GVHD. A total 19 patients with suspected intestinal GVHD due to their diarrhoea, nausea/vomiting, hematemesis, and odynophagia were evaluated with upper GI endoscopy or both upper and lower GI endoscopy. Upper GI endoscopic findings were compatible with acute intestinal GVHD 12/19 symptomatic patients with a sensitivity of 64.7%, a specificity of 50%, a positive predictive value of 91.6% and a negative predictive value of 14.2% for GVHD. The diagnostic accuracy of upper GIS endoscopy was 63.1%. Lower GIS endoscopic findings compatible with acute intestinal GVHD were present in only 4/10 cases. Lower GIS endoscopic findings had a sensitivity of 40% and a specificity of 0%. The diagnostic accuracy of upper GI endoscopy and sigmoidoscopy with biopsies was 94.1%. The authors recommended a smart algorithm as performing upper GI endoscopy and unprepped sigmoidoscopy with duodenal and sigmoid colon biopsies as the most logical practical diagnostic modality in suspected acute intestinal GVHD. See page 312.

Diabetes increases morbidity and mortality rates in peptic ulcer bleeding: An updated systematic review and meta-analysis

Diabetes damages the heart, blood vessels, kidneys, eyes, and nerves. Wei and Lin performed a meta-analysis to check associations among diabetes and morbidity and mortality rates in peptic ulcer bleeding (PUB) complications. They included 19 studies which consisted of 46,674 patients with diabetes and 159,630 patients without diabetes in their meta-analysis. They found a higher morbidity ratio (OR of 1.433 (95% CI=1.280–

1.604) and a higher mortality ratio in PUB patients with diabetes (OR=1.442, 95% CI=1.245–1.671) than in PUB patients without diabetes. Their meta-analysis showed that presence of diabetes was associated with a 43.3% higher morbidity rates and a 44.2% higher 30-day mortality risk in PUB patients. Their meta-analysis of the associations between DM and the risk of PUB contained only multivariate adjusted/matched OR and RR. This study is the largest systematic effort meta-analysis study to quantitatively synthesize data of PUB in diabetes patients. See page 304.

Glutathione and glutathione S-transferase levels in patients with liver metastases of colorectal cancer and other hepatic disorders

Oxidative stress plays a critical role in tumour carcinogenesis. Reactive oxygen species and their reactive derivatives cause DNA damage and influence the tumour microenvironment. Colorectal cancer is one of the entity associated with oxidative stress, which results in disease progression. Baltruskeviciene et al. evaluated the alterations of reduced glutathione (GSH) and glutathione-S-transferase (GST) in colon cancer cases with (n=40) or without (n=18) liver metastases groups, liver disease control groups (n=27 steatosis and n=29 alcoholic cirrhosis) and healthy subjects (n=40). The GSH level in patients with alcoholic cirrhosis was higher than all other groups ($p<0.001$). GST level in steatosis group was higher than the GST level in patients with alcoholic cirrhosis and in patients with colorectal cancer with liver metastases ($p<0.001$). The authors recommend to GSH and GST as a potential biomarkers to check the antioxidative system status in different diseases to consider appropriate antioxidant treatment. See page 336.

Association between single nucleotide polymorphisms in prospective genes and susceptibility to ankylosing spondylitis and inflammatory bowel disease in a single centre in Turkey

About 6.5% of patients with ankylosing spondylitis (AS) develop inflammatory bowel disease (IBD), and conversely, AS frequently develops in patients who are primarily diagnosed with IBD as well. This study evaluated the prevalence of single nucleotide polymorphism (SNPs) of endoplasmic reticulum aminopeptidase 1 (ERAP1), IL-23 receptor (IL-23R), signal transducer and activator of transcription 3 (STAT-3) and Janus kinase 2 (JAK-2) in AS and IBD in a Turkish population. A total 562 subjects (n=365 patients with AS and n=197 patients with IBD and n=230 healthy controls) were genotyped. This study has been the first to show the presence of ERAP1 gene polymorphism as a risk factor and the presence of IL-23R gene polymorphism as a protective factor in the pathogenesis of AS and IBD. See page 317.

