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Genetics Popular Press Article Summary

The article “Gene Therapy Brings Hearing to Kids with Congenital Deafness”, was published by the U.S. News & World Report on January 25th, 2024. The author of this article is Dennis Thompson, who also is a reporter for HealthDay; A newsletter dedicated to publishing professional medical content. The article refers to a Chinese study that was conducted on six children in order to restore hearing function by gene therapy. Thompson states that the study’s procedure included a virus capsule that contained a healthy copy of the OTOF gene, which is responsible for coding otoferlin. Otoferlin is described as the protein that is needed in order to transmit sound signals to the brain from the inner ear.

It was stated in the article that all six of the children were diagnosed with complete congenital deafness. Out of the six children that underwent the procedure, five of them had a dramatic increase in hearing and speaking capabilities afterwards with no major side effects being recorded. Thompson states the findings from the study are supported by another case of hearing loss being treated by the same gene therapy methods. More specifically it was stated that the method was used to treat an 11 year old boy at the Children’s Hospital of Philadelphia. In this case the boy received his treatment in October and a dramatic increase in hearing and speaking function was also observed just four months after treatment.

The article gives statistics based on how common the mutation of the OTOF gene is. Furthermore it is stated that more than 60% of all congenital hearing loss cases are caused by the mutation of the gene which causes the lack of the signaling protein, otoferlin. Which is also why, due to the nature of the mutation, genetic researchers hypothesize that gene therapy could be used as a method to counteract the effects of the mutation.

When it comes to relating this source to genetics, the relevance of the information is very apparent throughout the document. Congenital Deafness, in the majority of cases, is due to a mutation of the OTOF gene which codes for the signaling protein, otoferlin. The method used to treat this mutation is a form of gene therapy which also bolsters its relevance.

Works Cited

Thompson , D. (2024, January 25). *Gene Therapy Brings Hearing to Kids with Congenital Deafness*. U.S. News & World Report. https://www.usnews.com/news/health-news/articles/2024-01-25/gene-therapy-brings-hearing-to-kids-with-congenital-deafness

Yasunaga, S., Grati, M., Cohen-Salmon, M., El-Amraoui, A., Mustapha, M., Salem, N., El-Zir, E., Loiselet, J., & Petit, C. (1999). A mutation in OTOF, encoding otoferlin, a fer-1-like protein, causes DFNB9, a nonsyndromic form of deafness. *Nature Genetics*, *21*(4), 363–369. https://doi.org/10.1038/7693