Teaching NeuroImages: Cochleitis

A rare cause of acute deafness in a patient with HCV

M. Luigiatti, MD
A. Cianfoni, MD
A. Modoni, MD
A. Conte, MD
G. Conti, MD
M. Sabatelli, MD

Address correspondence and reprint requests to Dr. Marco Luigiatti, Institute of Neurology, Largo F. Vito 1, 00168 Rome, Italy
mluigiatti@gmail.com

Figure 1 Brain MRI

(A, B) Inner ear MRI: 2 contiguous adjacent axial enhanced fat-suppressed T1-weighted high-resolution images, showing asymmetric abnormal contrast enhancement of the right cochlea (arrows) and labyrinthine structures. Left cochlea has no detectable abnormalities, and shows no abnormal contrast enhancement (arrowheads).

Figure 2 Sural nerve biopsy

Hematoxylin & eosin staining documented a severe loss of fibers in all fascicles (A, B). Epineural vessels are thickened (arrowheads in B–D) with deposits of hemosiderin (arrows in B–D) positive at Pearls staining (D). All these findings are indirect signs of vasculitic neuropathy.

A 60-year-old woman with history of multineuritis and hepatitis C virus (HCV) infection suddenly developed bilateral asymmetric sensorineural hearing loss (SNHL). Laboratory panel found a HCV load of 2,031,900 UI/mL and a type II mixed cryoglobulinemia. Brain MRI revealed asymmetric contrast enhancement of right cochlea (figure 1). Sural nerve biopsy showed indirect signs of vasculitis (figure 2). Many viruses have been described as cause of SNHL while its association with HCV has been reported only as complication of antiviral therapy.^{1,2} Our diagnosis was HCV-related vasculitis with bilateral cochlear involvement. MRI can be negative in SNHL,³ and in our case did not show any abnormality on the left side, but revealed inflammation in the right cochlea.

AUTHOR CONTRIBUTIONS

Dr. Luigiatti: drafting/revising the manuscript, study concept or design, analysis or interpretation of data, acquisition of data, study supervision. Dr. Cianfoni: drafting/revising the manuscript, study concept or design, analysis or interpretation of data. Dr. Modoni: drafting/revising the manuscript, analysis or interpretation of data, acquisition of data. Dr. Conte: drafting/revising the manuscript, analysis or interpretation of data, acquisition of data. Dr. Conti: drafting/revising the manuscript, analysis or interpretation of data, acquisition of data. Dr. Sabatelli: drafting/revising the manuscript, study concept or design, study supervision.

REFERENCES

1. Schattner A, Halperin D, Wolf D, Zimhony O. Enteroviruses and sudden deafness. *CMAJ* 2003;168:1421–1423.
2. Formann E, Stauber R, Denk DM, et al. Sudden hearing loss in patients with chronic hepatitis C treated with pegylated interferon/ribavirin. *Am J Gastroenterol* 2004;99:873–877.
3. Cadoni G, Cianfoni A, Agostino S, et al. Magnetic resonance imaging findings in sudden sensorineural hearing loss. *J Otolaryngol* 2006;35:310–316.

From the Department of Neurology (M.L., A.M., A.C., M.S.) and Institute of Otorhinolaryngology (G.C.), Catholic University of Sacred Heart—Rome, Rome, Italy; and Neuroradiology Section (A.C.), Radiology Department, Medical University of South Carolina, Charleston.

Disclosure: The authors report no disclosures.

Neurology®

Teaching *NeuroImages*: Cochleitis: A rare cause of acute deafness in a patient with HCV

M. Luigetti, A. Cianfoni, A. Modoni, et al.

Neurology 2011;77:e109

DOI 10.1212/WNL.0b013e3182364904

This information is current as of October 31, 2011

Updated Information & Services

including high resolution figures, can be found at:
<http://n.neurology.org/content/77/18/e109.full>

References

This article cites 3 articles, 1 of which you can access for free at:
<http://n.neurology.org/content/77/18/e109.full#ref-list-1>

Subspecialty Collections

This article, along with others on similar topics, appears in the following collection(s):

Cranial neuropathy

http://n.neurology.org/cgi/collection/cranial_neuropathy

MRI

<http://n.neurology.org/cgi/collection/mri>

Vasculitis

<http://n.neurology.org/cgi/collection/vasculitis>

Permissions & Licensing

Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:

http://www.neurology.org/about/about_the_journal#permissions

Reprints

Information about ordering reprints can be found online:

<http://n.neurology.org/subscribers/advertise>

Neurology® is the official journal of the American Academy of Neurology. Published continuously since 1951, it is now a weekly with 48 issues per year. Copyright Copyright © 2011 by AAN Enterprises, Inc.. All rights reserved. Print ISSN: 0028-3878. Online ISSN: 1526-632X.