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CORRESPONDENCE

ST Elevation Acute Myocardial Infarction (STEMI) in a Child with Multisystem Inflammatory Syndrome

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To the Editor: A 10-y-old boy, suffering from Duchenne muscular dystrophy, presented with high-grade fever, bilateral nonpurulent conjunctival congestion and erythroderma. The child was ambulatory on wheelchair since last 6 mo, on low-dose oral steroids, and his echocardiography done 2 mo prior was normal. Investigations showed neutrophilic leukocytosis, positive IgG COVID-19 antibody, CRP - 128.38 mg/L, D-dimer - 1980 ng/Ml, and troponin I negative. MIS-C KD phenotype was considered. Baseline ECG and echocardiography were normal. Child was treated with IVIG 2 g/kg, IV methylprednisolone, aspirin, and prophylactic LMWH. He became afebrile with improved general well-being. On day 4, child developed severe precordial chest pain, ECG was suggestive of STEMI, and echocardiography showed inferolateral wall motion abnormality with an ejection fraction of 45%. Loading dose of aspirin was administered and thrombolysis done with streptokinase. ECG at 3 h after fibrinolysis showed resolution of ST segment by 50% in the affected leads. Diagnostic coronary angiography 3 h after thrombolysis showed no evidence of reduced flow in the infarct-related regions. LMWH was continued at therapeutic doses with dual platelet therapy. On follow-up at 3 mo, child was stable with normal echocardiography and ECG.

Cardiac involvement is not uncommon in pediatric MIS-C. Valverde et al. reported shock, cardiac arrhythmia, pericardial effusion, and coronary artery dilatation as the four most common complications in their cohort of children with MIS-C [1]. Myocardial infarction has only been reported once, but in the background of significant dilatation of the left descending coronary artery [2]. In our case, cardiac function and coronaries were normal and STEMI developed in the background of a normal heart. MIS-C is known to lead to prothrombotic state in children [3] but this is the first reported case of myocardial infarction in a child with MIS-C with normal coronaries, and highlights the importance of strict vigilance in such cases.

Declarations

Conflict of Interest None.

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