

#### MYOCARDITIS IN PEDIATRICS: A GROWING CONCERN FOR HEALTHCARE SYSTEMS IN PAKISTAN

## OPEN ACCESS

# ILYAS S<sup>\*1</sup>, BILAL M<sup>2</sup>

<sup>1</sup>Department of Pediatric Cardiology (HOD), Lady Reading Hospital Peshawar, Pakistan <sup>2</sup>Department of Pediatric Cardiology (House Officer), Lady Reading Hospital Peshawar, Pakistan \*Corresponding author email address: <u>saadia76@gmail.com</u>



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### Dear Editor,

Myocarditis, defined as an inflammation of the heart muscle, can pose significant challenges in pediatric cardiology due to its varied causes and potentially serious consequences. While there are several potential causes of myocarditis, for instance, autoimmune diseases and toxins, viral infections account for a large majority of cases in pediatric populations (Tschöpe et al., 2021). The frequency of myocarditis is still rather high due to the increased prevalence of viral diseases in children, especially during specific seasons; this puts a significant strain on hospital resources. Myocarditis in paediatric patients has consequences that go beyond the initial inflammatory insult to the heart. Patients affected with myocarditis can often exhibit acute heart failure, arrhythmias, and, in severe cases, cardiogenic shock (Ammirati et al., 2021). Moreover, long-term consequences can manifest as chronic heart failure, which necessitates continuous, ongoing monitoring and management to optimize cardiac function and quality of life (Upadhya and Kitzman, 2020). We have noticed a worrying trend in our pediatric cardiology practice at Lady Reading Hospital Peshawar, whereby approximately half of the patients who consult our outpatient and inpatient departments have left ventricular failure. A significant portion of these cases are diagnosed as viral myocarditis. We have noticed a worrying trend in our pediatric cardiology practice: about 50% of the cases that come into our outpatient and inpatient departments have left ventricular failure, and a sizable percentage of those cases are diagnosed with myocarditis. This finding not only highlights the frequency of myocarditis but also highlights the pressing need for increased awareness, prompt diagnosis, and effective management of viral myocarditis in order to reduce negative consequences in vulnerable pediatric populations. In resource-poor environments like Pakistan managing myocarditis can unique challenges. Treatment methods such as IV immunoglobulin treatment which can have proven success in some patients, are generally expensive and not readily available (Ammirati et al., 2021). This gap in access to modern treatments can further exacerbate the load on healthcare systems that are already strained by the high prevalence of myocarditis. In low and middle-income countries (LMICs) like Pakistan, proactive preventative interventions are especially important to reduce the strain on already overburdened healthcare systems. The increased frequency of myocarditis in pediatric populations can be decreased by highlighting the significance of vaccination against common viral infections linked to the illness such as adenovirus and enterovirus (Makimaa et al., 2020; Upadhya and Kitzman, 2020). In addition, raising awareness among caregivers and medical professionals about the early detection of myocarditis symptoms and the importance of promptly referring patients to specialized clinics will help to expedite intervention and enhance long-term results (Inoue et al., 2019). In summary, the growing incidence of myocarditis in pediatric patients demands a multimodal strategy that includes early detection, prevention, and complete therapeutic techniques. By addressing these issues collectively and pushing for fair access to key treatments, we can seek to lessen the impact of myocarditis on pediatric cardiac health and alleviate the load on healthcare systems, particularly in resource-limited settings.

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