A successfully treated COVID related Multisystemic Inflammatory syndrome in a child (MIS-C) at Department of Pediatrics and Neonatology, ETERNAL Hospital, Jaipur

Master Dhairya 8 years old boy, presented (on 8th May, 2021) with case of Acute Abdomen (? Appendicitis). He was admitted for the same under Gastrointestinal surgery department and empirical antibiotics were started; but CECT abdomen showed -Mild hepatosplenomegaly, Mesenteric lymphadenopathy (Largest 1.7 X 1.2 cm and 1.8 X 1.2 cm) and no evidence of appendicitis or other intra-abdominal surgical problem, hence child was shifted to Pediatric medicine department and further evaluation of fever with pain abdomen was started. On day 2 of admission child developed cracked lips, rashes all over body mainly trunk with palmer and soles erythema and swelling. He also developed non-purulent conjunctivitis and sterile pyuria as urine culture was sterile. No obvious cause of fever was evident in the child at that time and provisional diagnosis of Post Covid MIS-C was made and investigations along with 2d Echo were sent for the same and Methylprednisolone was started along with prophylactic fluconazole to avoid secondary fungal infection.

It fulfilled the clinical criteria for Covid related MIS-C syndrome

1) Fever ≥3 days ,
2) with Rashes all over body with palms and soles, non-purulent conjunctivitis
3) Multisystem Involvement (Skin, GI, Heart, Blood, & Lungs etc) any of the two
4) Raised inflammatory markers (ESR, CRP, D-Dimers, Ferritin, Pro-calcitonin)
5) Deranged coagulation profile (deranged PTINR)
6) COVID RT PCR positive/ contact to a Covid positive or suspected Covid case within 30 days
7) No Obvious other cause of fever or the illness.

On day 3 he developed sudden onset breathlessness and pallor so he was shifted to ICU and started on BIPAP (non-invasive ventilation) and antibiotics were empirically upgraded as per the clinical condition of the child; by that time investigations came (IL-6- 638.1, D-Dimer-2790, CRP- 303.76, ESR- 49, Ferritin- 586, Procalcitonin- 9.65) and was in favor of MISC syndrome and IVIG along with LMWH was started with parents' consent and methylprednisolone was continued. For sudden onset breathlessness and pallor investigations were sent and cardiac opinion was taken. 2D-echo- showed LVEF 45 % (which was 60% on day 2) so Dobutamine was added to the treatment. Gradually child improved on the given treatment and inflammatory markers were reduced and respiratory support was weaned off. He responded well to the given treatment. After stabilization he is walking well, eating well, afebrile X 7 days, no other clinical symptoms and signs except D-Dimer though reduced much (2790 to 1110) are still mildly raised which is to be followed up. This was the first case of MIS-C successfully treated at this hospital and one of those rare cases treated elsewhere in the state. Discharged today (17-05-2021)

Treating Team

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Junior Consultants- **DR SWATANTRA RATHORE, DR AVESH SAINI, DR SURENDRA VYAS DR AMITA VYAS**

Pediatric Cardiology team: DR AARIF KHAN, DR PRASHANT DWIVEDI

Nursing Team- **Mr. Monu Agarwal** (Nursing Incharge), Sister Saamod, Staff Mr. Gajendra

PICTURE TAKEN AT THE TIME OF DISCHARGE

From Left to Right- Dr S.D. Sharma, Dr Vikram Singh Chouhan, Master Dhairya (Index case), Father, Mother, Dr Amita Vyas, Dr Avesh Saini