

Ceftriaxone/hydroxychloroquine/tocilizumab**S****QT prolongation, torsade-de-pointes and off label use: case report**

A 44-year-old man developed QT prolongation and torsade de pointes syndrome during off label therapy with hydroxychloroquine for COVID-19. Additionally, he received off label treatment with ceftriaxone and tocilizumab for COVID-19 [routes, dosages and duration of treatment to reaction onset and outcome not stated].

The man presented to the hospital with intermittent fevers, worsening dyspnoea on exertion and flu-like symptoms. He had undergone left ventricular assist device implantation in June 2019 for end-stage ischaemic cardiomyopathy. On admission, he was diagnosed with COVID-19. He was then commenced on off label therapy with hydroxychloroquine and ceftriaxone. On arrival, he was haemodynamically stable with moderate respiratory distress. His other medications included lisinopril, spironolactone, furosemide and carvedilol. Laboratory investigations and chest radiograph were consistent with COVID-19 pneumonia. On day 2 of admission, his condition worsened with an increased requirement of oxygen, which necessitated intervention with endotracheal intubation and commencement of norepinephrine for haemodynamic support. He developed leucocytosis and fever. Subsequently, he received empirical treatment with vancomycin and piperacillin/tazobactam. Additionally, he received off label therapy with tocilizumab.

The man's treatment with hydroxychloroquine was discontinued due to an episode of torsade-de-pointes and QT prolongation. On day 3 of admission, his INR was supratherapeutic, which decreased after therapy with vitamin K. Therapeutic anticoagulation was further managed with heparin. Additionally, he received aspirin as an antiplatelet therapy. On day 10 of admission, he reported the loss of left pedal arterial Doppler signals and mottling of the left foot, which was associated with an increase in D-dimer levels. There was a decrease in fibrinogen levels along with platelet count in subsequent days, which eventually improved within 2 weeks. At that time, he developed a retroperitoneal haematoma, gross haematuria and nasopharyngeal bleeding. Anticoagulation therapy was therefore withheld for 6 days. During that period, no recurrence of arterial thrombosis was observed. After 11 days of mechanical ventilation, he was extubated. On day 19 and day 23 of admission, he was noted to be COVID negative. He showed continuous improvement and was discharged on day 31 of admission.

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