

Hydroxychloroquine**S****Torsades de pointes following off label use: case report**

A 73-year-old man developed torsades de pointes during off-label therapy with hydroxychloroquine for coronavirus disease-2019 (COVID-19) infection [*dosage and route not stated*]. This adverse drug reaction report was submitted to the UK Medicines and Healthcare products Regulatory Agency (UK MHRA).

The man was admitted to the critical care unit with respiratory and acute renal failure secondary to COVID-19 infection. His past medical history included diabetes, hypertension and previous stroke, from which he had a full recovery. He was treated with peritoneal dialysis and mechanical ventilation. He received off-label treatment with hydroxychloroquine for COVID-19 infection under randomised evaluation of COVID-19 therapy (RECOVERY) trial. His baseline electrocardiogram (ECG) was normal and did not indicate any QT prolongation. After 3 days, ECG showed ventricular tachycardia with a circulatory collapse. Immediate cardiopulmonary resuscitation was started and defibrillator pads were attached; however, his arrhythmia self-terminated within 2 minutes. Following the resuscitation, another ECG was performed, which revealed a normal QT interval. Arterial blood gas analysis and full panel of blood tests were normal. No signs of myocardial ischaemia, hypomagnesaemia and hypokalaemia were noted. From these findings and clinical presentation, torsades de pointes ventricular tachycardia presumably resulting from hydroxychloroquine therapy was suspected. Review of the telemetry data indicated a polymorphic ventricular tachycardia in the pattern of torsades de pointes, with a spontaneous onset and termination. A cardiac electrophysiology review was done, which confirmed the diagnosis of torsades de pointes. Based on the review of ECGs, blood test results, and medication history it was concluded that the torsades de pointes was most likely been caused by hydroxychloroquine. At this stage, no further antiarrhythmic therapy was recommended.

The man's treatment with hydroxychloroquine was stopped, and his participation in the RECOVERY trial was terminated. During his stay no further torsades de pointes were observed.