Posted on 31 Jan 2024 — The copyright holder is the author/funder. All rights reserved. No reuse without permission. — https://doi.org/10.22541/au.170667968.82241976/v1 — This is a preprint and has not been peer-reviewed. Data may be preliminary.

Therapeutic challenges of the modern era: QT prolongation management in COVID-19 hospitalised patients

Ailís Pollock[1], Rajesh Kumar[2], Patrick Devitt[3], Clíona Ní Cheallaigh[4], Berry Kennedy[3], Caroline Daly[5], and Brian Kent[5]

[1]Beaumont Hospital
[2]St. James's Hsopital
[3]St. James's Hospital
[4]St. James's Hospital
[5]St James's Hospital

April 16, 2024

Abstract

Introduction: Hydroxychloroquine, with or without Azithromycin, was used as a treatment strategy for COVID-19 in March and April 2020. The use of Hydroxychloroquine (HCQ), with or without Azithromycin, may increase the risk of QT prolongation. This study was performed to assess the incidence and degree of QT prolongation in hospitalised COVID-19 patients treated with HCQ, and the association with morbidity and mortality. Methods and Results: Single centre retrospective observational study. Baseline corrected QT interval (QTc), peak QTc and change in QTc ([?]QTc) were calculated for all patients. Known or suspected risk factors for QT prolongation were assessed. All patients were followed up for QT prolongation, length of stay, incidence of ICU admission and 30 day all-cause mortality. Sixty-two patients were included (mean age 67 years; 33.9% female). QT prolongation occurred in 62.9% of patients given HCQ, with [?]QTc [?]60msec or acquired QTc [?]500msec in 14.5% of patients. The mean [?]QTc was 28.4msec. QT prolongation was associated with increased mortality (OR 11.0; 95% CI 1.3 – 90.9; P=0.03). Conclusions: There was a high incidence of QT prolongation in patients who received HCQ as part of a COVID-19 treatment regimen. We observed an increased risk of death in patients with QT prolongation, as well as an increased incidence of ICU admission and longer length of stay in hospital. We recommend particular attention be paid to the risk of QT prolongation with novel treatment strategies for COVID-19. Further research is warranted on the effect of QT prolongation on clinical outcomes in COVID-19.

Hosted file

`Therapeutic challenges of the modern era.docx` available at https://authorea.com/users/734834/articles/712592-therapeutic-challenges-of-the-modern-era-qt-prolongation-management-in-covid-19-hospitalised-patients