

Hydroxychloroquine and the Risk of Sudden Cardiac Death

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Introduction

- Hydroxychloroquine (HCQ) is an antimalarial drug that is widely utilized in dermatology to treat autoimmune disorders and connective tissue diseases.
- QT interval prolongation is a well-documented adverse event associated with HCQ.
- Drug-induced QTc prolongation can lead to torsades de pointes and sudden cardiac death in certain individuals.
- It remains unclear if QTc prolongation from HCQ is associated with an increased risk of sudden cardiac death, particularly in the context of long-term, dermatologic usage of HCQ
- Multiple studies have evaluated the relationship between short-term HCQ usage and sudden cardiac death in hospitalized COVID-19 patients with conflicting results
- Only one study to date has evaluated the relationship between long-term HCQ usage and sudden cardiac death, finding a statistically significant increased risk of sudden cardiac death among patients currently taking HCQ

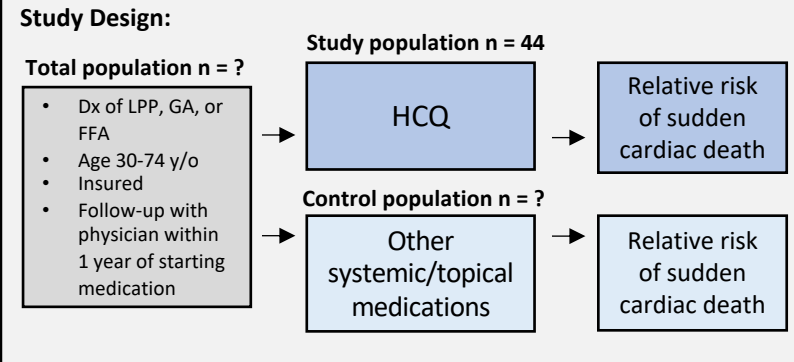
Hypothesis & Aim

Hypothesis: There is no meaningful association between hydroxychloroquine and sudden cardiac death when the medication is used to treat dermatologic conditions.

Aim: To investigate the relationship, if any, between hydroxychloroquine and sudden cardiac death by comparing the relative risk of sudden cardiac death among individuals taking hydroxychloroquine for a dermatologic disorder to that of a matched control population of non-hydroxychloroquine users.

Methods

Retrospective cohort study of patients with lichen planopilaris (LPP), granuloma annulare (GA), or frontal fibrosing alopecia (FFA) seen in UCHealth Dermatology Outpatient Clinics from 1/1/2000 – 1/21/2021



Study Period: Date of the patient's first-follow up appointment until death of the patient, termination of insurance enrollment, or the date on which inclusion criteria were no longer met

Statistical Analysis:

- Relative risk of sudden cardiac death will be estimated with the incidence-rate ratio, as calculated from Poisson regression models
- Relative risk may be stratified by dose of HCQ if sufficient data

Results

- Results are pending
- Due to delays in the data acquisition process, we are currently still in the process of obtaining our control data

Discussion and Conclusion

- The results of this study will help elucidate the relationship, if any, between hydroxychloroquine and sudden cardiac death, when used to treat dermatologic conditions.
- These findings may help guide future dermatology practices surrounding cardiac disease screening and/or monitoring for persons taking hydroxychloroquine.

Limitations

- Population size and the need to use sudden cardiac death as an endpoint since ECGs are not routinely collected in the population being studied may be limitations

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Conflicts of Interest

No relevant conflicts of interest to disclose.

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