



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

References

1. Aslam AF, Aslam AK, Vasavada BC, Khan IA. Hypothermia: evaluation, electrocardiographic manifestations, and management. *Am J Med* 2006;119:297-301.
2. Umpierrez G, Korytkowski M. Diabetic emergencies—ketoacidosis, hyperglycaemic hyperosmolar state and hypoglycaemia. *Nat Rev Endocrinol* 2016;12:222-32.
3. Rashidi H, Ghaderian SB, Latifi SM, Hoseini F. Impact of diabetic ketoacidosis on thyroid function tests in type 1 diabetes mellitus patients. *Diabetes Metab Syndr* 2017;11(suppl 1):S57-9.
4. Bohn D, Daneman D. Diabetic ketoacidosis and cerebral edema. *Curr Opin Pediatr* 2002;14:287-91.
5. Gregory T, Smith M. Cardiovascular complications of brain injury. *Cont Educ Anaesth Crit Care Pain* 2012;12:67-71.

Changes in hospitalization in children during COVID-19 pandemic quarantine in a single center in Turkey



To the Editor:

Li et al¹ reported the variations in healthcare visits of children to hospitals during the coronavirus disease 2019 (COVID-19) pandemic in China. In Turkey, the first case of severe acute respiratory syndrome coronavirus 2 infection was authoritatively reported by the Ministry of Health on March 11, 2020.² The schools and universities were closed on March 16, 2020. The government took further steps to mitigate disease spread, including travel restrictions, social distancing, and home quarantine from March to June 2020.

We report the effects on healthcare utilization data derived from a tertiary pediatric hospital in the middle of Turkey and accepting complicated patients from all over the country. The electronic database system of the hospital was evaluated for the containment period of the country; the same period in 2019 was chosen for comparison. The diagnoses of the hospitalized patients were classified by

types of infectious diseases, organ system diseases, oncologic diseases, and intoxications. We calculated the change rate of the diseases according to percentage rates. The diseases having a change rate >1 was accepted to be increased, <1 was accepted to be decreased during the pandemic period. With the start of quarantine restrictions and school holidays, a prominent decline in the number of patients occurred not only in outpatient clinics (Figure 1) but also in hospitalized patients (Figure 2). Patients suspected or diagnosed with COVID-19 infection were excluded. Data indicating the rates of diagnosis and the change rates are shown in Figure 3.

As expected, the major decline occurred in infections, including acute lower respiratory infections because of social distancing and restricted close contacts during the pandemic. Other infections spread by close interactions, such as diarrhea, were also diminished.

There was an increase in the number of patients hospitalized for allergic diseases, especially severe urticaria and anaphylaxis. Li et al¹ also noted an increase in atopic dermatitis and related skin problems in China and speculated on the role of lack of sunlight exposure and reduction of vitamin D levels during the long period of home quarantine.

In 2020, there was an increase in rheumatologic diseases including IgA vasculitis (Henoch-Schonlein purpura), juvenile idiopathic arthritis, and juvenile idiopathic arthritis-related macrophage activation syndrome compared with the same period in 2019. The relationship between viral infections and the trigger of both T cell-associated damage and post-translational modification of peptides activating T cells have been reported.³ Although the highly suspected and confirmed cases of COVID-19 were excluded from the study, multisystem inflammatory syndrome in children without the active symptoms of COVID-19 infections might contribute to this finding.³

Intoxication by drugs was 3.5 times higher during COVID-19 quarantine. Intoxication as suicide attempt

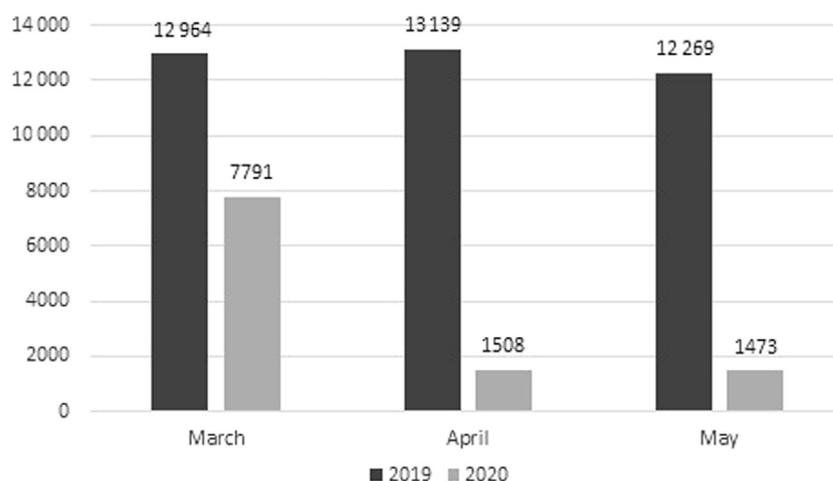


Figure 1. Number of patients admitted to outpatient clinics in the department of pediatrics in 2020 compared with 2019.

