

CLINICAL PROFILE AND OUTCOME OF MULTISYSTEM INFLAMMATORY SYNDROME IN CHILDREN IN A TERTIARY CARE SETTING

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Background: Multisystem Inflammatory Syndrome in Children (MIS-C) is a life threatening presentation temporally associated with the pandemic COVID 19 infection. Early identification and appropriate treatment of the disease is important for a favorable outcome of this newer clinical entity, which is little studied. **Objective:** To study the clinical presentations and outcome of patients with MIS-C. **Methods:** It was a prospective observational study conducted in the Department of Pediatrics, SAT Hospital, Government Medical College, Thiruvananthapuram. All children admitted with MIS-C at SAT Hospital, aged 1month to 12years, from September to November 2020 were recruited into the study. **Results:** In this study period, among the 28 patients with MIS-C, GI symptoms (66.7%) was the most frequently observed presentation. 25% children had conjunctival hemorrhage. Systemic manifestations like shock (66.7%), respiratory distress (54.2%), clinical myocarditis (37.5%) were observed at admission. GI (87.5%) and CVS (79.2%) were the commonest organ systems involved. 67% had involvement of ≥ 5 organ systems. COVID antibody was positive in 21(75%) patients while PCR was positive in 10 (36%). 5(18%) patients were negative for both PCR and antibody. Among the PCR positive cases, antibody was positive in 8 cases. Dengue fever (21.4%) was the most frequent referral diagnosis, while 10.7% had referral diagnosis as MIS-C. CRP was elevated in more patients compared to ESR. All patients had elevated D Dimer($3.62\text{mcg/ml} \pm 3.1$) and NTproBNP ($5848 \pm 8210\text{pg/ml}$). 52% had coronary involvement while 36% had LV dysfunction. 20.8% had MIS-C overlapping with KD. Among patients with KD, 8.3% had complete KD, and 91.6% had incomplete KD. 95.8% required PICU care. All patients with MIS-C survived following timely treatment with immune-modulators and supportive management. 62.5%

required inotropic support. 20.9% needed ventilator support. Bradycardia was observed in 45.8% of patients. **Conclusion:** During this COVID pandemic, MISC should be a differential diagnosis in any children presenting with fever. CRP is a better screening inflammatory marker than ESR. Early and appropriate treatment leads to excellent recovery.