Long COVID in children

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Abstract

Question Several physicians in our family medicine clinic noted a recent increase in the number of children with nonspecific symptoms after having had COVID-19. Based on the assumption that these children may have long COVID syndrome, what is the recommended treatment?

Answer Lockdowns and isolation during the COVID-19 pandemic have affected the physical and mental health of children and adolescents. A recognized complication of COVID-19 is a post–COVID-19 syndrome (*long COVID*) that was initially reported in adults with an estimated prevalence of 10%. More recent reports on long COVID in children suggest a prevalence of 8% to 10%, but small cohorts, a range of symptoms, and challenges in defining the syndrome make accurately estimating the prevalence difficult. Furthermore, providers may find it challenging to differentiate between neuropsychiatric symptoms that are consequences of COVID-19 infection versus those that are a result of stress, anxiety, or changes in behaviour owing to restrictions associated with the pandemic. Until more evidence is available, management includes obtaining a detailed history, performing a comprehensive physical examination, and aiming to relieve symptoms while following up every 2 to 4 months.

La COVID longue chez l'enfant

Résumé

Question Plusieurs médecins de notre clinique de médecine familiale ont remarqué une récente augmentation du nombre d'enfants qui présentent des symptômes non spécifiques après avoir contracté la COVID-19. Si l'on se fie à l'hypothèse selon laquelle ces enfants pourraient avoir le syndrome de la COVID longue, quel est le traitement recommandé?

Réponse Les confinements et l'isolement durant la pandémie de la COVID-19 ont affecté la santé physique et mentale des enfants et des adolescents. L'une des complications reconnues de la COVID-19 est un syndrome post-COVID-19 (*COVID longue*), qui a initialement été signalé chez les adultes et dont la prévalence est estimée à 10 %. Des rapports plus récents sur la COVID longue chez les enfants font valoir une prévalence de 8 à 10 %, mais la petite taille des cohortes, la diversité des symptômes et les difficultés à définir le syndrome compliquent l'estimation de la prévalence avec exactitude. En outre, les médecins peuvent trouver difficile de faire la distinction entre les symptômes neuropsychiatriques attribuables à l'infection à la COVID-19 et ceux qui résultent du stress, de l'anxiété ou des changements dans nos comportements dus aux restrictions liées à la pandémie. Jusqu'à ce qu'un plus grand nombre de données probantes soient accessibles, la prise en charge comporte d'obtenir une anamnèse détaillée, de faire un examen physique complet et d'essayer de soulager les symptômes, tout en assurant un suivi tous les 2 à 4 mois.

Since the start of the COVID-19 pandemic, illness among children was considered mild.[1,2] Even during the surge in prevalence of the highly transmissible Omicron variant of COVID-19 in late 2021, while many more children became symptomatic, their illness remained mild, and complications resulting in admission to hospital were few and far between.[3,4]

Nevertheless, lockdowns, supply chain complications, and isolation have had an impact on children. School closures and regional lockdowns were detrimental to children and adolescents' physical activity owing to more time on screen and longer periods of sleep,[5] and increases in housing and food insecurity were well documented, with concerns about the long-term health of children.[6] Furthermore, reliable reports in the early stages of the pandemic described an increased prevalence of depression, anxiety, and behaviour problems in children,[7] as well as delays in seeking emergency care.[8]

A recognized complication of COVID-19 has been termed post–COVID-19 syndrome, or *long COVID*. The United Kingdom's National Institute for Health and Care Excellence definition of long COVID includes acute COVID-19, defined by signs and symptoms lasting up to 4 weeks; postacute or ongoing symptomatic COVID-19, when symptoms persist from 4 to 12 weeks; and post–COVID-19 syndrome, defined by signs and symptoms that continue for more than 12 weeks after the onset of acute symptoms. Long COVID includes both postacute COVID-19 and post–COVID-19 syndrome.[9] Long COVID was initially reported in adults and included cardiorespiratory conditions, symptoms of fatigue, headache, dyspnea, and anosmia, and it was more likely to occur

with older age, with higher body mass index, and among women.[10] It has been estimated that up to 10% of adults who test positive for COVID-19 may experience long COVID.[11] The list of postviral symptomatology among people who contracted COVID-19 is long and includes nonspecific conditions that are highly prevalent, such as sleep changes, difficulty concentrating, and anxiety.

Symptom prevalence and persistence in children

Initial reports of the multisystem symptomatology in children appeared in case reports and small series, mostly among those who had severe COVID-19 illness.[12] The estimated prevalence among children varies considerably.[13] The definition of the condition (especially if the need for a confirmed test of COVID-19 illness is included), the broad range of symptoms (as some may have started before COVID-19 illness), and the similarities to other conditions (eg, chronic fatigue syndrome) are some of the reasons for the diagnosis being challenging. Furthermore, studies to date have had small cohorts, suffered from the biased selection of populations or recall bias of reported symptoms, had no control groups, and had variable lengths of follow-up.[14] A large Norwegian study reported a substantial increase in the number of individuals seeking post–COVID-19 primary care visits 2 or 3 months after positive tests, particularly in young children. The investigators described a noteworthy increase in respiratory and unspecified conditions.[15]

Over the course of the pandemic, more information has emerged about long COVID. Among 5 Swedish children with a median age of 12 years, symptoms persisted after 6 months and included fatigue, muscle and joint pain, headache, and insomnia. None were hospitalized at diagnosis, but 1 child was later admitted for pericarditis-myocarditis.[12]

In a study of 129 Italian children with COVID-19, almost half reported having at least 1 symptom 60 days or more after infection.[16] Common symptoms included fatigue, muscle and joint pain, headache, insomnia, respiratory problems, and palpitations. The investigators found that even some children with asymptomatic COVID-19 infections developed chronic, persistent symptoms, although follow-up was brief.

Among 171 children seen at a dedicated COVID-19 follow-up clinic in Melbourne, Australia, with one-third asymptomatic and most with mild disease, 12 (8%) of the 151 children for whom follow-up data were available at 3 to 6 months had postacute COVID-19 symptoms. All of these children were symptomatic when they had acute COVID-19. Symptoms such as fatigue lasted up to 8 weeks, and almost all children in the clinic returned to their baseline levels of health.[17]

In a prospective cohort study from a designated pediatric clinic in Israel, long COVID symptoms were associated with functional impairment up to 7 months after the onset of infection (mostly fatigue and dyspnea).[18]

The neuropsychiatric symptoms that present in children with long COVID are of interest. Further research is needed to determine whether they are the consequence of COVID-19 infection or a result of stress, anxiety, or changes in behaviour related to restrictions associated with the pandemic. While the prognosis of children with long COVID is generally good, some children may develop long-term symptoms that have a profound impact on daily family life.

Support for patients and caregivers

Much more information is needed on this new condition, and a standardized definition of the syndrome will help characterize it and evaluate its prevalence in children. In the meantime, primary health care providers can support children and their caregivers based on presenting symptomatology. Treatment protocols for long COVID in children are still in development, and more research will ensure management is evidence based. Completing the initial evaluation, spending time eliciting a detailed history on symptomatology, and performing a comprehensive physical examination are essential. It is yet unclear which tests, if any, are helpful as part of the initial investigation or during follow-up. Primary health care providers' follow-up is warranted, either when the symptom pattern changes or every 2 to 4 months. Providing patients and families with advice about how to cope with symptoms, especially fatigue, muscle and joint pain, headache, insomnia, and mood, is vital.

Competing interests
None declared

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