Genomic sequencing enhances findings of hearing loss in NICU

July 12 2022

Expanded genomic sequencing may be an effective adjunct hearing

screening to detect hearing loss among patients in the neonatal intensive care unit (NICU), according to a study published online July 11 in *JAMA Network Open*.

Yunqian Zhu, from National Children's Medical Center in Shanghai, and colleagues examined the association between expanded genomic sequencing combined with hearing screening and detection of hearing loss as well as improvement in the NICU. The analysis included 8,078 newborns.

The researchers found that 52 of 240 newborns (21.7 percent) received a diagnosis of hearing loss. When expanded genomic sequencing was used, there was a 15.6 percent increase in cases of diagnosed hearing loss that were missed by existing newborn hearing screening. Genetic factors were identified for 39 of 52 patients with hearing loss, with *GJB2* and *SLC26A4* emerging as the most common genes identified. Compared with those without genetic findings, those with genetic findings experienced a more severe degree of hearing loss (21 profound, four severe, seven moderate, and seven mild versus two severe, four moderate, and seven mild). Patients with genetic factors had more bilateral hearing loss (100 versus 69.2 percent).

"Genetic factors associated with hearing loss need to be identified for the proper clinical management of hearing loss in patients," the authors write.

More information: Yunqian Zhu et al, Association Between Expanded Genomic Sequencing Combined With Hearing Screening and Detection of Hearing Loss Among Newborns in a Neonatal Intensive Care Unit, *JAMA Network Open* (2022). DOI: 10.1001/jamanetworkopen.2022.20986

Ahmad N. Abou Tayoun, Comprehensive Genomic Sequencing–Based

Medical Xpress

Screening for Hearing Loss in the Neonatal Intensive Care Setting—Is It Time?, *JAMA Network Open* (2022). DOI: 10.1001/jamanetworkopen.2022.20992

Copyright © 2022 HealthDay. All rights reserved.

Citation: Genomic sequencing enhances findings of hearing loss in NICU (2022, July 12) retrieved 1 February 2024 from https://medicalxpress.com/news/2022-07-genomic-sequencing-loss-nicu.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.