

Screening of Patients for COVID-19 Infection Before Endoscopic Procedures

Endoskopik İşlemlerden Önce Hastaların COVID-19 Enfeksiyonu İçin Taranması

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Abstract

During the COVID-19 pandemic, it was recommended to delay elective gastrointestinal procedures and perform only emergency procedures. Herein, we will report the results of the evaluation process of patients in terms of COVID-19 before the gastrointestinal procedures performed in our clinic during the COVID-19 pandemic. Patients who underwent endoscopy, colonoscopy, and endoscopic retrograde cholangiopancreatography in our hospital were included in the study. A total of 987 patients were included in the study. Twelve (1.2%) patients who were asymptomatic and underwent the COVID-19 polymerase chain reaction (PCR) test were shown positive. The COVID-19 PCR test of 80 of the 98 patients referred to the pulmonary disorders department was positive. A cautious evaluation of patients for the signs and symptoms of COVID-19 infection by the clinician is more important than laboratory tests in the diagnosis of COVID-19 infection before gastrointestinal procedures.

Keywords: COVID-19; Colonoscopy; Endoscopy; ERCP

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the cause of COVID-19 and was first identified in China in 2019.^[1] COVID-19 was accepted as a pandemic by the World Health Organization (WHO) in March 2020 and continues to be a serious cause of morbidity and mortality despite the use of emerging therapies and vaccines.^[2] As of January 24, 2022, approximately 5.5 million deaths all over the world and 84 thousand deaths in Turkey were caused by

COVID-19.^[3,4] The spectrum of infection is in a broad range. Although 40%–70% of COVID-19 positive patients are asymptomatic, of the symptomatic COVID-19 positive patients, 80% have mild disease, 10% have severe disease, 5% have a critical disease, and 2% have a fatal disease.^[5,6] Severe disease is characterized by dyspnea, hypoxia, and acute respiratory distress syndrome, while critical disease leads to respiratory failure, shock, and multiple organ failure.^[6]

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During the COVID-19 pandemic, it was recommended to delay elective gastrointestinal procedures and perform only emergency procedures.^[7] However, in many centers, it has been shown that many gastrointestinal procedures could be performed by taking appropriate protective measures during the COVID-19 process^[8] and even in patients with active COVID-19 disease.^[9] In this study, we aimed to report the results of the evaluation process of patients in terms of COVID-19 before the gastrointestinal procedures performed in our clinic during the COVID-19 pandemic.

Materials and Methods

Patients who underwent endoscopy, colonoscopy, and endoscopic retrograde cholangiopancreatography between March 2020 and December 2021 in the gastroenterology clinic of Lokman Hekim University Akay Hospital were included in the study. In line with the recommendations of international associations, elective gastrointestinal procedures were delayed during the lockdown period, and gastrointestinal procedures were performed for patients with urgent or semi-urgent indications. After the post lockdown period and in the vaccination era, pre-procedure polymerase chain reaction (PCR) testing within 48 h was performed for all patients.

Patients between the ages of 18 and 89 years were included in the study. Patients who had recently (in the last 10 days) been diagnosed with COVID-19 or who were in a quarantine period due to close contact with a PCR-positive patient were excluded from the study. On the other hand, 98 patients who were symptomatic in terms of COVID-19 and applied for the gastrointestinal procedures were referred to the department of pulmonary disorders and not included in the study. COVID-19 PCR test was applied to all patients who were scheduled for the procedure and were asymptomatic. The demographic information, medical background, and COVID-19 results of the patients were taken from the files of the patients. COVID-19 was diagnosed using the nasopharyngeal swabs PCR test in accordance with the WHO guideline.^[10]

Statistical Analysis

All of the statistical analyses were performed using SPSS version 22.0 (IBM SPSS statistics, version 22.0 for Windows; SPSS, Inc., Chicago, IL, USA, an IBM Company).

Table 1. Clinical and demographic features of study participants

Variables	
Patients, n	1096
Symptomatic	98
Asymptomatic, PCR+	12
Asymptomatic PCR-	975
Gender, female, n (%)	654 (66.2)
Age (mean) (years)	62.36±21.4
Procedures (n, %)	
Upper GIS endoscopy	492
Lower GIS endoscopy	205
ERCP	9
Upper and lower endoscopy	281
COVID-19 positive	
Gender, female, n (%)	7 (58.3)
Age (mean)	50.7±5.9

GIS: Gastrointestinal system; ERCP: Endoscopic retrograde cholangiopancreatography.

Results

A total of 987 patients who underwent gastrointestinal procedures were included in the study. Among the patients, 66.2% of the patients were women and the mean age was 62.3±21.4 years. A total of 1277 gastrointestinal procedures were performed on 987 patients, of whom 492 had only upper gastrointestinal system (GIS) endoscopy and 205 had only lower GIS endoscopy. The procedures of 11 of 12 COVID-19 positive patients were delayed because the procedure was semi-urgent. For one patient, as the procedure was urgent, endoscopic retrograde cholangiopancreatography was performed even though he was positive for COVID-19.

Twelve (1.2%) patients who were asymptomatic and underwent the COVID-19 PCR test were shown positive. Of these patients, 7 were females and 5 were males. The COVID-19 PCR test of 80 of the 98 patients referred to the pulmonary disorders department was positive. Asymptomatic COVID-19 positive cases were between the ages of 40 and 60 years. The general clinical and demographic features of the patients are given in Table 1.

Discussion

In the evaluation before the GIS endoscopic procedures performed in our clinic, the COVID-19 PCR test was found to be positive in only 12 of 998 asymptomatic patients, while the test was positive in 80 of 98 symptomatic patients, which shows that symptom evaluation is important. In our hospital, all GI procedures are

performed by gastroenterology specialists who are also internal medicine specialists. All patents are systematically evaluated before any GI procedure by these gastroenterology specialists. This may be the main reason that the rate of PCR positivity was exceedingly low in our asymptomatic group.

Due to the transmission routes of COVID-19, endoscopic procedures were considered to be at high risk for transmission. However, it has been determined that the risk of acquiring significant COVID-19 is low with the precautions taken in the studies.^[11] In the early stages of the pandemic, gastrointestinal endoscopy associations suggested delaying procedures other than emergent and semi-urgent procedures.^[7] Besides, according to the economic analysis of the PCR test, it has been determined that PCR testing for all patients may be an effective strategy for performing endoscopic procedures. In the post-lockdown phase, it is recommended to perform endoscopic procedures by performing a PCR test before all procedures in centers where PCR testing is readily available.^[12] In a recent study, Bowyer et al.^[13] reported that only 8 of 1000 patients scheduled for GI endoscopy tested positive for COVID-19. Similarly, in another recent study, in 167 asymptomatic patients who were submitted to nasal swab for SARS-CoV-2 before any GI procedures, only 1 (0.6%) was positive for this infection.^[14] Recent recommendations for evaluation in terms of COVID-19 before endoscopy are as follows: pre-procedure PCR testing within 48 h, full COVID-19 vaccination, or documentation of COVID-19 recovery within 6 months.^[15]

In conclusion, although the risk of being COVID-19 positive in asymptomatic patients is low, the current approach recommends screening patients who have not been fully vaccinated and who have not recently recovered from COVID-19 with PCR testing. A cautious evaluation of patients for the signs and symptoms of COVID-19 infection by the clinician is more important than laboratory tests in the diagnosis of COVID-19 infection before GI procedures. On the other hand, it is important to take all protective measures when performing GIS procedures to reduce the risk of transmission of all infectious diseases.

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Conflict of Interest: None declared.

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