



بسم الله الرحمن الرحيم

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Cardiac Follow up of Pediatric Patients Presented with Covid-19 Cardiovascular Affection

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قالوا

سبحانك لا علم لنا
إلا ما علمتنا إنك أنت
العليم العليم

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List of Abbreviations

Abb.	Full term
ACE	Angiotensin converting enzyme
ACE2	Angiotensin-converting enzyme 2
ADE	Antibody-dependent enhancement
AR.....	Aortic regurgitation
ARDS	Acute respiratory distress syndrome
BMI.....	Body mass index
BNP	Brain natriuretic peptide
BNP indicates	B-type natriuretic peptide
CFR	Case fatality rate
CMP.....	Comprehensive metabolic profile
CRP	C-reactive protein
CT.....	Computed tomography
CVL	Central venous catheter
DBP	Diastolic blood pressure
ECG	Electrocardiogram
ECHO	Echocardiography
ECMO.....	Extra Corporeal Membrane Oxygenation
EF.....	Ejection fraction
ESR	Erythrocyte sedimentation rate
FS	Fractional shortening
GCSF	Granulocyte-colony stimulating factor
HcoV	Human coronavirus
HLH	Hemophagocytic lymphohistiocytosis
HR	Heart rate
ICU.....	Intensive care unit
IFN	Interferon
IL	Interleukin
IP10	Interferon-Inducible Protein 10

List of Abbreviations *cont...*

Abb.	Full term
IV	Intravenous
IVF.....	Intravenous fluids
IVIG	Intravenous immune globulin
KD	Kawasaki Disease
KDSS	Kawasaki Disease Shock Syndrome
LCA	Left coronary artery
LDH.....	Lactate dehydrogenase
LV	Left ventricular
MAS	Macrophage activation syndrome
MAS	Macrophage Activation Syndrome
MCP1A	Monocyte Chemoattractant Protein-1
MERS-CoV	Middle Eastern respiratory syndrome coronavirus
MIS-C	Multisystem inflammatory syndrome in children
MR	Mitral regurgitation
MRI.....	Magnetic resonance imaging
NAAT	Nucleic acid amplification test
NK	Natural killer
NT-proBNP	N-terminal pro-B-type natriuretic peptide
O2	Oxygen
PARDS	Pediatric Acute Respiratory Distress Syndrome
PE	Pericardial effusion
PICU	Pediatric intensive care unit
PR.....	Pulmonary regurgitation
proBNP	Pro-B-type natriuretic peptide
PT	Prothrombintime
PTT.....	Partial thromboplastin time

List of Abbreviations *cont...*

Abb.	Full term
QTc	Corrected QT
RAS.....	Renin-angiotensin system
RCA	Right coronary artery
RR	Respiratory rate
SARS-CoV-2	Severe acute respiratory syndrome coronavirus
SARS-HcoV	Severe Acute Respiratory Syndrome human coronavirus
SBP	Systolic blood pressure
SHLH	Secondary hemophagocytic lymphohistiocytosis
So2.....	Oxygen saturation
TLR	Toll-Like Receptor
TNF	Tumor necrosis factor
TNF- β	Tumor necrosis factor β
TR.....	Tricuspid regurgitation
TSS	Toxic shock syndrome
TTE	Transthoracic echocardiography
ULN.....	Upper limit of normal.
VIS	Vasoactive-inotropic score

INTRODUCTION

Severe acute respiratory syndrome coronavirus (SARS-CoV-2) infection has rapidly spread worldwide since it was first identified in China in late 2019, with subsequent epicenters being recognized in Europe and the U.S. Previous reports of SARS-CoV-2 infection indicated that young children were disproportionately spared from infection (*CDC, 2020; Parri et al., 2020*).

Although it remains unclear if this is due to a lack of detection because of predominantly asymptomatic or mild disease in this age group. In the latter half of April 2020, a novel syndrome in children and adolescents termed “multisystem inflammatory syndrome in children” (MIS-C) with likely relation to SARS-CoV-2 infection was first described. Initial reports surfaced in the UK (*Riphagen et al., 2020*) and Italy (*Verdoni et al., 2020*), followed by New York and other parts of the U.S. Preliminary accounts of the features of this syndrome resemble those of known entities such as Kawasaki Disease (KD), toxic shock syndrome (TSS), and secondary hemophagocytic lymphohistiocytosis (SHLH)/ macrophage activation syndrome (MAS).