Chloroquine and COVID

Francesca Claridge-Owen
University of Warwick

Background

In December 2019 SARS-CoV-2 was discovered, which causes Covid-19. Human-human transmission was identified, and WHO announced a worldwide pandemic on 11th March 2020. Covid-19 has caused over 700,000 deaths globally. There is currently no treatment for Covid-19 and repurposing current drugs with known safety profiles was an attractive option. Aminoquinolines were trialled against Covid-19. Preliminary in vitro results showed encouraging results.

Methodology

This study will review data on the use of chloroquine or hydroxychloroquine to treat Covid-19. I will search PubMed, Embase, Cochrane Library database, ClinicalTrials.gov and medRxiv.org for published and preprint studies. I will include, RCTs, retrospective studies, observational studies and case reports. I will accept variation of methodology due to limited data available.

Results

Five preprint and five published peer reviewed studies were included. There was significant heterogeneity between papers, including different doses of chloroquine or hydroxychloroquine. Most studies had a low number of patients included and admitted that they were underpowered.

Key Points

Three studies included reported results which were statistically significant supporting the use of chloroquine or hydroxychloroquine. Two studies had statistically significant results reporting worse outcomes with chloroquine or hydroxychloroquine. Five studies reported no statistically significant results between standard care and the use of an aminoquinoline.

Conclusion

There is no reliable evidence that either chloroquine or hydroxychloroquine will significantly improve the condition of patients with Covid-19. Due to known side effects of these drugs, it would be sensible to be cautious when giving them as they may have no benefit to patients with Covid-19.