

Effect of triple combination therapy with lopinavir-ritonavir, azithromycin and hydroxychloroquine on QT interval and arrhythmic risk in hospitalized COVID-19 patients.

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Abstract

Introduction: no data are provided about the effect of triple combination therapy with Lopinavir/Ritonavir (LPN/RTN), hydroxychloroquine (HQ) and azithromycin (AZT) on corrected QT (QTc) interval and arrhythmic risk, in COVID-19 patients. This study aims to describe the incidence of extreme QTc interval prolongation among COVID-19 patients on this experimental treatment and to identify the clinical features associated with extreme QTc prolongation. **Materials and methods:** data of 87 COVID-19 patients, treated with triple combination including LPN/RTN, HQ and AZT, were analyzed. QT interval was obtained by the tangent method and corrected for heart rate using Bazett's formula. Extreme QTc interval prolongation was considered an absolute QTc interval ≥ 500 ms or an increase in QTc intervals of 60 milliseconds or greater (Δ QTc ≥ 60 milliseconds) compared with baseline. **Results:** Hypertension (66.7%) and diabetes (25.3%) were the most prevalent cardiovascular comorbidities. 20 patients (23%) showed extreme QTc interval prolongation; No clinical, electrocardiographic or pharmacological characteristics have been associated to extreme QTc prolongation, except the history of ischemic stroke ($P= 0,007$). One torsade de pointes (TdP) in patient with QTc extreme prolongation (QTc: 560 ms) after 5 days of therapy was recorded. **Conclusions:** We observed a high incidence of extreme QTc interval prolongation among COVID-19 patients on triple combination therapy. The incidence of malignant arrhythmias seems to be low, a careful electrocardiographic monitoring would be advisable.

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