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Reply to Letter to the Editor: "Multisystem Inflammatory Syndrome Versus Kawasaki Disease: Potential Differences in Pathogenetic and Clinical Implications"

LETTER TO THE EDITOR
REPLY

To the Editor,

We are grateful for your valuable comments and want to thank the authors for their interest in our article entitled[1] "Acute Myocardial Infarction in a 9-Year-Old Boy due to Multisystem Inflammatory Syndrome" and for spending time to express their opinions. The authors' letter to the editor mentions differential diagnosis between multisystem inflammatory syndrome (MIS-C) and Kawasaki disease and important aspects like clinical findings, biomarkers, and imaging modalities that could lead practitioners to differentiate and make a more precise identification for them. The distinction between these 2 similar diseases is a controversial topic for physicians. In this context, we would like to respond to the highlighted points.

Our case had not got any clinical symptoms after exposure to the virus and had no signs of acute SARS-CoV-2 infection at that first-time confrontation. The patient's father had a delta-type SARS-CoV-2 positivity, 15-20 days before the child's symptoms. The patient's polymerase chain reaction test for the virus was negative, but the antibody test was positive.

Myocarditis could also cause left ventricular dysfunction, but apart from this, the association of ischemic changes in electrocardiography like this patient directed us to myocardial infarction. Left ventricular dysfunction improved gradually after stent implantation to the right coronary artery in this case but was still in the lower limit of the normal value following 9 months that ejection fraction increased from 45% to 59%-61%.

We could not analyze the cytokine profile in this patient because of the unavailability of the measurement in our hospital laboratories. Lymphopenia and no thrombocytosis were all likely with MIS-C. The patient had no signs of neurological involvement like hemiplegia or swelling of the lower extremities associated with deep vein thrombosis. For this reason, we did not make further imaging for other vascular structures.

Kawasaki disease is usually with coronary artery aneurysmatic dilatation dissimilar to MIS-C. The patient coronary artery was examined serially with echocardiography in the beginning. There was no dilatation or other findings to suspect coronary involvement. Physicians should be aware in MIS-C cases even if no aneurysmal involvement occurred and invasive imaging methods could be preferable with the symptoms of ischemia in the acute period.[2] As the clinical progress is on the good side with the improvement of the left ventricular ejection fraction after stent therapy, any further coronary imaging has not been performed yet. But as the guidelines suggest,[3] we are planning to take a computed tomography of the coronary arteries for exact evaluation in the follow-up.

To our knowledge, this case is interesting with rare involvement of coronary arteries. It could be safe to start anticoagulant therapy in pediatric patients with

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MIS-C[4] and even after SARS-CoV-2 exposure, especially when thrombophilia risk factors present.[5]

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