



Children with chronic disease and COVID-19

Kronik hastalığı olan çocuklar ve COVID-19

Olca Evliyaoğlu

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

Children who have comorbid chronic diseases are under threat in terms of COVID-19 infection and of failure of chronic disease management. Therefore, management of chronic diseases in the period of the pandemic gains additional importance. Similar to global data, comorbid chronic diseases were found in 40% of subjects who developed severe disease in our clinic (unpublished data) (1, 2). Although there are differences between the causes that increase the tendency to COVID-19 infection and the severity of infection, a weakened immunity appears to be important as a mutual factor. Children and adults have similar susceptibility to COVID-19 infection, though they have different underlying chronic diseases. In adults, disorders such as cardiovascular diseases, diabetes, chronic lung diseases, hypertension, and cancer increase the mortality rate. In children, comorbid conditions including diabetes, adrenal insufficiency, chronic lung diseases, cancers, immune deficiencies, chronic renal failure, and neurologic disorders may increase the risk of COVID-19-related severe morbidity and mortality. In order to protect such children, the necessary precautions should be taken in the period of the pandemic and follow-up pathways should be specified. For example, it is known that diabetes increases the risk of COVID-19-related severe morbidity and mortality by disrupting immunity or because of diabetes-related complications such as hypertension, obesity, cardiovascular diseases, and nephropathy (3, 4). In addition, increased blood glucose also appears to be important. Among the patients who were hospitalized because of COVID-19 and who previously had no signs related to diabetes, the mortality rate was reported to be increased and the hospitalization period was reported to be prolonged in those whose blood glucose levels increased during the period of hospitalization (5). These data prompt the following questions: Can maintaining a

blood glucose level between normal limits be sufficient in terms of protecting against the disease and decreasing complications and mortality? Is acute hyperglycemia an independent cause or is it the result of severe infection? On the other hand, blood glucose levels should be closely monitored in the presence of the association of diabetes and COVID-19 because these patients carry a risk in terms of diabetic ketoacidosis due to sudden changes in general status (6).

As healthcare teams, we should ordinarily follow-up the chronic diseases of our patients. For example, we should target the best glycated hemoglobin (HbA1c) in patients with diabetes as usual, and we should encourage patients in terms of appropriate lifestyle changes, especially in quarantine periods. Emphasizing that they are more susceptible in this period, we should state that they should be especially careful in terms of general hygiene recommendations and mask use.

Management of chronic diseases after the acute period of the pandemic:

The quarantine period and the fact that hospitals were unsafe in terms of risk for infection, caused diseases other than COVID-19 to stay in the background. Patients delayed their normal follow-up visits or did not care about their symptoms. This caused patients to present to hospitals in the final stages of their morbidities such as severe diabetic ketoacidosis. We should determine what kind of a path we should follow in order to enable patients who have chronic disorders to be minimally harmed during and after this period.

Alleviating the damage due to the interruption of chronic care is only possible if patients, the healthcare system,

Cite this article as: Evliyaoğlu O. Children with chronic disease and COVID-19. Turk Pediatri Ars 2020; 55(2): 93–4.

Corresponding Author/Sorumlu Yazar: Olca Evliyaoğlu E-mail/E-posta: olcayevliyaoglu@hotmail.com

©Copyright 2020 by Turkish Pediatric Association - Available online at www.turkpediatriarsivi.com

©Telif Hakkı 2020 Türk Pediatri Kurumu Derneği - Makale metnine www.turkpediatriarsivi.com web adresinden ulaşılabilir.

DOI: 10.14744/TurkPediatriArs.2020.57805

OPEN ACCESS This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.



and healthcare employees comply with the ‘new normal.’ Using visual communication on the internet instead of reciprocal visits, and disease-specific renewed follow-up paths may be included in the context of this compliance.

References

1. Lu X, Zhang L, Du H, et al. SARS-CoV-2 Infection in Children. *N Engl J Med* 2020; 382: 1663–5. [\[CrossRef\]](#)
2. Sun D, Li H, Lu XX, et al. Clinical features of severe pediatric patients with coronavirus disease 2019 in Wuhan: a single center’s observational study. *World J Pediatr* 2020 Mar 19. doi: 10.1007/s12519-020-00354-4. [Ahead of print]. [\[CrossRef\]](#)
3. Remuzzi A, Remuzzi G. COVID-19 and Italy: what next? *Lancet* 2020; 395: 1225–8. [\[CrossRef\]](#)
4. Richardson S, Hirsch JS, Narasimhan M, et al; and the Northwell COVID-19 Research Consortium. Presenting Characteristics, Comorbidities, and Outcomes Among 5700 Patients Hospitalized With COVID-19 in the New York City Area. *JAMA*. 2020 Apr 22;323(20):2052–9. doi: 10.1001/jama.2020.6775. [Epub ahead of print]. [\[CrossRef\]](#)
5. Bode B, Garrett V, Messler J, et al. Glycemic Characteristics and Clinical Outcomes of COVID-19 Patients Hospitalized in the United States. *J Diabetes Sci Technol*. 2020 May 9:1932296820924469. doi: 10.1177/1932296820924469. [Epub ahead of print]. [\[CrossRef\]](#)
6. Ma WX, Ran XW. The Management of Blood Glucose Should Be Emphasized in the Treatment of COVID-19. [Article in Chinese]. *Sichuan Da Xue Xue Bao Yi Xue Ban* 2020; 51: 146–50.