

CHAPTER I

INTRODUCTION

1.1 Background

Coronavirus Disease 2019 (COVID-19) is predominantly a respiratory disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), which were first reported in China on December 2019 and has been declared as a global pandemic by the World Health Organization (WHO) since March 2020 (Lee et al., 2020; Puoti et al., 2021). As of June 16, 2021, there have been over 176 million confirmed COVID-19 cases and 3.8 million deaths worldwide, with approximately 8.5% of the reported cases were pediatric patients under the age of 18 years (WHO, 2021). According to El Quali et al. (2021), the prevalence of gastrointestinal manifestations seen in patients with COVID-19 is up to 50%, although most studies show ranges from 16% to 33%. In pediatric cases itself, gastrointestinal manifestations are the most common extrapulmonary symptoms of COVID-19, with a prevalence of 32.5% compared to other extrapulmonary manifestations (Pousa et al., 2021).

The main routes of transmission of SARS-CoV-2 are respiratory droplets, aerosol particles, as well as contact with respiratory secretions and saliva. As stated by the WHO, people with COVID-19 may be asymptomatic or symptomatic, with both cases still being contagious and able to spread the virus to the people around them. The most common symptoms associated with COVID-19 are fever, cough, and shortness of breath, as well as other respiratory distress. However, recent studies have proven that extrapulmonary

manifestations are becoming more frequent, with gastrointestinal symptoms as the most common extrapulmonary manifestations in COVID-19 adult and pediatric patients.

The most common gastrointestinal manifestations of COVID-19 in pediatric patients include anorexia or loss of appetite, diarrhea, nausea, vomiting, and abdominal pain (Pouti et al., 2021). It is important to note that GI manifestations can be the earliest presenting symptoms of COVID-19, may occur in advance of respiratory symptoms or may manifest later during the disease course. In up to 10% of pediatric patients, GI symptoms may be the only presentation of the disease. According to Jin et al (2020), patients with GI symptoms were found to have a more severe disease course compared to the patients without GI symptoms. In addition, patients with both GI symptoms and fever had an 85% increased risk of severe COVID-19 (Liu et al., 2020).

Unfortunately, there are only limited data and information regarding COVID-19 in pediatric patients in Indonesia, particularly with presenting GI manifestations. As research studies on COVID-19 continue to grow, the understanding of the correlation between GI manifestation and COVID-19 disease course, especially in pediatric patients, is becoming an urgent matter. For these reasons, it is significantly important to understand the gastrointestinal manifestations on pediatric patients with COVID-19 in order to accurately diagnose pediatric patients with COVID-19, anticipate the COVID-19 disease course, as well as to provide the best management and therapy for the patients.

1.2 Formulation of Problem

Based on the background, the research problems is:

1. How is the profile of gastrointestinal manifestation on pediatric patients with COVID-19?

1.3 Objective of Research

1.3.1 General Objective

The general objective of this study is to identify and describe the gastrointestinal manifestations on pediatric patients with COVID-19 in RSUD Dr. Soetomo.

1.3.2 Specific Objective

The specific objectives of this study are:

1. To describe the demographic characteristics of pediatric patients with COVID-19
2. To describe the underlying medical condition of pediatric patients with COVID-19
3. To describe the illness severity of COVID-19 in pediatric patients.
4. To describe the prevalence and variety of gastrointestinal manifestations in pediatric patients with COVID-19.
5. To describe the laboratory examination and stool analysis of pediatric patients with COVID-19.

1.4 Benefit of Research

1.4.1 Academic Benefit

This study is expected to provide information regarding the gastrointestinal manifestations in pediatric patients with COVID-19, which can be used for further scientific development and research.

1.4.2 Practical Benefit

This study is expected to provide a profile of gastrointestinal manifestations in pediatric patients with COVID-19, which is beneficial to be used as additional data and information for further analysis and research.