

## ORIGINAL ARTICLE

# Knowledge, attitude and prevalence of ivermectin use as coronavirus disease treatment: A cross-sectional study among a Malaysian population

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### Abstract

**Introduction:** During the coronavirus disease (COVID-19) pandemic, there was a widespread public misconception regarding ivermectin use in managing the disease. There is no approval of ivermectin as COVID-19 treatment by the Food and Drug Administration, and the adverse effects of the drug are alarming. This study aimed to evaluate the knowledge and attitude towards and prevalence of ivermectin use as COVID-19 treatment among the Malaysian population.

**Methods:** This cross-sectional study was conducted among 391 Malaysians aged  $\geq 18$  years. A validated online self-administered questionnaire disseminated via Google Forms was used to evaluate the knowledge and attitude towards and prevalence of ivermectin use as COVID-19 treatment. The socio-demographic characteristics and knowledge and attitude towards and prevalence of ivermectin use among the respondents were evaluated through descriptive analysis. The chi-square test was used to identify the association between the variables.

**Results:** The respondents had moderate levels of knowledge and attitude towards ivermectin use, while the prevalence of ivermectin use was 3.58%. The respondents' sex ( $P=0.014$ ), age ( $P=0.012$ ) and monthly income ( $P=0.049$ ) were significantly associated with their level of knowledge. The respondents' sex ( $P=0.04$ ) was significantly associated with their level of attitude. Conversely, no socio-demographic characteristics were significantly associated with the prevalence of ivermectin use as COVID-19 treatment.

**Conclusion:** The majority of Malaysians have moderate levels of knowledge and attitude towards ivermectin use as COVID-19 treatment, with a low prevalence of actual use.

### Introduction

In 2020, severe acute respiratory syndrome coronavirus 2, one of the many types of coronaviruses, caused coronavirus disease (COVID-19), which was declared a pandemic respiratory illness by the World Health Organization.<sup>1</sup> Several repurposed antiviral drugs, including remdesivir, hydroxychloroquine, lopinavir and interferon beta-1a, have been tested as potential treatments for COVID-19. However, hydroxychloroquine and lopinavir have not been found to reduce the mortality rate of patients with COVID-19 and have been therefore dropped from clinical trials. In contrast, remdesivir has shown promising results in reducing the recovery time of patients with COVID-19 in some clinical trials. Taken together, current evidence suggests that repurposed antiviral drugs may have moderate effects on the outcomes of patients with COVID-19, but further research is needed to establish their effectiveness.<sup>2</sup>

A previous retrospective study involving 5889 clinical records of all reverse-transcription polymerase chain reaction-confirmed COVID-19 cases among patients aged  $\geq 12$  years in Malaysia reported a prevalence of mild disease of up to 92% with a low fatality rate of 1.2%. Hydroxychloroquine was administered to over 37% of patients, mainly those with severe illness. Approximately 77% of patients with severe illness received antiviral treatment, particularly lopinavir/ritonavir. Steroids and tocilizumab were used sparingly, predominantly for more severe cases.<sup>3</sup>

During the initial phase of the COVID-19 pandemic, there was a shortage of effective treatments and vaccines. This led to a search for potential therapies, with some studies suggesting that ivermectin could be a viable option. However, there has been controversy surrounding the use of ivermectin for COVID-19 owing to conflicting evidence and concerns about its effectiveness. While