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Determining Urgent/Emergent status of Gastrointestinal (GI) Endoscopic Procedures in an Ambulatory Care Setting during the Coronavirus Disease of 2019 (COVID-19) Pandemic: Additional Factors that need to be considered.

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Every effort is being made at the White House, federal and state government levels along with individual component medical societies to suppress spreading of Coronavirus Disease 2019 (COVID-19), manage infected patients properly, and provide financial and emotional support only for infected patients and family members, but also for the business community. Guidelines and executive orders issued by the White House, federal and state governments recommend that elective surgical procedures including gastrointestinal (GI) endoscopies be postponed. On March 15, 2010 guidelines were jointly published by American Association for the Study of Liver Diseases, American College of Gastroenterology, American Gastroenterological Association and American Society for GI Endoscopy. [1]

An elective procedure is defined as one that can be delayed without undue risk to the current or future health of patient as determined by the patient's treating physician. (New Jersey Executive Order No. 109, March 27,2020). Elective procedures that may be delayed and urgent/emergent procedures that may not be delayed are listed in the New York Society for Gastrointestinal Endoscopy Guidelines for Endoscopy Units during the COVID-19 Pandemic.[2] The reasons for postponing elective surgery are mainly to conserve medical resources including health care providers, hospital capacities, essential personal protective equipment (PPE) and ventilators to reduce the risk of bringing the novel coronavirus into medical facilities, and obviously to suppress further spreading of this virus. Although the foregoing reasons are sufficient to recommend the postponing of elective procedures, there are additional factors that need to be considered.

The management of patients undergoing GI endoscopic procedures using intravenous sedation with propofol, particularly for colonoscopy and EGD present additional concerns that should be mentioned. Regurgitation and vomiting resulting in pulmonary aspiration under deep

propofol sedation can occur, especially during a difficult colonoscopy, and silent regurgitation with pulmonary aspiration during EGD is not uncommon. When pulmonary aspiration occurs, the symptoms and signs of pneumonitis or pneumonia are very similar to COVD-19, including fever, coughing, shortness of breath, and CXR findings of areas of consolidation with ground glass opacities. This will induce unnecessary confusion not only for the patient but also for the care givers and provoke anxiety and emotional burden. Frequently reported signs and symptoms of patients admitted to the hospital with COVID-19 include fever (77-98%), cough (46-82%), myalgia or fatigue (11-52%), and shortness of breath (3-31%).[3]

Patients presenting for screening GI endoscopies are generally older with multiple comorbidities including cardiovascular, pulmonary, endocrine(diabetes), cerebrovascular, renal, and hepatic conditions. If such patients were infected by SARs-CoV2, their illness would progress much more severely, resulting in a higher mortality rate.[3] Furthermore, patients on corticosteroids and/or other immunosuppressants for cancer treatment may develop more severe symptoms.[3]

A report from China states that a person can carry and transmit COVID-19 without showing symptoms during their incubation period.[4] The Chinese CDC analyzed records of all of China's reported cases of COVID-19 from Dec 8 to Feb 11 found that 1.2 percent of patients confirmed to be infected showed no symptoms.[5] The incubation period of COVID-19 is estimated at 4 days ranging from 2-7 days, but may last longer than14 days.[3] The incubation period of a woman in aforementioned case in China turned out to be 19 days.[5] An asymptomatic patient during his/her incubation period scheduled for an urgent endoscopic procedure can transmit this virus to other patients and healthcare providers.

While body fluids other than respiratory secretions have not been clearly implicated in transmission of COVID-19, unprotected contact with other body fluids including stool and vomitus present a risk of contracting COVID-19.[3,6] Sudden explosive vomiting or regurgitation or explosion of stool are not uncommon during colonoscopies. This can produce large droplets or aerosolized small particles, and/ or directly contaminate surfaces of equipment or personnel in the procedure room. The importance of using PPE should never be overlooked even in the care of asymptomatic patients. (Airborne transmission by aerosolized small particles is prevented more efficiently by N 95 face mask or respirator rather than a standard surgical face mask.)

In conclusion, postponing elective GI endoscopic procedures would definitely help conserve medical resources and slow the spread of SARS-CoV2. Asymptomatic transmission is a real possibility in the large cohort of high-risk elderly patients typically found in the endoscopic centers. This can occur either by direct contact with respiratory secretions from the infected patients, or by large droplets or small aerosolized particles from vomitus and stool. More serious and rapid progression of the illness is concerning in these elderly patients with multiple comorbidities. Other consideration should be the similarity of symptoms between COVID-19 and aspiration pneumonitis or pneumonia.

All of the foregoing factors should be strongly considered when weighing the risk/benefit ratio of endoscopic procedures on a patient who belongs to "non-urgent but higher priority status" such as cancer evaluations or evaluation of severe GI symptoms.

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