

Immune-globulin/methylprednisolone

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Lack of efficacy : case report

A 12-year-old boy exhibited lack of efficacy during treatment with immune-globulin and methylprednisolone for multisystem inflammatory syndrome (MIS-C) [*not all routes and dosages stated*].

The boy who had no significant medical history presented with a 3-day history of fever, malaise, maculopapular rash and diffuse abdominal pain with diarrhoea. His two family members had tested positive for SARS-CoV-2 6 weeks ago. At presentation, he was positive for serum SARS-CoV-2 immunoglobulin G. Off-label amoxicillin/clavulanic-acid [amoxicillin/clavulanate acid] and IV fluids were initiated. A culture showed the presence of *Providencia stuartii*. Several hours after the admission, he developed fluid refractory shock and was transferred to a paediatric ICU. Initial investigations revealed increased levels of inflammatory markers. He then initiated on dopamine, epinephrine [adrenaline] and milrinone. Meanwhile, his antibiotic coverage was switched to off-label cefotaxime and clindamycin. MIS-C was considered a provisional diagnosis, and he was treated with methylprednisolone 50 mg/12h, (1.7 mg/kg/day). Echocardiography showed a slight reduction in left ventricular ejection fraction (60%). On the next day, he developed a fever. His MIS-C was unresponsive to IV immune-globulin [immunoglobulin] and methylprednisolone pulse 1g. Unspecified low molecular weight heparins was started. His antibiotic therapy was changed to off-label vancomycin and meropenem. Repeat ECG showed a left ventricular ejection fraction of 50%. At 8h, repeat ECG showed pulseless ventricular tachycardia, refractory to cardiopulmonary resuscitation. Autopsy revealed the presence of a large intracardiac thrombus. Additionally, SARS-CoV-2 spike protein was detected in intestinal cells. This indicated the hypothesis that the presence of SARS-CoV-2 in the gut might be related to the immunologic response of MIS-C.

Mayordomo-Colunga J, et al. SARS-CoV-2 Spike Protein in Intestinal Cells of a Patient with Coronavirus Disease 2019 Multisystem Inflammatory Syndrome. *Journal of Pediatrics* 243: 214-218.e5, Apr 2022. Available from: URL: <http://doi.org/10.1016/j.jpeds.2021.11.058>

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