

The Official Publication of the Canadian Academy of Audiology

The Virus and Hearing Loss. An Update

Published November 19th, 2020

Robert V. Harrison, PhD, DSc

It seems like a lifetime ago that COVID-19 crept into our lives – well more like jumped at us headfirst! But it was only three issues of Canadian Audiologist ago (that's how I mark time nowadays) that I wrote about "The Virus and Hearing Loss". There was nothing to report then, and now there is nothing much extra to report.



A survey of Medline publications and a Google Scholar search reveals no clear cases where

COVID-19 directly causes hearing loss. There are just a handful of cases^{1,2} where hearing loss is secondary to a direct viral effect, such as ischemia during respiratory failure, or a local thrombosis.

A couple of cases of sudden hearing loss in COVID-19 pneumonia have been reported.^{3,4} And a patient with conductive loss related to middle ear fluid build-up during nasopharyngeal COVID infection.⁵

So, to date, we have seen limited evidence of COVID related hearing problems. However, it is important to remember that so far all we have are case reports and no more systematic studies. We should be proud of a new Canadian project headed up by our own Steve Aiken, to make before and after hearing assessments in COVID-19 patients. His team is looking to enroll clinics across the country to share data; please participate if you can!

An interesting sidebar has been about the potential ototoxicity of chloroquine and

hydroxychloroquine.⁶ Thankfully (despite Mr. Trump) this did not become a major treatment for COVID-19, because there are well-reported cases of hearing loss related to this drug.

So, with a total of 39 million COVID-19 infections worldwide (as of October 2020), we have approximately 20 cases of hearing loss. That means the probability of having a hearing loss caused by the virus is 0.00000052.

But after that glass-half-full (hearing healthcare) perspective we have plenty of time to go. It ain't over till the *fat lady sings*.



References

- 1. Sriwijitalai W, Wiwanitkit V. Hearing loss and COVID-19: A note.Am J Otolaryngol 2020;Apr 2:102473. doi: 10.1016/j.amjoto.2020.102473
- Saniasiaya J. Hearing Loss in SARS-CoV-2: What Do We Know? Ear Nose Throat J 2020; Aug 5. doi: 10.1177/0145561320946902
- Lang B, Hintze J, Conlon B. Coronavirus disease 2019 and sudden sensorineural hearing loss. J Laryngol Otol October 2020;1–6. DOI: https://doi.org/10.1017/S0022215120002145
- Degen C, Lenarz T, Willenborg K. Acute Profound Sensorineural Hearing Loss After COVID-19 Pneumonia. Mayo Clin Proc 2020;95(8):1801–803. DOI: https://doi.org/10.1016/j.mayocp.2020.05.034
- Fidan V. New type of coronavirus induced acute otitis media in adult. Am J Otolaryngol 2020;41(3):102487. doi:10.1016/j.amjoto.2020.102487 Prayuenyong P, Kasbekar A, Baguley DM. Clinical implications of chloroquine and hydroxychloroquine ototoxicity for COVID-19 Treatment: A Front. Public Health 2020. Available at: https://doi.org/10.3389/fpubh.2020.00252