

**Clinical Characteristics and Outcomes of COVID-19 Patients with Gastrointestinal
Manifestations Seen in a Tertiary Hospital: A Retrospective, Cohort Study**

Sara Jessica Pizarra, M.D.¹, Margaret Alba, M.D.¹,

John Christopher Onilla, M.D.¹, Michael Alek Tan, M.D.¹,

Mikee Elaine Wee, M.D.², Angelica Hannah Jobo-Varona, M.D.²,

Jobel Feliz Castillo, M.D.², Rafael Bien Guingon, M.D.²,

Marilyn Talingdan-Te, M.D.¹, Marie Michelle Cloa, M.D.¹,

¹ Section of Gastroenterology and Digestive Endoscopy, Department of Internal Medicine,

Manila Doctors Hospital

²Department of Internal Medicine, Manila Doctors Hospital

Abstract

Significance/Objectives: Patients with Coronavirus Disease 2019 (COVID-19) typically have respiratory symptoms. However, some patients present with gastrointestinal (GI) symptoms. Studies on the association of clinical outcomes and GI symptoms are conflicting. Attention to non-typical symptoms like digestive symptoms is important for extensive identification of these patients, efficient quarantine protocols and ultimate control of COVID-19 transmission for public benefit and safety during this pandemic.

Methods: In this retrospective, single-center, cohort study, data from 348 adult, RT-PCR-confirmed-COVID-19 patients admitted in Manila Doctors Hospital from March 1, 2020 to August 31, 2020 were reviewed including demographic profile, COVID-19 severity on admission and clinical outcomes such as COVID-19 severity on discharge and death. T-test, Fisher Exact Tests, Chi-square test and Binary Logistic Regression analysis were used for data analysis.

Results: Of the 348 patients, 38.5% had GI symptoms. Diarrhea was the most common symptom (50%). Patients with GI symptoms were older (54.42 ± 17.92 vs 47.7 ± 17.49 , $p < 0.01$) and had moderate ($p = 0.003$) and critical ($p = 0.049$) COVID-19 on admission. Among the GI symptoms, abdominal pain and GI bleeding had increased risk for severe to critical COVID-19 (OR=3.194, $p < 0.05$) and death (OR=18.616, $P < 0.05$), respectively. During the course of hospitalization, however, those with GI symptoms had higher cases of critical COVID-19 (28% vs 21%, $p = 0.0480$), but no statistical difference in death (19% vs 14%, $p = 0.1510$) compared to those without GI manifestations.

Conclusion: Gastrointestinal manifestations are common in COVID-19. GI symptoms are associated with moderate and critical COVID-19 but were not associated with death.

Keywords: *COVID-19, SARS-CoV-2, gastrointestinal manifestations, gastrointestinal symptoms*