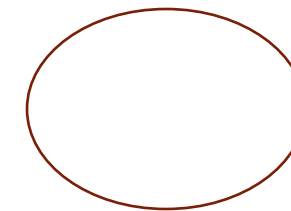


# A RARE CASE OF MIS-C PRESENTING WITH MUCORMYCOSIS

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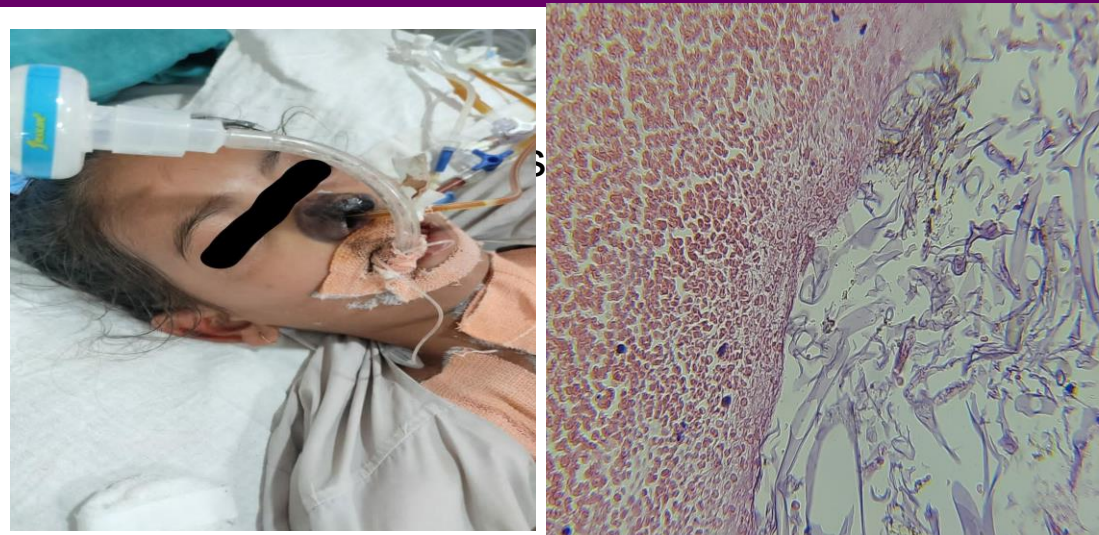
## INTRODUCTION

Multisystem Inflammatory Syndrome (MIS-C) in the Pediatric age group is a clinical syndrome in children and adolescents which is recognized in association with a high local prevalence of COVID-19 (coronavirus disease 2019). In most cases it is found to have increased inflammatory markers and a strong positive SARS-CoV-2 antibody titres. Many studies showed strong positive association between COVID infection and Mucormycosis, also known as COVID-19 associated Mucormycosis (CAM). However there is no literature available for association of MIS-C and mucormycosis. Our patient had presented with post COVID MIS-C and later developed mucormycosis.

## PATIENT PRESENTATION

A 9 year old female child was brought with complaints of fever since 3 days associated with redness and swelling in right post auricular site and conjunctival congestion. on admission to picu patient was disoriented and irritable. Vitals suggestive HR 98/min RR 64/min SpO2 96% BP 88/60 which was around 5<sup>th</sup> centiles. Systemic examination revealed swelling in post auricular region with no hepatosplenomegaly. Usg local site was done s/o bilateral lymphadenopathy in submandibular, submental and cervical region. Misc panel was sent which was suggestive of covid antibodies 10.4, serum ferritin-1000, crp-27, d dimer-8.1. This was s/o MIS-C

## PICTURES



## CLINICAL COURSE

Patient was started on inj.methylprednisolone and inj.enoxaparin along with IV antibiotics and hydration. Patient then developed respiratory distress and was not maintaining saturation, patient was intubated. Patient was transfused with ivig at the dose of 2 gram per kg body weight. Blood picture was suggestive of progressive thrombocytopenia and anemia (hb-8, tlc-20000, platelets-69000. 1 aliquot of prc was transfused. Electrolytes were suggestive of hyponatremia and hyperkalemia (na-169, k-6.5). et secretion culture s/o growth of enterococci sensitive to linezolid. 2d echo was done s/o mild lv dysfunction, ra, rv dilatation, lvef-50%. Liver function tests were deranged sgpt-582, sgot-1692. Kidney function tests showed the patient developing acute kidney injury with increasing urea and creatinine levels. patient underwent two cycles of dialysis for aki. Due to decreased albumin levels (2.2), albumin was infused at 1gm/kg. Patient developed blackish discoloration which appeared to be pressure necrosis at tip of nose. Dermat call was done and was advised to start amphotericin b and voriconazole and to send investigations to rule out ? Mucormycosis (koh mount, swab culture, ct pns). Histopathology report was s/o mucormycosis. On 3/5/21 patient went into bradycardia and desaturation. Despite all resuscitative measures and 45 mins of CPR, patient could not be revived and was declared dead on 3/5/2021 at 3:15pm. Cause of death: 1) myocarditis since 10 days 2) multisystem inflammatory syndrome-children since 10 days

## DISCUSSION

Most reported cases of MIS-C present with persistent temperature, increased inflammatory markers and also laboratory evidence of multiorgan dysfunction (1,2,3). In some cases it also shows features of Kawasaki syndrome like rash, conjunctival and mucosal injection and in few other cases it shows features of Toxic shock syndrome like erythroderma, renal involvement and hypotension. Mucormycosis is an invasive fungal infection involving sinuses that typically affects immunocompromised individuals with an impaired neutrophilic response. It is associated with high morbidity and mortality that is characterised by extensive angio invasion and necrosis of the affected tissue. This is especially fatal in the pediatric age group. However mucormycosis associated with MIS-C is a rare occurrence. Hence early identification and prompt treatment is required for satisfactory prognosis.

## CONCLUSION

The severity of MIS-C in children and the presentation varies in every child. While some present with toxic features, some present with only prolonged fever. Mucormycosis was very commonly noted during the pandemic in covid-19 positive patients but in our case it presented in MIS-C. The child eventually succumbed to MIS-C. Hence in severe cases of MIS-C we should always watch out for the development of MIS-C.

## REFERENCES

1. Royal College of Paediatrics and Child Health: Guidance - Paediatric Multisystem Inflammatory Syndrome Temporarily Associated With COVID-19 (PIMS). Royal College of Paediatrics and Child Health website. Published May 1, 2020.
2. CDC: Emergency Preparedness and Response: Multisystem Inflammatory Syndrome in Children (MIS-C) Associated With Coronavirus Disease 2019 (COVID-19). CDC website. Published May 14, 2020.
3. European Centre for Disease Prevention and Control: Rapid Risk Assessment: Paediatric Inflammatory Multisystem Syndrome and SARS-CoV-2 Infection in Children. Published May 15, 2020.