

Epinephrine/methylprednisolone/prednisone**S****Delirium and lack of efficacy: case report**

An adult woman in her 30s [*exact age not stated*] developed delirium during treatment with methylprednisolone and prednisone for Kawasaki-like multisystem inflammatory syndrome. Additionally, she exhibited lack of efficacy with epinephrine for circulatory shock.

The woman presented to the emergency department of the hospital in South Africa in late 2020 with febrile illness and circulatory shock. She received vasopressor support with epinephrine [*dosage and route not stated*], and she was shifted to the acute medical admissions resuscitation area. She had developed myalgia, sore throat and fatigue three weeks prior to the admission, which had resolved spontaneously after 2–3 days. She also developed fever, diarrhoea, generalised weakness, vomiting, rash, dry cough, arthralgia and intermittent headache two weeks later, prompting a visit to her general practitioner. Medical history was significant for non-severe malaria in early childhood. On examination, hypotension, neck stiffness, submandibular and cervical lymphadenopathy, pan-systolic murmur and bilateral crepitations were noted. Her ECG was consistent with acute pericarditis. Unspecified broad-spectrum antibiotic cover was started on admission. However, she continued to deteriorate despite epinephrine treatment, and she was shifted to the ICU. Due to escalating vasopressor requirements and severe tachypnoea, intubation and mechanical ventilation was required. Furthermore, pulmonary oedema and stage 2 acute kidney injury were also noted. The PCR test for SARS-CoV-2 and qualitative testing for SARS-CoV-2 nucleocapsid IgG antibodies was later found to be positive, and she was eventually diagnosed with Kawasaki-like multisystem inflammatory syndrome associated with SARS-CoV-2 infection complicated by myopericarditis and shock. She received treatment with IV methylprednisolone 500mg daily for 3 days, immune globulin [immunoglobulin], colchicine and aspirin. After completing the methylprednisolone pulse, she received oral prednisone 0.5 mg/kg/day. In addition, she also received standard adjunctive COVID-19 treatment with zinc, vitamin-D, ascorbic acid [vitamin C], niacin and prophylactic unspecified low molecular weight heparins. Rapid improvement was seen, and the inflammatory markers improved. Transient atrial fibrillation was noted on day 5 of her admission, for which she was successfully cardioverted. Ventilatory support was eventually weaned off, and she was successfully extubated to room air on day 7 of admission. Subsequently, her ICU stay was complicated by a marked delirium, which was attributed to high-dose steroid therapy with methylprednisolone and prednisone, ICU delirium and the disease entity itself [*duration of treatments to reaction onset not stated*]. She was then shifted to the general medical ward on day 8 for rehabilitation and ongoing treatment. One week later, she was discharged on aspirin, unspecified low molecular weight heparins and a tapering course of prednisone. Since then, she has made a full recovery, and during her 6 month review, she was completely well with no impairment in effort tolerance being noted.

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