



COVID-19 in children

Olca Evliyaoglu¹, Ayşe Ayzıt Kılınç², Pınar Önal³, Fatih Aygün⁴, Haluk Çokuğraş^{2,3}

¹Division of Pediatric Endocrinology, Department of Pediatrics, İstanbul University-Cerrahpaşa, Cerrahpaşa Faculty of Medicine, İstanbul, Turkey

²Division of Chest Diseases, Department of Pediatrics, İstanbul University-Cerrahpaşa, Cerrahpaşa Faculty of Medicine, İstanbul, Turkey

³Division of Pediatric Infectious Diseases, Department of Pediatrics, İstanbul University-Cerrahpaşa, Cerrahpaşa Faculty of Medicine, İstanbul, Turkey

⁴Division of Pediatric Intensive Care, Department of Pediatrics, İstanbul University-Cerrahpaşa, Cerrahpaşa Faculty of Medicine, İstanbul, Turkey

We are going through the period of the COVID-19 pandemic, which the whole world is battling, under extraordinary conditions. Although coronaviruses are regarded as agents of mild respiratory infection, they have caused three fatal epidemics up to the present time; severe acute respiratory syndrome (SARS-CoV-2) in 2002, Middle East respiratory syndrome (MERS) in 2012, and now coronavirus disease 2019 (COVID-19) caused by SARS-CoV-2, which primarily began in bats. COVID-19 first emerged in humans in December 2019 in the city of Wuhan in China, and rapidly spread all over the world. The World Health organization declared the disease “a public health emergency of international concern” on January 30th, 2020, and “global pandemic” on March 12th, 2020.

In the early stages of the pandemic, it was thought that children were affected rarely. However, it was found later that SARS-CoV-2 might infect children as well as adults, though children had fewer disease symptoms, lesser disease severity, and lower mortality rates (1). The Cerrahpaşa Pediatric Clinic monitored the process of the pandemic well from the onset and made the necessary preparations. Four hundred thirteen subjects with fever, respiratory tract symptoms or a history of contact, presented to our clinic between March 11th, 2020, when the first case of COVID-19 was reported in our country, and May 25th, 2020, and these subjects were evaluated in terms of COVID-19. Briefly reviewing our data, which will be published soon, a total of 45 subjects were diagnosed as having COVID-19 following clinical, laboratory, and radiologic examinations. Forty-three percent of the subjects were female and the median age was found as 10.6 (range, 0.5–17.9) years. There was a history of contact in 34 (76%) subjects. Eleven subjects had comorbid chronic conditions (medulloblastoma, Hodgkin lymphoma, neuroblastoma, hepatoblastoma, diabetes, obesity, juvenile idiopathic arthritis, primary immune deficiency, Crouzon syndrome, tuberous sclerosis, mitochondrial myopathy). Asymptomatic infection was identified in 8% of the subjects, mild-moderate disease was identified in 68%, and severe disease was identified in 24%. Forty percent of the subjects who developed severe disease had comorbid chronic conditions. Dry cough, fever, loss of appetite, and dyspnea were among the common findings. Nasopharyngeal-opharyngeal real-time polymerase chain reaction (RT-PCR) samples were found as positive in 37 of the subjects, whereas eight subjects were diagnosed through clinical and radiologic findings. The most commonly identified laboratory findings included lymphopenia (44%) and increased D-dimer (41%). Radiologically, peripheral ground-glass opacity or areas of consolidation of the lung parenchyma, which are sensitive but not specific for the diagnosis of COVID-19, were found in 23 subjects (51%). Asymptomatic subjects were followed up without medical treatment. Azithromycin treatment was given to 25 (55%) of the subjects and azithromycin plus hydroxychloroquine treatment was given to 16 subjects (35%). Hydroxychloroquine and azithromycin treatment in association with noninvasive mechanical ventilation support was given to 11 subjects who had findings of hypoxia. Additional

favipavir treatment was given to four of these subjects and plasmapheresis was administered to three subjects. All of our patients were discharged in good health. Data related to children, which were scarce in the beginning, are gradually increasing and enabling us to draw more accurate conclusions. Our data showed that COVID-19 did not have a course as mild as it was thought in children, and severe disease developed in 24% of the subjects. The review written by Çokuğraş et al., which examined SARS-CoV-2 infection in children in many aspects, is included in this issue of our periodical. In this review, which will respond to many questions on the topic, the microbiologic features, clinical findings, diagnostic criteria, and treatment methods of COVID-19 infection, were discussed in detail. Two other important questions are how SARS-CoV-2 infection affects pregnant women and newborns, and if vertical transmission occurs. Although it was reported that SARS-CoV-2 was not isolated in amniotic fluid, placental tissue, vaginal swab, cord blood, breast-milk, and nasopharyngeal and throat swabs in mother-baby pairs in whom COVID-19 infection was found during pregnancy in some studies, SARS-CoV-2 tests were found as positive in three newborns despite the introduction of strict infection prevention and control measures (2–5). In addition, immunoglobulin M and G against SARS-CoV-2 were found in three newborns whose mothers were diagnosed as having COVID-19 infection 23 days before birth (6, 7). Vertical transmission cannot be excluded because of this information. In this issue of our periodical, Erdevi et al. gave detailed information and recommendations about COVID-19 infection in pregnant women and newborns and about COVID-19 management in neonatal intensive care units. These recommendations will be instructive for neonatal intensive care units.

Children are affected by COVID-19 infection as well as adults. More data should be evaluated to specify the most appropriate management and treatment for COVID-19 infection in children.

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Corresponding Author/Sorumlu Yazar: Olca Evliyaoglu E-mail/E-posta: olcaevliyaoglu@hotmail.com

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