An unusual cause of paediatric abdominal pain: Mesenteric masses accompanied with volvulus

In this retrospective study, Yang et al. evaluated volvulus caused by mesenteric masses in 24 children who underwent surgical treatment. The patients had positive ileus symptoms and findings with acute abdominal pain. Radiology imaging

showed mesenteric masses in 21/24 patients. All patients underwent emergency laparotomy. Pathology examination were as lymphangioma (n=18), lipoma (n=5), and lipoblastoma (n=1). Volvulus caused by mesenteric masses is a rare intra-abdominal lesion. The authors recommend to include mesenteric masses accompanied with volvulus as a differential diagnosis of pediatric acute abdominal pain. See page 325.

Combination of DKK1 and AFP improves the diagnostic accuracy of hepatocellular carcinoma compared with either marker alone

Poor prognosis of hepatocellular cancer (HCC) can be attributed mainly to delayed diagnosis. Erdal et al. evaluated the diagnostic accuracy of serum Dickkopf proteins (DKK1 and DKK3) in HCC, as compared with serum alpha-fetoprotein (AFP). A total 133 subjects were enrolled in their study. The study groups were HCC (n=40), cirrhosis (n=54), and control (n=39) groups. DKK1 level of the HCC group was higher than cirrhosis and control groups' DKK1 levels ($p<0.001$); however, the levels were similar between the cirrhosis and control groups. Combined usage of DKK1 and AFP improved the diagnostic yield, with a sensitivity, specificity, positive predictive value, and negative predictive value of 87.5%, 92.3%, 92.1%, and 87.8%, respectively. Although AFP is superior to DKK1 and DKK3 in the diagnosis of HCC, the combination of DKK1 and AFP showed better diagnostic yield than a single AFP test. See page 375.

Insight into the natural history of primary biliary cirrhosis: A systemic review of data from placebo-controlled clinical trials

The natural history of primary biliary cholangitis (PBC) is extremely variable. Ursodeoxycholic acid (UDCA) is the only approved pharmacological treatment. Xu et al. evaluated the natural history of PBC patients without effective treatment in their systemic review data from 12 randomized, placebo-controlled clinical trials of the PubMed, EMBASE and Cochrane Library databases. A total of 769 patients served as placebo controls. PBC patients received a 2-year placebo therapy, moderate worsening of histological scores was noted. The pooled analyses found that placebo treatment could not prevent deterioration of PBC. Xu et al. supplied us detailed natural history of placebo-treated PBC patients. Serum ALP levels decreased significantly and other biochemical parameters were practically unchanged within the study term. Histological progression occurred in more than 1/3 of PBC patients over a 2-year period. The 2-year rates of death, transplantation and development of varices were 11.4%, 8.7% and 10.6%, respectively. See page 342.

Cirrhosis with ascites: Is the presence of hemorrhagic ascites an indicator of poor prognosis?

Hemorrhagic ascites, described as red blood cell (RBC) count higher than 50,000/mm³ was shown to be related with increased morbidity and mortality. Ascitic fluid becomes pink colored at a level of approximately 10,000 RBC/mm³. Yildiz et al. evaluated the presence of positive RBC count below 50,000/mm³ in ascites of 329 cirrhotic patients. The authors chose $\geq 10,000/\text{mm}^3$ of RBC as their threshold value for hemorrhagic

ascites diagnosis for the patients (n=118, 35.9%). The patients with number of ascites RBC lesser than 10,000/mm³ were accepted as control group (n=211, 64.1%). Of 118 hemorrhagic ascites patients, 18 had hepatocellular cancer, 87 were spontaneous hemorrhagic ascites and 3 were iatrogenic. The median survival in the cirrhotic patients with hemorrhagic ascites (8.1 months) was significantly lower than the control group cirrhotic patients (19.3 months). The mortality rates in 1 month, 1 year and 3 year were higher in the hemorrhagic ascites group (34.1%, 85.7%, 93.4%) than the control group rates (6.8%, 54.7%, 79.8%). The higher morbidity and mortality could be attributed to higher hepatorenal syndrome, spontaneous bacterial peritonitis and frequent admissions to intensive care unit in hemorrhagic ascites cases group. This study supplied us a better cut off RBC level as $\geq 10,000/\text{mm}^3$ for the diagnosis of hemorrhagic ascites to predict the outcome. See page 349.

