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Long Coronavirus Disease in Pediatric Rheumatology

To the Editors:

We read with interest the article by Ashkenazi-Hoffnung et al[1] reporting 90 children with long coronavirus disease (COVID) followed in a designated multidisciplinary clinic. The authors reported mainly respiratory symptoms with less than half of tested patients carrying abnormal findings.[1] Nevertheless, musculoskeletal manifestations were frequent among the study cohort with myalgia and arthralgia recorded in 46% and 14% of cases, respectively.[1]

Herein, we report our experience with long COVID in a tertiary referral hospital for pediatric rheumatology. We prospectively followed patients referred to our center for musculoskeletal manifestations and a previous severe acute respiratory syndrome coronavirus 2 infection (positive reverse transcription polymerase chain reaction test on nasopharyngeal swab and/or serology tests) from January to June 2021. Six patients (2 girls) were included in the study; the median age at first evaluation was of 10.1 ± 3 years. All patients were previously healthy. None of them was hospitalized because of acute COVID19. All patients underwent a full physical examination along with laboratory test and other investigations according to their clinical manifestations. Polyarthralgia represented the main reason of referral; even so, the clinical pictures were slightly different for each patient. A 10-year-old girl developed diffuse and persistent joint pain along with antalgic gait; all the investigations were negative, and the physical examination documented the presence of allodynia; thus, a diagnosis of diffuse amplified musculoskeletal pain syndrome was made. A 16-year-old boy had persistent low-grade fever with weight loss (7 kg in 3 months) and polyarthralgia of the hands. Three patients had intense joint pain, and one of them, a 5-year-old girl, had an ultrasound documenting an intraarticular swelling of the right hip but the arthralgia persisted once the swelling subsided. One patient was referred for persistent swelling of the fourth toe of the right foot along with a red-purple rash; he was diagnosed as having COVID toe.[2] The onset of these symptoms preceded or appeared right after a positive result of the nasopharyngeal swab, except for a patient who developed an intense and excruciating low back pain after recovering from a multisystem inflammatory syndrome in children. The median time interval from onset of manifestations and first visit at our center was 2.5 ± 1 months. All patients recovered during the follow-up, and the median duration of long COVID manifestations was 5 ± 1.3 months.

None of our patients developed a chronic inflammatory condition, and the investigations did not document relevant and/or persistent abnormalities. Despite the fact that they all recovered, these patients showed several degrees of limitations in daily life for some months. Furthermore, we recently saw a high number of young patients referred for musculoskeletal manifestations without any abnormal findings, often diagnosed with amplified musculoskeletal pain syndrome, without any antecedent COVID history. Whether long COVID can be considered just a consequence of a viral infection or should be attributed to the implications of "the pandemic era" we are now living in is still a matter of debate.[3,4]

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Invasive *Haemophilus influenza* Type b in an Infant During the COVID-19 Pandemic: *The Return of Diseases We Hoped Never to See Again…*

To the Editors:

A 7-month-old previously healthy female was admitted to our hospital with generalized tonic-clonic seizures, 4 days history of fever (102.9 F) and nonbilious nonbloody emesis. Meningitis was diagnosed with a lumbar puncture that revealed pleocytosis. Brain magnetic resonance imaging with

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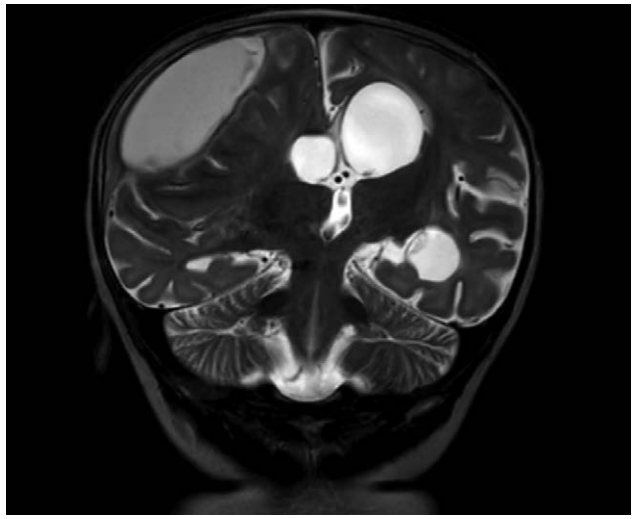

FIGURE 1. MRI brain with and without contrast (HD 44) showing right subdural empyema that was more loculated and organized, exerting more mass effect leading to increased leftward midline shift compared with MRI brain with and without contrast (HD 25), communicating hydrocephalus. MRI indicates magnetic resonance imaging.

and without contrast showed subdural collections over both convexities. *Hemophilus influenzae* type b was isolated from blood and cerebrospinal fluid cultures.

On hospital day (HD) 8 and HD 26, the patient underwent transfontanel subdural taps for the persistence of the subdural collections. On HD 44, a magnetic resonance imaging (Fig. 1) revealed a loculated subdural empyema with a markedly worsened midline shift. The patient underwent a craniotomy with the removal of the pyogenic membrane and drainage of the fluid.

Before the availability of vaccinations, *H. influenzae* type b was the leading cause of bacterial meningitis in the United States. Following widespread vaccination, the disease virtually disappeared with the annual incidence of Hib decreasing to an estimated annual incidence of 0.27 cases per 100,000 children <5 years of age since 2001.[1]

Risk factors for invasive Hib disease in our patient included her age and, most important, lack of Hib vaccination. Routine immunization services faced stark challenges in 2020, with the coronavirus disease 2019 (COVID-19) pandemic causing the most widespread and most significant global disruption in recent history. Supply and facility constraints, fear of severe acute respiratory syndrome coronavirus 2 exposure in healthcare settings, as was the case in our patient, might explain why routine immunization was among the most affected health services. Globally, estimated coverage in 2020 fell to 76.7% for third-dose diphtheria-tetanus-pertussis vaccine while first-dose measles-containing vaccine dropped to 78.9%.[2] A recent study suggests a potential 10% increase in mortality from vaccine-preventable diseases due to pandemic-related disruptions to routine immunization.[3] The second half of 2020 showed signs of recovery; nevertheless, recovery efforts were far from complete.

While COVID-19 remains a formidable threat in 2021, even when the pandemic wants gaps in vaccine coverage increase, the risk of vaccine-preventable disease outbreaks.

Many current US trainees have likely never seen or managed Hib meningitis. Due to falling vaccination rates related to COVID-19, providers should be alert to the presence of vaccine-preventable infections and their management. In addition, strengthening routine immunization data systems and efforts to target resources and outreach, reaching children who missed regular vaccine doses during the pandemic will be essential to minimize the risk of vaccine-preventable disease outbreaks; otherwise the world's fragile progress could easily give way to vaccine-preventable disease outbreaks in 2021 and beyond.

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Do not Miss the Diagnosis of Bacterial Sepsis in Infants With COVID-19

To the Editors:

A 34-day-old male infant presented with a 2-day-history of cough, poor feeding and vomiting after feeding. His severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) polymerase chain reaction test was positive, and he was admitted to the hospital for intravenous hydration. Physical examination revealed no specific finding of

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