



Letter to Editors

## Can Covid-19 be iatrogenically auto-transmitted through combined oropharyngeal and nasopharyngeal swabs test with one Bar?

Hakan Alagozlu 

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### Abstract

Since the inception of the pandemic, almost all countries have been testing Covid-19 via a swab test with one bar (combined OP and NP). They use the same bar - first an oropharynx swab and then a nasopharynx swab- This manner of application causes oropharyngeal Covid-19 viruses to be inoculated into the nasopharynx and help grow Covid-19 disease infection in that area as well. We speculate that asymptomatic Covid- 19 carriers can be converted to pre-symptomatic people via auto-transmission iatrogenically. This highlights the critical role of asymptomatic cases in the progression of the ongoing pandemic. Also, infectivity can also be carried through nostrils to nasopharyngeal area via manual intervention with one bar.

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### Keywords

Auto-transmission; Covid-19; Microbiota

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## Background to hypothesis

The nostril/nasopharynx and oropharynx are two different sites that have distinct microbiota and habitat [1]. The nose and throat may host pathogen colonization like Covid-19 virus. The colonization of these pathogens increases the risk of infection [2]. Especially the oropharynx is a proper location for Covid-19. The virus may remain in the oropharynx causing no symptom, which results in asymptomatic Covid-19 cases. Asymptomatic people who test positive for SARS-CoV2 nucleic acid by Real-time reverse transcriptase polymerase chain reaction (RT-PCR) do not develop symptoms. [3]. Asymptomatic individuals with COVID-19 were estimated to be up to 79 % of SARS-CoV-2 infections in Wuhan, China. This population has two subpopulations: the pre-symptomatic and the true asymptomatic. Pre-symptomatic people are the ones with no symptoms who test positive for SARS-CoV-2 and later develop symptoms whereas true asymptomatic cases are people who test positive but never show any signs and symptoms [[4], [5]].

## Hypothesis

To test Covid 19, Centers for Disease Control and Prevention (CDC) recommends collecting only the NP (nasopharynx) specimen although an OP (oropharynx) specimen is an acceptable specimen type. CDC states that NP and OP specimens are to be combined in a single tube to maximize test sensitivity if both are collected [6]. “February 2020 Report of the WHO-China Joint Mission on Covid-19” suggests collecting specimen through combined NP and OP [7]. Similarly WHO in its “January 2020 Interim Covid Guidance” advises a specimen collection from NP and OP [8]. WHO and WHO-China Joint Mission agree that NP and OP swab need to be obtained. CDC and WHO seem to be in conflict. This being the case, currently, since the inception of the Covid 19 pandemic, some countries have been testing Covid-19 via a swab test with one bar (combined OP and NP). They use the same bar - first an oropharynx swab and then a nasopharynx swab- This manner of application causes oropharyngeal Covid-19 viruses to be inoculated into the nasopharynx and help grow Covid-19 disease infection in that area. Considerably high number of countries in their official websites have posted informative and comprehensive videos showing how to test Covid-19 using combined nasopharyngeal and oropharyngeal swabs with the same bar simultaneously.

In this article, it is proposed that there are iatrogenic effects on the spread of Corona virus. Specifically, the main hypothesis is that the use of one bar to obtain specimen from the OP and NP to test Covid 19 causes the spread of infection and increases the risk of the infection. Described mechanisms for collecting specimen is thought to be linked with the higher number of the infected people as the virus is carried to the nasopharynx from the oropharyngeal area. Furthermore, we speculate that most asymptomatic Covid-19 carriers are converted to pre-symptomatic people via auto-transmission iatrogenically. This highlights the critical role of asymptomatic cases in the progression of the ongoing pandemic.

## Discussion

As the nasopharynx and oropharynx have distinct microbiota, using one bar to collect specimen from these areas is a risk for the increased infection. Based on the foregoing explanations, we speculate that the infectivity of some asymptomatic SARS-CoV-2 carriers might be linked with combined OP and NP swabs. Infectivity can also be carried from the OP to the NP area via manual intervention with one bar.

To prevent this, we have to swab either with two different bars from the OP and NP sites or with only one bar into the nasopharynx. Person-to-person transmission through respiratory droplets is the main route of Covid-19 transmission [9]. However, we should not ignore the possibility of iatrogenic auto-transmission. This strategy is believed to play a role in terminating pandemic.

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## Consent statement/Ethical approval


Not required.

## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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