



# Cardiac Involvement in Multisystem Inflammatory Syndrome in Children

Ines Maaloul<sup>1</sup> · Rania Gargouri<sup>2</sup> · Zouhour Hadrach<sup>1</sup> · Leila Abid<sup>2</sup> · Thouraya Kamoun<sup>1</sup>

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*To the Editor:* This is a retrospective study involving children with multisystem inflammatory syndrome in children (MIS-C) who were diagnosed and treated in the pediatric department, CHU Hédi Chaker Sfax Tunisia, during the period January 2020 – March 2022. The study included children aged less than 14 y of age who fulfilled the diagnostic criteria of the WHO [1].

Twenty-seven children were included; the age of the patients varied between 6 mo and 12 y (median 5.58 y +/- 3.37). A slight male predominance was noted (15 boys) with a sex ratio of 1.25. Cardiac ultrasound was performed in all cases; it objectified abnormalities in 24 cases. Cardiac involvement was dominated by coronary abnormalities with coronary dilation in 16 cases. Myocardial damage with a decrease in left ventricular ejection function (LVEF) was objectified in 7 patients. Pericarditis was noted in 6 cases.

Five of the 7 patients who initially had an impaired LVEF recovered normal heart function. After a mean follow-up of 58 d (+/- 35 d), cardiac abnormalities disappeared in 18 patients, and persistence of cardiac abnormalities was noted in 6 patients; these were 4 cases of coronary dilation and 2 cases of heart failure (LVEF <55%).

Several studies have highlighted the importance of myocardial dysfunction in children with MIS-C. Depression of left ventricular systolic function has been commonly reported and described in 31–100% of patients undergoing echocardiogram [2, 3]. Coronary artery abnormalities are among the most serious lesions reported in MIS-C; Ramcharan et al. found coronary dilation in 93% of patients [4].

MIS-C is a new and emerging post-infectious disease, linked to SARS-CoV-2 infection, affecting children and

potentially fatal by cardiac involvement. The prognosis of MIS-C in the short term depends on cardiac complications which are dominated by coronary abnormalities and myocarditis.

## Declarations

**Conflict of Interest** None.

## References

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✉ Ines Maaloul  
maaloul.ines2010@gmail.com

<sup>1</sup> Department of Pediatrics, Hedi Chaker Hospital, Sfax, Tunisia

<sup>2</sup> Department of Cardiology, Hedi Chaker Hospital, Sfax, Tunisia