



Understanding the Necessity to Recognize Multisystem Inflammatory Syndrome in Children (MIS-C) in Emerging Infectious Diseases based on the Lessons Learned from COVID-19: A Letter to the Editor

Mohammadreza Naghibi¹  and Rasoul Raesi^{2,3,*} 

¹*Pediatric Interventional Cardiology, Pediatric and Congenital Cardiology Division, Pediatric Department, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad-Iran*

²*Department of Health Services Management, School of Health, Mashhad University of Medical Sciences, Mashhad, Iran*

³*Department of Nursing, Torbat Jam Faculty of Medical Sciences, Torbat Jam, Iran*

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*Address correspondence to this author at the Department of Health Services Management, School of Health, Mashhad University of Medical Sciences, Mashhad, Iran and Department of Nursing, Torbat Jam Faculty of Medical Sciences, Torbat Jam, Iran; E-mail: raesi.br881@gmail.com

Cite as: Naghibi M, Raesi R. Understanding the Necessity to Recognize Multisystem Inflammatory Syndrome in Children (MIS-C) in Emerging Infectious Diseases based on the Lessons Learned from COVID-19: A Letter to the Editor. *Open Public Health J*, 2024; 17: e18749445346904. <http://dx.doi.org/10.2174/0118749445346904241014093301>



Received: August 01, 2024
Revised: September 27, 2024
Accepted: October 04, 2024
Published: November 18, 2024



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To The Editor,

In the wake of the COVID-19 pandemic, the medical community has been faced with a new challenge in the form of Multisystem Inflammatory Syndrome in Children (MIS-C), a rare but serious condition with potentially life-threatening complications [1, 2]. We are writing to express our concerns about a new condition that has emerged during the COVID-19 pandemic known as MIS-C. As healthcare researchers, we believe it is crucial to raise awareness about MIS-C and its potential implications on pediatric health during this unprecedented global health crisis. As we navigate the complexities of emerging infectious diseases, it becomes increasingly crucial to recognize and understand the unique manifestations of MIS-C in pediatric populations. Drawing upon the lessons learned from the global response to COVID-19, this article delves into understanding the necessity of recognizing MIS-C in emerging infectious diseases.

Emerging infectious diseases can have a great impact, especially when it comes to the little ones [3]. Children have their unique ways of reacting to new infections [4]. This is where MIS-C comes into the spotlight, causing a stir in the realm of pediatric healthcare [5]. MIS-C is like a mystery package the immune system receives after a bout

of an infectious disease [6]. This inflammatory syndrome can appear with infections, leaving pediatricians confused by its varied presentations [7, 8]. MIS-C is a rare but serious condition that affects children and adolescents who have been infected with the novel coronavirus [9, 10]. The principal symptoms and signs of MIS-C are similar to those of Kawasaki disease (KD), suggesting a shared pathogenesis. Clinicians should suspect MIS-C if patients present with fever, inflammation of the heart, KD-like features (skin rash, conjunctivitis, oral mucosa changes, hand or foot edema), gastrointestinal symptoms (abdominal pain, vomiting, diarrhea), evidence of SARS-CoV-2 infection (by PCR or serology) or recent contact with COVID-19 patients, respiratory distress, joint pain, dysuria, skin erosions (including chilblains-like phenomenon affecting fingers and toes), swelling or erythema of the hands and feet, and altered consciousness (AVPU score below A) [11-14].

The exact cause of MIS-C is still not fully understood, but it is believed to be a delayed immune response to the virus [15]. This condition can be life-threatening and requires prompt recognition and treatment [16]. As healthcare providers and public health officials continue to learn more about MIS-C, it is important to implement

strategies for early detection and intervention to prevent severe outcomes in affected children [17]. One of the challenges in managing MIS-C is the lack of specific diagnostic criteria [18, 19]. The symptoms of MIS-C can overlap with other pediatric inflammatory conditions, making it difficult to differentiate and diagnose [20]. It is imperative for healthcare providers to be vigilant and consider MIS-C in children presenting with prolonged fever and systemic inflammation, especially if they have had a recent history of COVID-19 infection or exposure [21]. Furthermore, the long-term consequences of MIS-C are still unknown. Some children may experience ongoing cardiac issues or other complications even after the acute phase of the illness has resolved [22, 23]. This highlights the importance of long-term follow-up and monitoring of children who have experienced MIS-C to ensure optimal recovery and prevent future health complications [24]. In addition, the disproportionate impact of COVID-19 on children from marginalized communities raises concerns about the potential disparities in access to care for children with MIS-C [25]. Children from low-income families or minority populations may face barriers to healthcare services, leading to delays in diagnosis and treatment [26, 27]. It is essential for public health efforts to address these disparities and ensure equitable access to care for all children affected by MIS-C [28, 29].

As we continue to navigate the complexities of the COVID-19 pandemic, healthcare providers, researchers, and policymakers must collaborate and share information about MIS-C to improve our understanding of this condition and enhance our ability to effectively manage and prevent it. By prioritizing pediatric health and investing in research on MIS-C, we can better protect the well-being of our children and mitigate the long-term impact of this pandemic on future generations. In conclusion, the emergence of MIS-C as a complication of COVID-19 has highlighted the critical need for heightened awareness and recognition of this condition among healthcare providers, parents, and public health officials. As a rare but serious manifestation of SARS-CoV-2 infection, MIS-C can lead to significant morbidity and, in some cases, mortality if not promptly diagnosed and treated. The lessons learned from the COVID-19 pandemic emphasize that timely recognition of MIS-C is essential for improving outcomes in affected children, underscoring the importance of ongoing education and training for healthcare professionals regarding the clinical features and diagnostic criteria associated with this syndrome. Furthermore, the COVID-19 pandemic has demonstrated the necessity of robust surveillance systems and interdisciplinary collaboration to monitor and respond to emerging infectious diseases that can affect pediatric populations. The rapid global response to COVID-19 has provided valuable insights into the importance of data sharing, research, and public health initiatives aimed at understanding and mitigating the impact of such diseases. By applying these lessons to the recognition and management of MIS-C, healthcare systems can enhance their preparedness for future outbreaks, ensuring that

children receive timely and appropriate care.

CONCLUSION

In conclusion, recognizing MIS-C as a significant consequence of emerging infectious diseases like COVID-19 is vital for protecting children's health. The pandemic has taught us the importance of early diagnosis, preventive management, and the need for comprehensive public health strategies that prioritize pediatric care. By fostering awareness, improving clinical practices, and strengthening health systems, we can better safeguard the well-being of children and respond effectively to future health crises.

AUTHORS' CONTRIBUTION

M.N.: contributed to the concept or design of the study. R.R.: wrote the manuscript.

LIST OF ABBREVIATIONS

KD = Kawasaki disease
MIS-C = Multisystem Inflammatory Syndrome in Children

CONSENT FOR PUBLICATION

Not applicable.

FUNDING

None.

CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

ACKNOWLEDGEMENTS

Declared none.

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