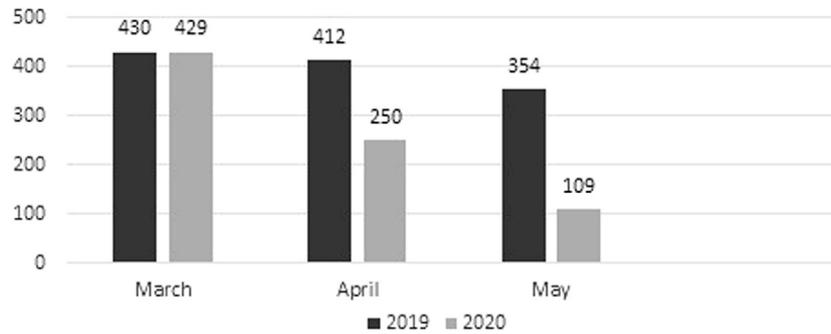


Figure 2. Comparison of hospitalized patients in the department of pediatrics in 2020 compared with 2019.

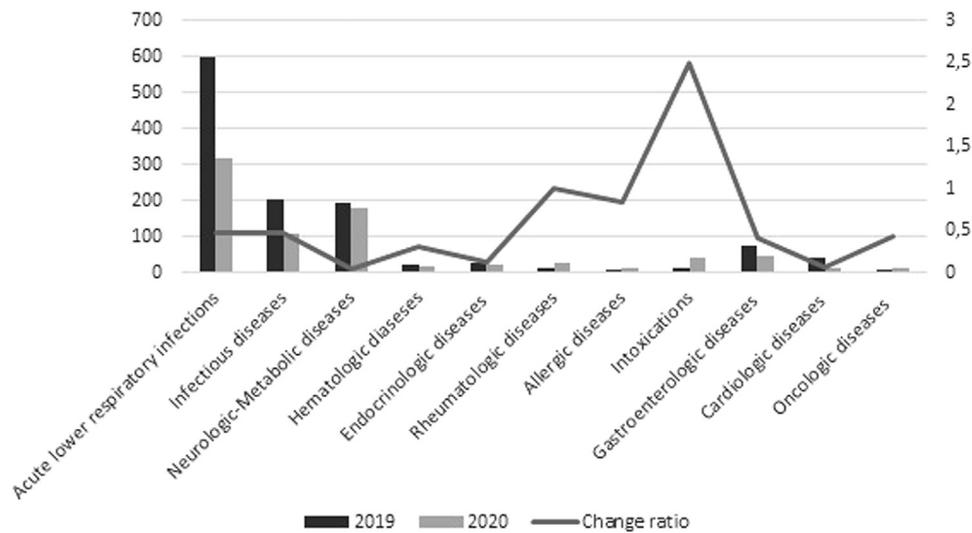


Figure 3. Diagnoses for hospitalized patients and the change ratio during quarantine in 2020 compared with 2019.

increased 2.25 fold and intoxication as home accidents was 6 fold increased in young children. With school closures, infants and young children face increased risk for accidents in their home environments.⁴

Meltem Akcaboy, MD
Harun Terin, MD
Saliha Senel, MD

Department of Pediatrics
 Dr. Sami Ulus Maternity and Children’s Health and Diseases
 Training and Research Hospital
 Ankara, Turkey

<https://doi.org/10.1016/j.jpeds.2020.12.014>

The authors declare no conflicts of interest.

References

- Li H, Yu G, Duan H, Fu J, Shu Q. Changes in children’s healthcare visits during COVID-19 pandemic in Hangzhou, China. *J Pediatr* 2020;224:146-9.

- Republic of Turkey, Ministry of Health, COVID-19 Information Page, General Coronavirus Table. <https://covid19bilgi.saglik.gov.tr/tr/gunlukvaka.html>. Accessed February 10, 2020.
- Jiang L, Tang K, Levin M, Irfan O, Morris SK, Wilson K, et al. COVID-19 and multisystem inflammatory syndrome in children and adolescents. *Lancet Infect Dis* 2020;20:e276-88.
- Le Roux G, Sinno-Tellier S, Descatha A. COVID-19: home poisoning throughout the containment period. *Lancet Public Health* 2020;5:e314.

Reply

To the Editor:

The effect of coronavirus disease 2019 (COVID-19) on global health was underestimated when we published the study in June 2020. The spread of infection to many additional countries, resurgence since the beginning of autumn, and need to reintroduce a lockdown make discussion about the changes in hospitalization in children during the quarantine period have relevant and practical significance.

Akcaboy et al confirmed the prominent decline in both the outpatient and inpatient departments in a children’s

