

# **Point prevalence of coronavirus disease 2019 in a multiethnic cohort of patients with autoimmune rheumatic diseases in Qatar**

Karima Becetti, MD, MS<sup>1\*</sup>, Eman Satti, MD<sup>1\*</sup>, Betsy Varughese, PhD<sup>2</sup>, Yousef Al Rimawi, MD<sup>1</sup>, Rawan Sheikh Saleh, MD<sup>1</sup>, Nawal Hadwan, MD<sup>1</sup>, Miral Hamed, MD<sup>1</sup>, Mohamed Awni Al Kahlout, MD<sup>1</sup>, Essa Abuhelaiqa, MD<sup>1</sup>, Hadil Afif Ashour, MSc<sup>1</sup>, Rajvir Singh, PhD<sup>3</sup>, Samar Al Emadi, MBBS, FRCPC<sup>1</sup>

<sup>1</sup>Division of Rheumatology, Department of Medicine, Hamad Medical Corporation, Doha, Qatar;

<sup>2</sup>Gastroenterology & Hepatology, Medicine, Hamad Medical Corporation, Doha, Qatar;

<sup>3</sup>Cardiology Research Center, Heart Hospital, Hamad Medical Corporation, Doha, Qatar

\*These authors contributed equally to this work

## **ABSTRACT**

*Objective:* It is still unclear whether having an autoimmune rheumatic disease (ARD) increases the risk of COVID-19. We aimed to evaluate the COVID-19 point prevalence and associated factors in a multiethnic cohort of patients with ARDs in Qatar.

*Methods:* We used telephone surveys and electronic medical records review to collect demographic and clinical information of ARD patients in Qatar, including any close contact with a COVID-19 case at home or work and polymerase chain reaction (PCR)-confirmed COVID-19 diagnosis. Prevalence with 95% CI, student t tests, and chi-square/fisher's exact tests were used

for univariate analyses whereas multivariate logistic regression was used to identify factors associated with COVID-19.

*Results:* We included 700 ARD patients with mean age  $43.2 \pm 12.3$  years, 73% were females. Until July 2020, 75 patients (11%, 95% CI 9% - 13%) had COVID-19. Factors associated with COVID-19 included being a man (aOR 2.56, 95% CI 1.35 – 4.88,  $P = 0.01$ ) and having close contact (aOR 27.89, 95% CI 14.85 – 52.38,  $P = 0.01$ ). Having diabetes increased the odds of contracting COVID-19 by 2 folds but this did not reach statistical significance (aOR 2.14, 95% CI 1.00 – 4.60,  $P = 0.51$ ). Disease severity, rheumatic medications, and other comorbid conditions had no significant association with the odds of contracting COVID-19. In the 86 patients with close contact, however, hydroxychloroquine use was less in patients who contracted COVID-19 than those who did not (35% vs 72.5%,  $P = 0.01$ ).

*Conclusions:* Patients with ARDs in Qatar had a higher point prevalence of COVID-19 compared to the global estimates. Men and having close contact with a COVID-19 case were strongly associated with COVID-19 as reported globally. The presence of comorbid conditions, disease-specific factors and medications had no significant impact on the risk of COVID-19 in our study suggesting alternative mechanisms to the increased prevalence.