

Letter to Editor:

Coronavirus Transmission during Mastoidectomy after Craniotomy to Remove Schwannoma Tumor: Danger to Surgical Team Members



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Dear Editor

Coronavirus 2019 (COVID-19) was first detected in December 2019 and spread rapidly around the world, becoming a pandemic and global crisis. COVID-19, caused by SARS-CoV-2, is a highly infectious respiratory disease [1, 2]. In surgery on the respiratory tract and cavities connected to the airway (paranasal sinuses and middle ear), individuals are exposed to the direct or indirect transmission of SARS-CoV-2 by inhalation of infected droplets [3]. Given the presence of the SARS-CoV-2 virus in the middle ear and mastoid [4], surgery on the middle ear, like drilling of the middle ear mucosa, is an aerosol-producing technique that can expose surgical teams to the risk of COVID-19 infection [5]. Moreover, evidence suggests that the virus can be transmitted to the brain and cause infection (6) because brain cells contain the enzyme angiotensin-2 (ACE2), serine protease 2 (TMPRSS2), cathepsin L, and furin which make the brain one of the most susceptible sites for SARS-CoV-2 virus replication [6], affecting the central and peripheral nervous systems. In craniotomy surgery after mastoidectomy, like vestibular schwannoma tumor resection, the virus can enter the cranial cavity from the mastoid

and cause it to spread. By the time the patient recovers from coronavirus, alternative therapies can reduce the negative effects of the tumor. Based on the available evidence, there is a possibility of spreading the coronavirus during ENT (ear, nose, and throat) surgery as well as neurosurgery due to the existence of the coronavirus in the mastoid and middle ear to members of the surgical team and operating room staff. Thus, it is necessary to use personal protective equipment in these surgeries and increase the awareness of the surgical team about this risk.

Ethical Considerations

Compliance with ethical guidelines

There were no ethical considerations to be considered in this research.

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Authors' Contributions

All authors equally contributed to preparing this article.

Conflict of interest

The authors declared no conflict of interest.

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