UPDATE: General guidance for QTc monitoring in COVID-19 patients

At this time, there are no FDA approved medications for the prevention or treatment of COVID-19. There has been great interest in hydroxychloroquine (HCQ) and chloroquine, with or without azithromycin (AZM), for inpatient treatment of COVID-19; however, available data have been conflicting (1-5) and there have been no published randomized controlled trials that assess efficacy and safety.

Hence, caution must be exercised when implementing these, yet to be proven, therapies individually or in combination with AZM, considering use of HCQ and AZM can result in QTc prolongation and Torsade de Pointes (TdP). (6) In addition, serial ECGs increase health care provider exposure and PPE usage and should be minimized or avoided when possible. Many centers have stopped using AZM, reducing risk of QT prolongation; however, polypharmacy and increasing comorbidities/clinical factors add additional risks in the critically ill COVID-19 population.

In-patient Management HCQ/chloroquine for COVID-19

Information for the treatment of COVID-19 patients with QTc prolonging medications continues to change rapidly as data and experiences are shared across the globe. The following general steps can be used to inform your practice:

Optimize the baseline QTc, minimizing QTc prolonging medications whenever possible. QTc prolonging drugs can be found at CredibleMeds.org; drug-drug interaction checks should also be performed. Be aware of clinical risk factors (female, elderly, hypokalemia, hypomagnesemia, and hypocalcemia) that can prolong the QTc or predispose to Torsade de Pointes (TdP).

Obtain 12-lead ECG to establish baseline QTc and provide telemetry, if feasible, in patients felt to be at risk for significant QT prolongation (based on baseline QTc, comorbidities, and drug regimen). If QTc ≤ 500ms (narrow QRS) or < 550 ms (for BBB or QRS>120ms), patients may be at relatively low risk for TdP.

Monitor the QTc, minimizing use of 12-lead ECGs to reduce contact with COVID-19 and conserve PPE if patients are not considered high risk. QTc measurements when required can be made by telemetry (lead 2) or potentially measured via MCOT/hand-held ECG monitoring. A multinational writing document is currently underway to address outpatient monitoring options in this setting.

The enclosed link provides a great overview of how to accurately measure the QT interval
https://www.youtube.com/watch?v=glqSiXfXfJE&t=48s

Out-patient Management of HCQ/chloroquine for treatment or prophylaxis against SARS-CoV2 infection

Given lack of credible evidence regarding efficacy, this task force does not recommend outpatient use of chloroquine/HCQ by itself, or in combination with AZM, for treatment or prophylaxis against SARS-CoV2 infection. However, for those who plan outpatient treatment of

SARS-CoV2 infection or prophylactic treatment with chloroquine/HCQ alone or chloroquine/HCQ+AZM, we advise obtaining a 12-lead ECG, to establish baseline QTc, prior to taking the drug. Given the lack of evidence supporting treatment, these agents should NOT be used in out-patients without a baseline ECG or a baseline QTc≥500msec (or ≥550 msec if QRS duration>120msec).

The COVID-19 Task Force will be examining further published data as it becomes available regarding the risk of TdP in this COVID-19+ population. No specific algorithm is being recommended at this time, as many of our colleagues have reported a very low risk of marked QT prolongation in their cohorts (personal communications). In addition, HRS will be gathering information regarding monitoring modalities and will also make this information available for guidance.

References

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