



COVID-19 disease in children: not as mild as we have been led to believe

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Since severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) emerged, we have followed this pandemic with great interest and concern from Europe (Navarra-Spain) and the United States (Boston-Massachusetts). We were expecting children to present to emergency departments with the “classical COVID-19 symptoms-triad” such as fever, cough, and a range of respiratory distress [1] and we had learned from countries affected earlier by the virus, that it appeared to be less common and relatively mild in children [2, 3].

However, in April 2020, pediatricians from different European countries and the United States began reporting cases of COVID-19 in children, requiring intensive care unit treatment and associating severe cardiac-symptoms, generally presenting 3–5 weeks after the COVID-19 peak. We have learned how children can present with a wide range of clinical symptoms, with respiratory symptoms not always being present and how some previously healthy children can present with skin-lesions, hypotension and tachycardia developing in the next hours an acute cardiac failure (with elevated cardiac-enzymes and imagine-compatible findings with acute-myocarditis).

As more case-reports and publications emerge in the next months, with different countries reporting their cases, we expect to learn more about this severe pediatric presentation, also referred as “Kawasaki-like” or “pediatric inflammatory multisystem syndrome”. We believe it is related to coronavirus but it seems to affect in a late phase of the disease [many cases report negative polymerase chain reaction (PCR) but positive immunoglobulin G], therefore, it might be related to a systemic inflammatory response or a delayed immune response. Pediatricians should be aware of this uncommon but possible complication, tachycardia and hypotension should be used as early red-flags, and SARS-CoV-2 should be suspected even if PCR is negative.

Many questions still need answers, but if this new pediatric presentation is related to COVID-19, it deserves fast and deeper investigation. The association between pediatric-severe-cardiac-cases and SARS-CoV-2 needs to be demonstrated and best prevention strategies, red flags, diagnosis tools and treatments need to be established. A global response should be taken to address a global problem. A global health institution, as the World Health Organization, might be a wise option to quickly recollect and analyze all reported cases, to better understand this new COVID-19 presentation in children. Global data recollection might help establish the correct guidelines to prevent, early detect and effectively treat pediatric-severe-cardiac-cases worldwide.

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Compliance with ethical standards

Ethical approval Not needed.

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