Received: 16 February 2021 | Accepted: 18 March 2021

DOI: 10.1111/apa.15849

ACTA PÆDIATRICA NURTURING THE CHILD WILEY

LETTER

Long-term symptoms of COVID-19 in children

Dear Editor,

We have read with great interest the article by Jonas F. Ludvigsson[1] reporting 5 cases of children with prolonged symptoms after being diagnosed of mild SARS-CoV-2 infection. There are many articles reviewing the long-term manifestations of COVID-19 in adult patients,[2] but paediatric reports are still scarce.

TABLE 1 Clinical characteristics of 'constitutional syndrome' patients (long COVID syndrome)

	Constitutional/Long COVID syndrome
Number of patients; *n* (%)	8 (11)
Gender; *n* (%)	
Male	4 (50)
Female	4 (50)
Age (months); median (IQR)	142 (117.8–166.8)
Comorbidities; *n* (%)	1 (12.5)
COVID−19 suspected or confirmed contact; *n* (%)	7 (87.5)
COVID−19 confirmation; n (%)	2 (25)
Days of symptoms before RT-PCR; median (IQR)	15.5 (4.3–26.3)
Hospital admission; n (%)	0
Blood test; median (IQR)	
Lymphocytes (cells/mm^3)	2355 (2057.8–2790)
D-Dimer (ng/mL)	290 (190–735)
LDH (UI/L)	210 (205.3–282)
CRP (mg/L)	0.5 (0.5–0.5)
Procalcitonin (ng/mL)	0.02 (0.02–0.02)
Chest X-Ray; n (%)	
Normal	4 (50)
Interstitial infiltrates	2 (25)
Pneumonia	0
Not performed	2 (25)
Fever duration (days); median (IQR)	53.5 (12.3–64.5)
Symptom duration (days); median (IQR)	60 (37–70)
Follow-up time (days); median (IQR)	52.5 (25–60.5)
Telephone consultations; median (IQR)	11 (6.3–19)
New symptoms during follow-up; *n* (%)	6 (75)
Clinical worsening during follow-up; *n* (%)	4 (50)
> 1 visit to Emergency Department; *n* (%)	4 (50)

During the first pandemic wave in Spain (March to June 2020), we performed telephone consultations for the follow-up of children with COVID-19 or high suspicion of SARS-CoV-2 infection.[3] We were able to demonstrate SARS-CoV-2 infection in 40 of 72 children (55,5%), but we had limited availability of diagnostic tests. We found a group of 8 patients who stood out from the rest due to the long duration of their symptoms. They were in most cases adolescents or preadolescents, and half of them were female. We described their symptoms as a 'constitutional syndrome' because their most frequent manifestations were persistent low-grade fever, intense asthenia and severe headache. Parents referred those symptoms as disabling in most of the children. Half of the minors were attended more than once at our Emergency Department, but none of them required to be admitted at the hospital. An extended diagnostic study was performed in all of them (including blood test, serology tests and in most cases also a chest X-ray) detecting less laboratory and radiological abnormalities compared to the rest of the children. The clinical data of the group are shown in Table 1.

We were only able to confirm a SARS-CoV-2 infection in 2 of those 8 patients. Other children had a positive parvovirus serology test (IgM and IgG). In the remaining cases, we were not able to obtain a diagnosis. However, we believe that delays obtaining RT-PCR and tests shortage in our patients might have caused underdiagnosis of COVID-19. By the time we wrote our article, there were no reports of long COVID in children. However, we considered the possibility that those persistent symptoms could be related to SARS-CoV-2. We also assumed that some of those manifestations might have been exacerbated because of the stress provoked by COVID-19 pandemic and lockdown measures. In light of the available evidence, this group of children could possibly be diagnosed with long COVID syndrome.

There is growing evidence that children are susceptible to suffer long-term effects of COVID-19 as proven by Jonas F. Ludvigsson's article.[1] We agree with the author that it is necessary to continue to report these cases to confirm its linkage to SARS-CoV-2 infection, to describe the clinical manifestations that might appear in this syndrome, and to develop clinical guidelines for the medical care of these patients.

KEYWORDS

coronavirus, long-term effects, children and adolescents

FUNDING INFORMATION

No funding was secured for this article. Carlos Grasa is funded by the Spanish Ministry of Science and Innovation, Instituto de Salud Carlos III and Fondos FEDER (Contrato Río Hortega CM19/00015).

CONFLICT OF INTEREST

There are no conflicts of interest relevant to this article to disclose.

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