

The association between face mask use and SARS-CoV-2 RNA viral clearance: A cohort study in Tunisia

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Background:

The outbreak of coronavirus disease (COVID-19) continues to constitute an international public health concern. Scientific evidence showed that community mask wearing is an effective nonpharmacologic intervention to reduce the spread of this infection. However, few data are available about the effect of face masking on the duration of the disease. We aimed to study the association between recovery time among a Tunisian cohort of COVID-19 confirmed patients and mask wearing.

Methods:

A prospective cohort study was conducted from March to July 2020 including patients with COVID-19 admitted to the Tunisian national containment center. Data were collected via phone call interview. Kaplan-Meier Methods and Cox proportional hazards regression models were, respectively, used to study the association between recovery time and face masks use.

Results:

Among the 264 patients included, the median duration of viral clearance was 20 days (interquartile range (IQR 17-32days)). The median time to RNA viral conversion was 18 days (IQR 16-21 days) when using masks versus 23 days (IQR17-36 days) without wearing masks. Face masks use was significantly associated with an accelerated RNA clearance of SARS-CoV-2 (HR 2.006, 95% CI 1.247-3.228) (p=0.004).

Conclusions:

With the emergence of new variants, it is important to adopt widespread mask wearing to avoid SARS-CoV-2 infection and accelerate RNA negative conversion, until effective levels of vaccination are achieved nationally.

Key messages:

- Face masking was associated with accelerated RNA clearance of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).
- Promoting community mask wearing during COVID-19 pandemic is crucial.