<https://doi.org/10.47660/CBR.2020.16884>

KAWASAKI DISEASE AND MULTISYSTEM INFLAMMATORY SYNDROME IN BRAZILIAN CHILDREN TEMPORARILY ASSOCIATED WITH SARS-COV-2

Gleice Clemente^{1,*}, Ana Maria Loroño Terrazas¹, Maria Fernanda Rezende¹, Rogério do Prado^{1,2}, Melissa Fraga¹, Cristina Medeiros Ribeiro de Magalhães³, Aline Garcia Islabão³, Marlon Sousa Lopes³, Agatha Siqueira Afonso³, Sarah Polyane Silva Veloso³, Caio Alexandre Zanon³, Regiane Duque Minardi Neves³, André Cavalcanti², Maria Teresa Terreri¹

1. Universidade Federal de São Paulo, São Paulo (SP), Brazil. 2. Universidade Federal de Pernambuco, Recife (PE), Brazil. 3. Hospital da Criança de Brasília José de Alencar, Brasília (DF), Brazil. 4. Faculdade de Medicina do ABC, Santo André (SP), Brazil.

*Corresponding author: gleiceclemente@gmail.com

BACKGROUND

Kawasaki disease (KD) is the second most common primary systemic vasculitis in childhood, with acute onset and self-limited duration. The disease is characterized by prolonged fever and its main complication is the development of coronary aneurisms. During the COVID-19 pandemic, a new syndrome was identified, the multisystem inflammatory syndrome in children (MIS-c), which is usually accompanied by positive antibodies against SARS-CoV-2. The MIS-c has clinical and laboratory similarities with KD, but it seems to be a more severe condition. The aim of this study was to identify signs, symptoms, changes in subsidiary tests and clinical follow up related to KD and MIS-c in Brazilian patients.

MATERIALS AND METHODS

This is a preliminary multicenter retrospective study with participation of four centers in Brazil, with 27 pediatric patients who met criteria for KD (according to AHA) and/or MIS-c (according to WHO), most of them tested positive for COVID-19 and with severe clinical manifestations and changes in subsidiary tests. The data were collected in a Microsoft Excel spreadsheet.

RESULTS

In this study, 59.2% were female and 48.1% were 10 years of age or older. Less than 15% of patients had comorbidities, and all patients were hospitalized with a median of 12 days (range 4-42). Of all patients, 85.1% met the criteria for KD and 33.3% for MIS-c. All the patients had fever. The most frequent KD symptoms were: skin rash (85.0%), conjunctivitis (77.7%) and oral changes (70.3%). There was involvement of the gastrointestinal tract in 66.6%, respiratory tract in 33.3%, and central nervous system in 18.5% of cases. Among laboratory findings, the most frequent abnormalities were: increased acute phase reactants (85.0%), anemia (77.0%), lymphopenia (70.0%), increased ferritin (66.6%), increased D-dimer (59.2%), increased liver enzymes (55.5%), thrombocytopenia (48.1%), increased LDH (51.0%) and increased troponin (44.4%). According to the echocardiogram, 18.5% of patients had some change in coronary arteries; one patient had myocarditis, progressing to cardiogenic shock. The confirmation of COVID-19 by PCR occurred in 33% and by serology in 44.4%. All patients with MIS-c needed intensive care support and developed shock, with need of vasoactive drugs. All patients received immunoglobulin, 77.7% received aspirin, and 63% needed corticosteroids. There were no deaths.

CONCLUSION

In this pandemic, a high frequency of KD patients were found. Some of them also met MIS-c criteria. There was a prevalence of cutaneous manifestations, significant increase in acute phase reactants, anemia and lymphopenia. Pediatricians should be aware about severe cases with shock and coronary aneurysms.