3. CHAPTER PEDIATRICS

COVID-19 INVOLVEMENT MIMICKING LOBAR PNEUMONIA IN A PEDIATRIC CASE

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BACKGROUND

COVID-19 and associated illness symptoms were first reported in the city of Wuhan in China at the end of 2019. The disease spread rapidly all over the world within a few months, and it was declared a worldwide pandemic by the World Health Organization (WHO) in March 2020. It has been found that the virus is transmitted by respiratory droplets and direct contact, mainly while breathing through the nose and mouth (1,2). It can result in acute respiratory distress syndrome, multiple organ failure, and even death in patients with advanced age and/or those having underlying chronic diseases.

It is difficult to identify the children infected with COVID-19 who have a few or no respiratory symptoms. For routine clinical care in different settings, it is important to evaluate the patients' COVID-19 status. Routine polymerase chain reaction (PCR) is considered as the gold standard but may be inaccurately negative due to sampling errors. According to the available literature, children account for about 1-5% of COVID-19 cases diagnosed (3). Although no pediatric cases were reported in the early stages of the pandemic, then COVID-19 cases were reported in children from different locations, especially in Wuhan (4,5). There are a growing number of studies focusing on the epidemiology of COVID-19 diseases in adults. However, limited studies are investigating the epidemiology of COVID-19

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and interstitial infiltrates, which can cause atelectasis or air trapping, especially due to small caliber airways. Sometimes airspace consolidation or hemorrhage may also occur (25). The widespread pulmonary diseases tend to cause infiltrative opacification around the lung, but different patterns may be observed in imaging between different etiologies (26). In interstitial pulmonary edema, ground-glass opacities are frequently encountered on CT imaging. Pleural effusion is a common accompanying finding in cardiogenic pulmonary edema.

CONCLUSION

The COVID-19 associated viral pneumonia in children is usually mild and thorax CT can show characteristic changes of subpleural ground-glass opacities and consolidations with surrounding halo, an effective way to monitor and evaluate changes in lung lesions. Early symptoms of the disease can vary and should be differentiated from various diseases seen in children, especially viral atypical pneumonia. Conditions such as underlying immune system deficiencies may play a role in aggravating or concealing the clinical picture of the disease. As with many other viral infections, significant or specific changes may not be observed in routine laboratory tests. The simultaneous use of PCR testing and chest CT scans in symptomatic cases is recommended as the preferred method of diagnosing the disease.

CONFLICT OF INTEREST

The author declares that there is no conflict of interest.

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