



## Gastroenterology,hepatology complications during COVID-19 pandemic with endoscopy planning –the dilemma

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### Abstract:

Digestive symptoms including anorexia, nausea, vomiting, diarrhea (N,V,D)- frequently reported in patients with COVID-19-disease[CD]). SARS-CoV-2 RNA was first detected in stool of the 1st reported CD-19 case in the USA, who also presented with the digestive symptoms of (N,V,D). In the biggest cohort -1099 patients with laboratory-confirmed CD-19 from 552 hospitals in China in Jan 2020,N,V,D were reported in 55(5%) and 42(3.8%) patients, respectively. Of the 204 patients with CD-19 and full investigations , 99 (48.5%) presented with digestive symptoms as main complaint. Patients with digestive symptoms had separate manifestations,like anorexia (83.8%),V,D and abdominal pain (0.4%). Digestive symptoms - might be presenting prior to respiratory symptoms, or only-symptoms of CD-19 The mode for GITinfection of SARSCoV is ACE2 cell receptor.SARS-CoV-2, having genome sequence of SARS-CoV(82%), might use the same ACE2, >strain -SARS-CoV(2003). Xiao et al showed on endoscopic biopsy samples that ACE2 was rarely expressed in esophageal epithelium, but abundantly distributed in cilia of glandular epithelia, while staining of viral nucleocapsid protein was visualized in the cytoplasm of gastric, duodenal, and rectum glandular epithelial cell, but not in esophageal epithelium.as found in another study in the small intestine,The crosstalk amongSARS-CoV-2 -ACE2 might disrupt the function of ACE2 and cause diarrhea.Chances of fecal-oral transmission of SARS-CoV-2 stressed on proper hand hygiene ,stools handling and hospital sewage carefully in pts. SARS-CoV-2 in the GIT,signifies CD-19 infection in patients with preexisting digestive diseases and fecal microbiota transplant donors. To prevent SARS-CoV-2 transmission by fecal microbiota transplantation, more testing needed over current ones.GIT endoscopy departments face marked transmissions risk of virus during endoscopy .Earliest reports of CD-19 , 40/138 showed high risk of infection for healthcare workers of infection.Possible routes of viral transmission onendoscopy examination - person-to-person, respiratory droplets, aerosols formed onendoscopy, and contact with contaminated surroundings, body fluids, and fecal material.Recommendation used-World Endoscopy Organization, ASGE,ESGE on endoscopy during the pandemic.Liver damage was common in the patients infected by the other 2 highly pathogenic coronavirus-SARS-CoV, MERS CoV associated with the severity of diseases. In patients with CD-19, several studies have documented the incidence of liver injury , indicating that 2- 11% of patients with CD-19 had liver comorbidities and 16 -53% cases reported abnormal levels of



SGOT /PT.Guan et al and Huang showed that elevated AST levels were observed more in pts with severe disease,. Liver injury might be due to viral infection in liver cells or due to other causes such as drug induced liver injury and systemic inflammation induced by CKSor pneumonia-related hypoxia. SARS virus has been shown to be present in the liver tissue, although the viral titer was relatively low because viral inclusions were not observed.The impact of COVID-19 in patients with preexisting chronic liver diseases, needs evaluation.from Chinese study showed that chronic hepatitis B infection pts didn't have higher disease severity vs population as did world cases. Major changes to the standard management of GIT diseases, priorities like minimizing viral transmission, preserving PPE, and freeing hospital beds have driven unconventional approaches to managing GI patients. Conversion of endoscopy units to CD units and redeployment of GI fellows and faculty has profoundly changed most GI services.Meanwhile, consult and procedural volumes have reduced drastically.Sethi et al., showed how dealing specific consults and conditions haschanged, the mainfocus is on noninvasive measures and maximizing medical therapies.Endoscopic procedures have been reserved for those timely interventions that are most likely to be therapeutic.The role of multidisciplinary discussion, although important, has become critical now.Advancing a clear vision and a transparent process for how to organize and triage care in the recovery phase will allow for a smooth transition to our new normal. For percutaneous endoscopic gastrostomy(PEG) placements even in this time of pandemic needs to be avoided . Despite the viral effects of the SARS-CoV-2 in the GIT, enteral nutrition is still the preferred method of nutrition therapy for patients with CD-19 because of its multiple benefits in the gut. It supports the structural and functional integrity of the gut, thereby modulating systemic immunity, attenuating disease severity,aiding in good results. However, the presence of GI symptoms such as anorexia, N,V,Din some patients with CD-19complicates this challenge to feed the patient.

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