Effect of coronary-caval shunt combined with partial pericardial devascularisation on oesophageal and gastric variceal bleeding caused by portal hypertension

Bai et al. evaluated the results of their coronary-caval shunt procedures combined with partial pericardial devascularisation for 15 patients with portal hypertension due to cirrhosis. All of the patients had a history of esophageal and gastric variceal bleeding. Preoperative upper endoscopy confirmed obvious esophageal and gastric varices they were all Child A or Child B patients. All of the 15 surgical procedures were performed successfully. All the patients recovered satisfactorily with a mean hospital stay of 11 days. All 15 patients were followed up regularly from 5 months to 10 years, with an average of 63 months. Two patients died during the follow-up. One death was secondary to liver failure induced by reactivation of hepatitis B virus in the 37th month after operation, and the other was due to esophageal and gastric variceal rebleeding in the 63rd month after operation. The rebleeding rate was 6.7% and the five-year survival rate was 85.7%. No long-term complications occurred for the remaining 13 patients. Coronary-caval shunt combined with partial devascularisation surgical technique has little effect on blood flow in the mesenteric area and can assure portal pressure and hepatic blood inflow, thus preserving liver function well. Theoretically, this is the best shunt operation for patients with severe esophageal and gastric varices who are not suitable for or unwilling to undergo liver transplantation. See page 354.

Galactin-3 and brain natriuretic peptide versus conventional echocardiography in the early detection of cirrhotic cardiomyopathy

Diastolic dysfunction is a common cardiac abnormality in cirrhotic patients. Abbas et al. evaluated the strength of galactin-3, brain natriuretic peptide (BNP), and echocardiography in diagnosis of diastolic dysfunction in cirrhotic cardiomyopathy (CCM) patients with and without ascites in their case control study. A total of 51 patients were enrolled (26 cirrhotic patients without ascites and 25 cirrhotic patients with ascites). Another 20 healthy subjects were recruited as controls in this case con-

trol study. Galactin-3 was 89.9% sensitive for diastolic dysfunction detection with 86.4% specificity. Brain natriuretic peptide was 77.6% sensitive for diastolic dysfunction detection with 95.5% specificity. BNP and galactin-3 had high sensitivity and specificity in the early detection of CCM. See page 376.

Role of oxidative stress and insulin resistance in disease severity of non-alcoholic fatty liver disease

This study evaluated the relation between oxidative stress parameters and histopathological findings in non-alcoholic fatty liver disease (NAFLD) patients with and without insulin resistance (IR). A total 32 biopsy confirmed NAFLD cases were diverted into two groups as NAFLD patients with IR (n=21) and NAFLD patients without IR (n=11), according to the homeostasis model assessment (HOMA) method. The steatosis grade, necroinflammatory grade and stage were significantly higher in patients with IR. HOMA IR significantly correlated with the necroinflammatory grade, stage, tissue malondialdehyde and superoxide dismutase and glutathione. This study underlined the importance of NAFLD with IR and oxidative stress as a more progressive disease than simple steatosis without IR or oxidative stress. See page 361.

Impact of psoas muscle index on short-term outcome after living donor liver transplantation

Loss of skeletal muscle mass has been identified as an important factor that affects postoperative mortality. Izumi et al. investigated the effects of the skeletal muscle mass and other perioperative factors on the onset of complications and the postoperative 120-day survival rate in patients who underwent living donor liver transplantation (LDLT). A total 47 patients with LDLT had abdominal computed tomography images before transplantation were retrospectively evaluated. The primary and secondary endpoints were the development of major complications during postoperative hospitalization and 120-day mortality after LDLT. Psoas muscle index (PMI) was investigated as an index of the total skeletal muscle mass and it was calculated by the outer margin of the cross-section of the major psoas muscle at the level of the caudal end of the third lumbar vertebral body on preoperative abdominal contrast CT images, and the sum of the left and right cross-sectional areas was divided by the square of the height. A significant difference was observed in PMI between patients with and without complications, both for men (p=0.004) and women (p=0.015). Multivariate analysis revealed that low PMI [odds ratio (OR)=6.555; confidence interval (CI): 1.428–37.156; p=0.015] was independent risk factor. The postoperative 120-day survival rate was 66.7% for the low PMI group (n=30) and 94.1% for the high PMI group (n=17) (p=0.034). The authors recommended PMI as a measure for risk stratification in patient selection criteria for LDLT. See page 382.

Veysel Tahan
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