Audiological Management of COVID-19 Survivors

Summary and Key Points

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- Repurposing a drug takes approximately 3 - 4 years; ~30% approval Rate
- Recommended websites to find drug side effects:
  www.rxlist.com
  www.drugs.com
  Contact the pharmacist or drug’s manufacturer
- Vaccine Adverse Event Reporting System: www.vaers.gov
- Long-Hauler – symptoms can linger eight weeks to six months post-diagnosis
- Several ‘Long Hauler’ Face Book support groups exist on social media
- “Brain Fog” is a non-medical that describes the symptoms comparable to mild cognitive impairment and/or an auditory processing disorder
- If a patient reports ‘brain fog” or a medical report indicates ‘brain fog” then an auditory processing disorder must be ruled out since there are overlapping behaviors for each diagnosis
- The virus has been identified in all parts of the auditory system: cerumen - the middle ear - cochlea - brainstem - primary auditory cortex
- A new set of questions about the COVID-19 experiences of the patient needs to be developed
- Co-morbidities and prior COVID-19 medical management must be further evaluated
- The patient’s pharmacist is a valuable resource to learn more about the patient’s pharmaceutical history
- The patient may have significant communication complaints with a normal pure tone audiogram
• Otoscopy should still be part of the initial work-up and all subsequent visits; video otoscopy is strongly recommended to maintain a visual record of the status of the ear canal and tympanic membrane

• The most common type of COVID-19 hearing loss is bilateral high frequency

• Recovery from HL cannot be predicted

• If high frequency audiometry is available, it should be added to the test battery (out to 14kHz)

• Middle ear muscle reflexes may be absent because of peripheral hearing loss or brainstem involvement; there is no published research on this test with COVID-19 patients

• Otoacoustic emissions (OAE) testing (Distortion Product and Transient Evoked) will be abnormal with or without hearing loss on a pure-tome audiogram

• ABRs could be abnormal after Wave I if the virus has affected the brainstem

• There is not published data about word recognition scores (WRS) being affected by the virus however, if the WRS is abnormal in the presence of normal pure tone audiogram then an auditory processing evaluation is strongly recommended

• Tinnitus is usually secondary to SNHL however, if there is no pure tone HL, then OAE data should confirm cochlear involvement

• Tinnitus self-assessments are very effective with tinnitus patients (i.e., Tinnitus Handicap Inventory, Tinnitus functional Index)

• There is an approximate 20% risk of vestibular involvement

• Over the next year there could be more baby referrals by pediatricians for families who did not keep their initial follow-up appointment or that audiological services were limited not available during the pandemic’s peak

• Re-establish yourself with all pediatricians in your area about your facility’s pediatric services (schedule the children ASAP)

• There is an increased risk of hearing loss (or an exacerbation of pre-existing hearing loss) with patients with diabetes

• Patients who are blind or have low vision or patients with developmental disabilities (including Down syndrome) are more at risk for anxiety-related problems (i.e., confusion).
• Personal Protective Equipment (PPE) should be worn at all times when removing cerumen (any technique)

• Cerumen can be disposed of (trash/drain/toilet) without any need for a biohazard bag

• There are no FDA approved over-the-counter (OTC) supplements/nutraceuticals for COVID-19 management (including auditory/vestibular problems and tinnitus)

• Audiologists can bill the patient’s insurance carrier for the cost of supplies related to COVID-19 care; use CPT Code 77902; there is no guarantee of payment

• Until specific testing and management guidelines are developed for COVID-19 survivors with communication complaints, it is recommended that audiologists use the following guidelines from the American Academy of Audiology

   Position Statement and Clinical Practice Guidelines: Ototoxicity Monitoring

   Audiologist's Role in the Diagnosis and Treatment of Vestibular Disorders

• Communication strategies will need to be reviewed as needed (see https://drbobdisogra.com/communication-strategies)

• Hearing Assistance Technologies (HAT) and/or hearing aid use will need to be addressed as needed

• Additional COVID-19 information for audiologists can be found at www.audiology.org

• More research is need in every aspect of audiology management for this patient population