

Spontaneous intralabyrinthine hemorrhage in an otherwise healthy patient: A case report



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ABSTRACT

Intralabyrinthine hemorrhage is a rare event that results in permanent sensorineural hearing loss. Most often, this injury is secondary to a traumatic event, though blood dyscrasias have also been implicated.

We present a case of a 34 year-old otherwise healthy female who suffered what appears to be a spontaneous cochlear hemorrhage, resulting in significant hearing loss. No trauma preceded the event. She had no known underlying coagulopathies or hypercoagulation disorder. Laboratory studies since the event have been unrevealing. This case demonstrates the possibility of this event occurring spontaneously.

BACKGROUND

- Intralabyrinthine hemorrhage is a rare but well-described cause for sensorineural hearing loss
- Underlying etiologies have always been identified in the literature
 - Trauma
 - Iatrogenic¹
 - Barotrauma²
 - Blunt force³
 - Blood dyscrasia
 - Leukemia⁴
 - Lupus⁵
 - Sickle-cell disease⁶
 - Anti-coagulants⁷
 - Miscellaneous
 - Vasculitis⁸
 - Cocaine⁹
 - Infection¹⁰
- To date, no cases of spontaneous intralabyrinthine hemorrhage have been reported

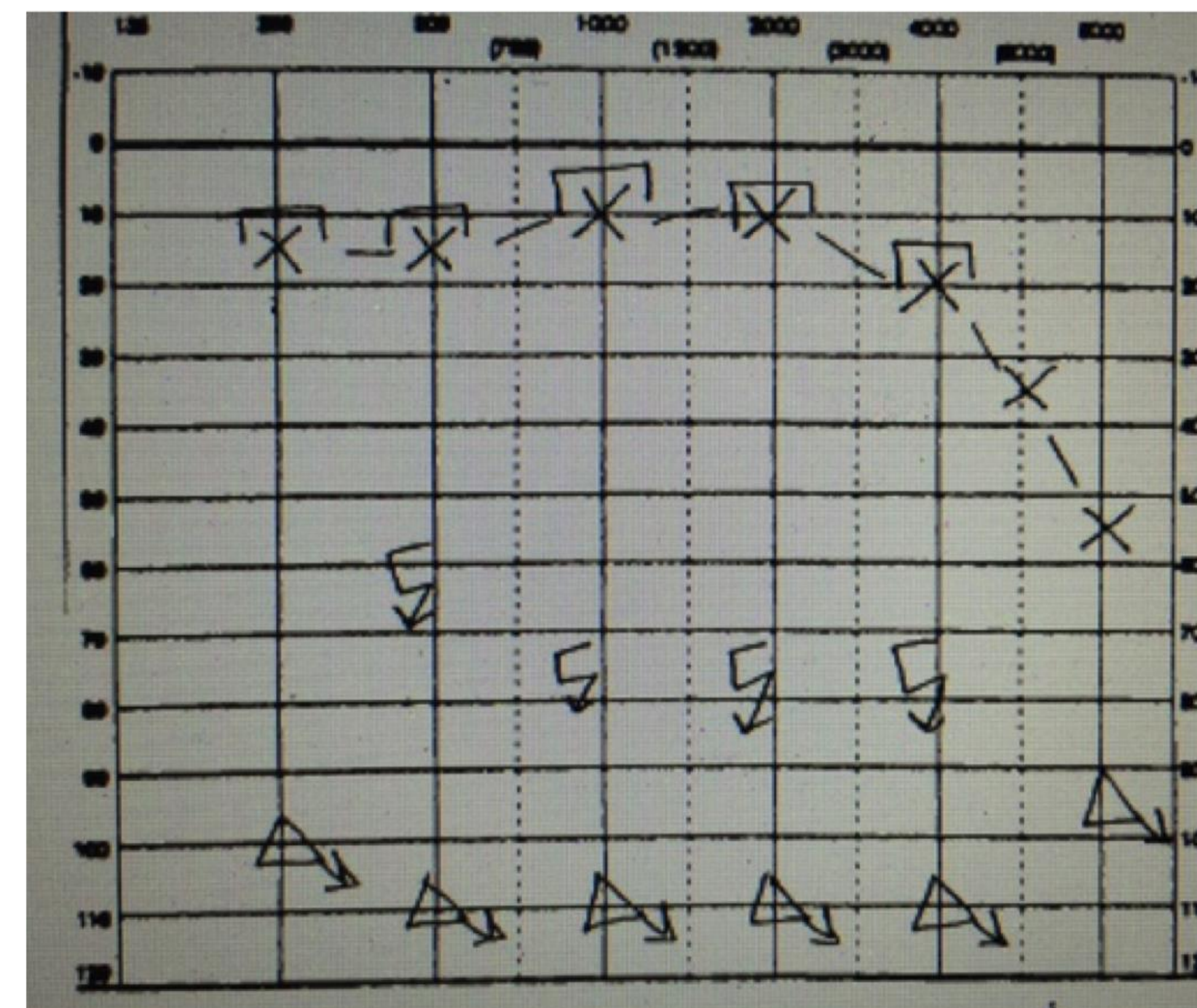


Figure 1. Patient's pure-tone audiogram demonstrating a profound right-sided sensorineural hearing loss. Frequency in Hertz is shown across the x-axis. Intensity in decibels is depicted, along the y-axis. "X" represents the left ear. "Δ" represents the right ear.

