CLINICAL PROFILE, CARDIAC INVOLVEMENT AND IMMEDIATE OUTCOME OF CHILDREN ADMITTED WITH MULTISYSTEM INFLAMMATORY SYNDROME (MIS-C) IN PICU AT GB PANT CHILDREN HOSPITAL SRINAGAR, INDIA

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ABSTRACT:-

Introduction:-Multisystem inflammatory syndrome in children (MIS-C) is a severe hyper inflammatory post infectious complication of acute respiratory syndrome coronavirus-2 (SARSCoV-2) infection, which typically occurs 2–6 weeks after exposure to SARS-CoV-2. Although the exact pathophysiology of MIS-C is uncertain, it is thought to be due to immune dysregulation occurring after recovery from acute infection.

Aims:-To determine the clinical profile, cardiac involvement and outcome of children admitted with multisystem inflammatory syndrome in pediatric intensive care unit.

Materials and Methods:-This Prospective observational study was conducted in pediatric intensive care unit over a period of two years. After informed consent from parents, all those patients meeting inclusion criteria were subjected to complete history, General and Systemic Physical Examination. Routine baseline investigations included CBC, LFT, KFT, ABG, Serum calcium and phosphorous, and other investigations like echocardiography, troponin-t, COVID-19 RAT and RTPCR and various inflammatory markers like serum ferritin, pro-calcitonin, CRP and ESR ,whenever required ,were done.

Results:- A total of 77 MIS-C patients, who met inclusion criteria were included in this study. It included 40 males and 37 females with an average age of 7.4 years and a male female ratio of 1.1:1.Out of them 47 (61%) patients had a history of covid-19 infection / contact with positive covid-19 cases 3 to 4 weeks before presentation. On echocardiography out of 77 MIS-C patients, 15 (19.5%) had pericardial effusion ranging from mild to massive , 25 (32.5%) had coronary artery dilatations and 32 patients (41.5%) had left ventricular systolic dysfunction with LVEF <55%. 12 (15.5%) patients had mild LV dysfunction (EF= 41 -55%), 16 [20.8%] patients had moderate LV dysfunction (EF=31-40) and 4 [5.2%] patients had severe LV dysfunction (EF ≤30). Coronary arteries were normal in 52 [67.5%] patients and LVEF function was normal in 45 [58.5%] patients. 7 (9.1%) patients expired during hospitalization.

Conclusion:-Pediatric multisystem inflammatory syndrome associated with SARS-COV-9 led to serious and life threatening illnesses which had a significant impact on morbidity and mortality in children .

Key Words:- Multisystem inflammatory syndrome, COVID-19, Cardiac abnormalities, Shock.

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