

## Multiple drugs

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**Lack of efficacy and off label use: 2 case reports**

A report described a 59-year-old woman exhibited lack of efficacy an off label during treatment with immune globulin, methylthioninium chloride and icatibant for systemic capillary leak syndrome (SCLS). Also a 36-year-old man exhibited lack of efficacy during treatment with epinephrine, bicarbonate, calcium and magnesium for cardiac arrest [*not all routes stated; dosages not stated*].

Case 1: The 59-year-old woman, who had hypertension, was admitted to a hospital in January 2021 with a 6-day history of cough, shortness of breath, and lower extremity pain. Later, she was found to be COVID-19 positive. Subsequently, she started receiving an off label treatment with dexamethasone 6mg daily. She also received enoxaparin sodium [enoxaparin] as anticoagulant. She was noted to have acute kidney injury. She became intermittently hypoxemic and required nasal cannula support. Her laboratory abnormalities raised concerns for SCLS. She was transferred to the ICU for further monitoring on day 4 of admission. On admission day 5, she experienced a cardiac arrest, and the spontaneous circulation returned after 2 rounds of cardiopulmonary resuscitation. She was intubated at the time of cardiac arrest and empirically treated with vancomycin and cefepime. An argatroban infusion was also started. However, she developed shock and received norepinephrine, vasopressin, epinephrine and hydrocortisone. Continuous unspecified renal replacement therapy was also ongoing for oliguric renal failure. The following day, she was noted to have rhabdomyolysis. Further, SARS-CoV-2 IgG was not detected, prompting treatment with an off label convalescent plasma. Subsequently, she started receiving an off label treatment with IV immune globulin, methylthioninium chloride [methylene blue] and icatibant for SCLS. Within hours, her haemoglobin decreased. Then, she was transfused with packed erythrocytes. She suffered cardiac arrest, and her ventricular fibrillation deteriorated into pulseless electrical activity (lack of effect of treatment). She received an additional units of erythrocytes, IV fluids, plasma [fresh frozen plasma] and prothrombin complex concentrate during the cardiac arrest. However, spontaneous circulation was not restored, and she died on day 6 of hospitalisation.

Case 2: The 36-year-old man had various comorbidities including SCLS. In February 2020, he experienced symptoms-related to SCLS and was treated with immune globulin. In January 2021, he was found to be COVID-19 positive. In the emergency department, his condition deteriorated rapidly. An echocardiogram revealed a flat inferior vena cava, intact bilateral ventricular function and pericardial effusion. He was intubated emergently but ultimately experienced cardiac arrest with pulseless electrical activity. Despite aggressive cardiopulmonary resuscitation and treatment with boluses of epinephrine, bicarbonate, calcium and magnesium, he developed refractory ventricular tachycardia followed by Torsade de Pointes. However, he died shortly thereafter.

Cheung PC, et al. Fatal exacerbations of systemic capillary leak syndrome complicating coronavirus disease. *Emerging Infectious Diseases* 27: 2529-2534, No. 10, Oct 2021.  
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