

Category: Travail de recherche / Research work

Primary author: Olga Tsyruk

Institution: McGill University

Additional Authors: Cristiano S Moura, Marina AA Machado, Celline C Almeida-Brasil, Jeffrey R Curtis, Elizabeth Turnbull, Autumn Neville, Sasha Bernatsky
Cristiano S Moura, Marina AA Machado, Celline C Almeida-Brasil, Jeffrey R Curtis, Elizabeth Turnbull, Autumn Neville, Sasha Bernatsky

Title: **Conduction Disorders/Dysrhythmias and Hydroxychloroquine in Rheumatoid Arthritis**

Objective(s): Rheumatoid arthritis (RA) is often treated with a disease-modifying antirheumatic drug (DMARD) hydroxychloroquine (HCQ). While generally considered safe, hydroxychloroquine has been associated with cardiac side effects, including conduction disorders and dysrhythmias. In this study, we aimed to determine whether HCQ exposure compared to methotrexate (MTX) is associated with increased conduction disorders/dysrhythmias in RA in pre COVID-19 era.

Method(s): We used the Marketscan Commercial Claims and Medicare databases and our population consisted of adult patients newly diagnosed with RA. The primary outcome was the occurrence of conduction disorders or dysrhythmias, documented as the primary diagnosis for hospitalization. This outcome was assessed within two distinct time frames: 30 days of treatment initiation and at any time thereafter. Patients were followed longitudinally until the first occurrence of the specified cardiac event.

To analyze the data, Cox regression models were utilized, adjusting for relevant covariates such as age, calendar year at beginning of study, health plan type, comorbidities, previous ER visits/hospitalizations and relevant medications.

Result(s): There were 70,995 new users of HCQ and 95,230 new users of MTX. Within 30 days of treatment initiation, 151 patients experienced conduction disorder/dysrhythmias. Event rate was 1.01/100 person-years (95% CI 0.78-1.31) among HCQ users vs 1.24/100 person-years (95% CI 1.01-1.51) for MTX users. Furthermore, at any time after treatment initiation there were 1,020 conduction disorder/dysrhythmias. Event rate was 1.04/100 person-years (95% CI 0.94-1.15) among HCQ users versus 1.08/100 person-years (95% CI 1.00-1.16) for MTX users.

Conclusion(s): In our study population, HCQ was not clearly associated with higher conduction disorders/dysrhythmia risk versus MTX. The greatest risk was seen in patients with older age, health plan type and previous ER visits/hospitalizations.