



## A RARE PRESENTATION OF MIS-C AS ACUTE ABDOMEN DURING COVID-19 PANDEMIC

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**ABSTRACT** Multisystem Inflammatory Syndrome In Children (MIS-C) is a new pediatric disease associated with Covid-19 which is dangerous & potentially lethal. Since mid may 2020 CDC has been tracking reports of MIS-C. Being a new syndrome many queries remain unsolved like why some children develop MIS-C why others do not. Clinical presentation of MIS-C includes fever, rash, conjunctivitis, features common to Kawasaki disease, Toxic shock syndrome ,severe illness involving two or more organ system. Acute abdomen is a very rare presentation of MIS-C in children.

We report a case of 5 year old boy presented to ER as acute abdomen with high spike of Fever for 4d. Patient was managed in the line of abdominal sepsis/ UTI. Urine analysis and USG abdomen came out to be normal except high titres of inflammatory markers and positive anti Covid-19 antibody. Patient recovered by conservative management along with IV methyl prednisolone under the antibiotics coverage without surgical intervention.

**KEYWORDS :** COVID-19, CDC, MIS-C , Kawasaki disease, Toxic Shock Syndrome.

### INTRODUCTION:

The rapidly evolving pandemic associated with Covid -19 has led to more than 73,961,247 confirmed cases and over 16,45,161 global death (by 16<sup>th</sup> dec. 2020) .<sup>1</sup> Previous reports suggest that children and adolescents have generally resulted in mild or asymptomatic cases compared to adults.<sup>2</sup>

On April 25, 2020 the United Kingdom's National Health Service reported a newly recognized syndrome with severe multi systemic inflammation in children with clinical features similar to those found in Kawasaki disease and TSS.<sup>3</sup> As more cases arose globally, the illness was labeled as MIS-C by the CDC & WHO.

Clinical presentation of MIS-C includes fever, severe illness and the involvement of two or more organ system in combination with laboratory evidence of inflammation & laboratory or epidemiologic evidence of SARS-COV-2 infection.<sup>4</sup> Relation of MIS-C to Covid-19 infection suggest that pathogenesis involves post infectious immune dysregulation.

The goals of treatment for MIS-C are to decrease systemic inflammation and restore organ function. Majority of affected children responded well to IVIG and high dose steroids. Patient should be ideally managed in intensive care settings because of rapid clinical deterioration.

### CASE DETAIL:

A 5 year old boy from Buguda , Ganjam district admitted to our casualty with C/O abdominal pain & distension, vomiting , non passage of stool for 4 days along with high grade fever.

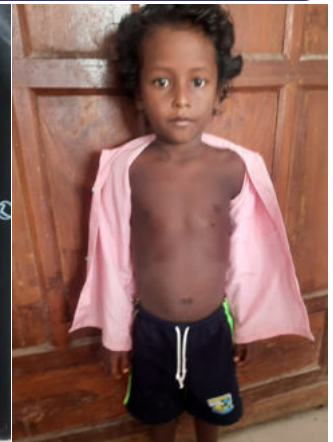
On examination child was conscious with stable vitals. Abdomen was distended with diffuse tenderness and guarding. No evidence of Organomegaly or visible peristalsis was present. Gradual increase in ascites was the consistent finding. Other systems were within normal limit.

Laboratory investigation revealed normal leucocytes count with neutrophilia. RFT, LFT and serum electrolytes were normal. Inflammatory markers (qCRP, LDH, Ferritin) were markedly elevated and Anti Covid antibodies was positive with 196 units. X-ray abdomen erect showed evidence of large gut obstruction with gross ascites on USG abdomen & pelvis. Ascitic fluid analysis came to be transudate.

Patient was managed conservatively by gut rest under the antibiotics coverage and IV Methyl prednisolone without surgical intervention. He improved remarkably and discharge successfully after 10 days of hospitalization.



[Fig 1 Xray abdomen done on D1 suggestive of large gut obstruction]



[Fig 2 on D10 at the time of discharge child showing clinical wellbeing]

### DISCUSSION:

SARS-COV-2 has spread throughout the world at alarming rate. Previous reports suggested that children infected with covid generally progress with a mild course. However a new life threatening childhood disease MIS-C has emerging with a varied clinical manifestations involving multiple system. Acute abdomen is a very rare presentation, few children have been detected as per data. For instance, studies by Belhadjer et al. and Dasgupta reported an urgent abdominal surgery, but ultimately found mesenteric lymphadenitis in the abdomen. In this view further imaging were performed in various studies. More common finding included are ascites, intestinal or colonic inflammation and mesenteric adenopathy . This highlights the vast spectrum of gastrointestinal pathology in MIS-C.<sup>6</sup>

### CONCLUSION:

MIS-C is a new pediatric disease which is dangerous and potentially lethal associated with COVID-19 resulting from post infectious immune dysregulation. With prompt recognition and medical attention most children will survive but the long term outcome of this is not known.

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