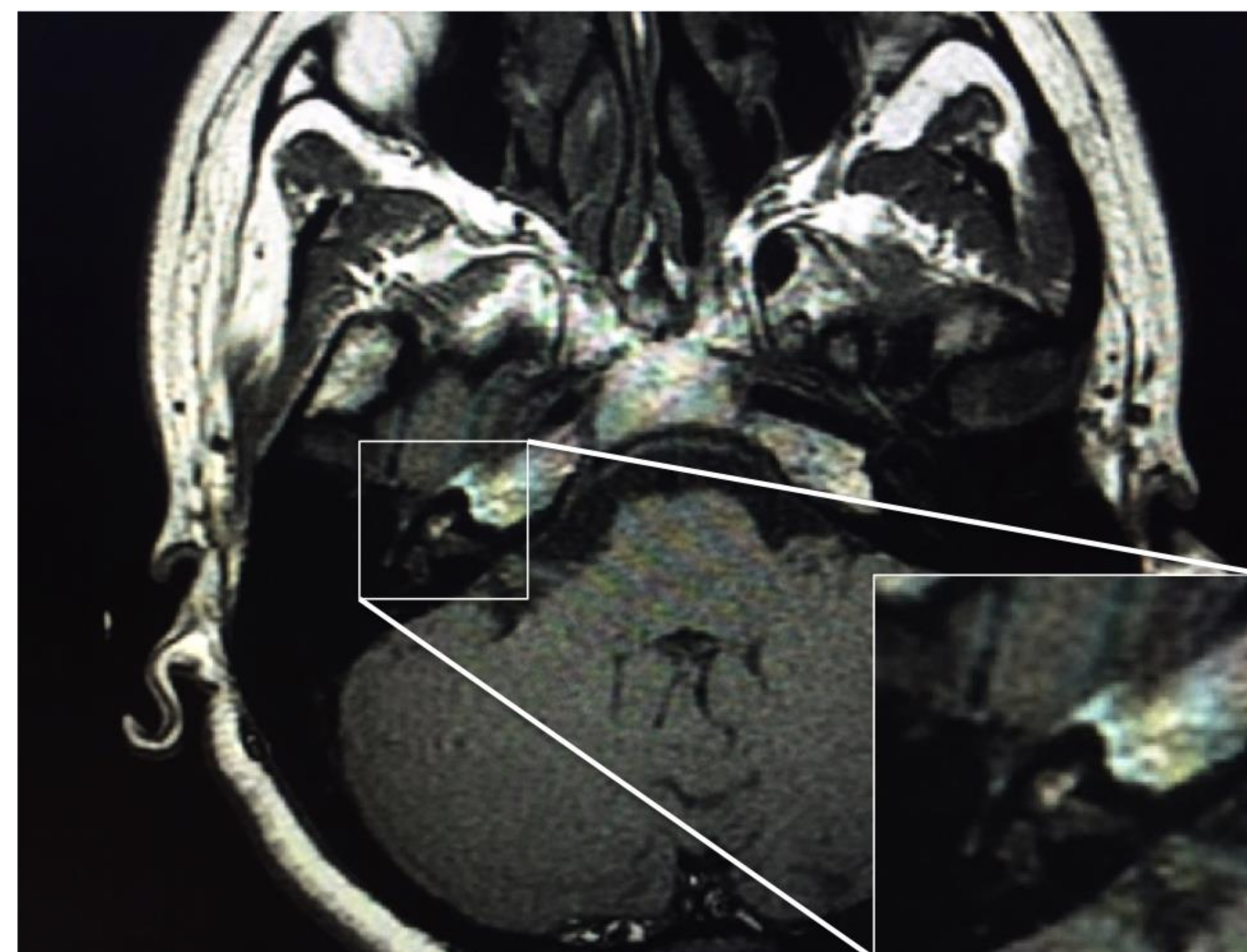


Figure 2. Axial non-contrast MRI T1-weighted pre-gadolinium. Intrinsic hyperintensity can be seen in the right cochlea. An enlarged image of this finding is shown in the lower right corner.

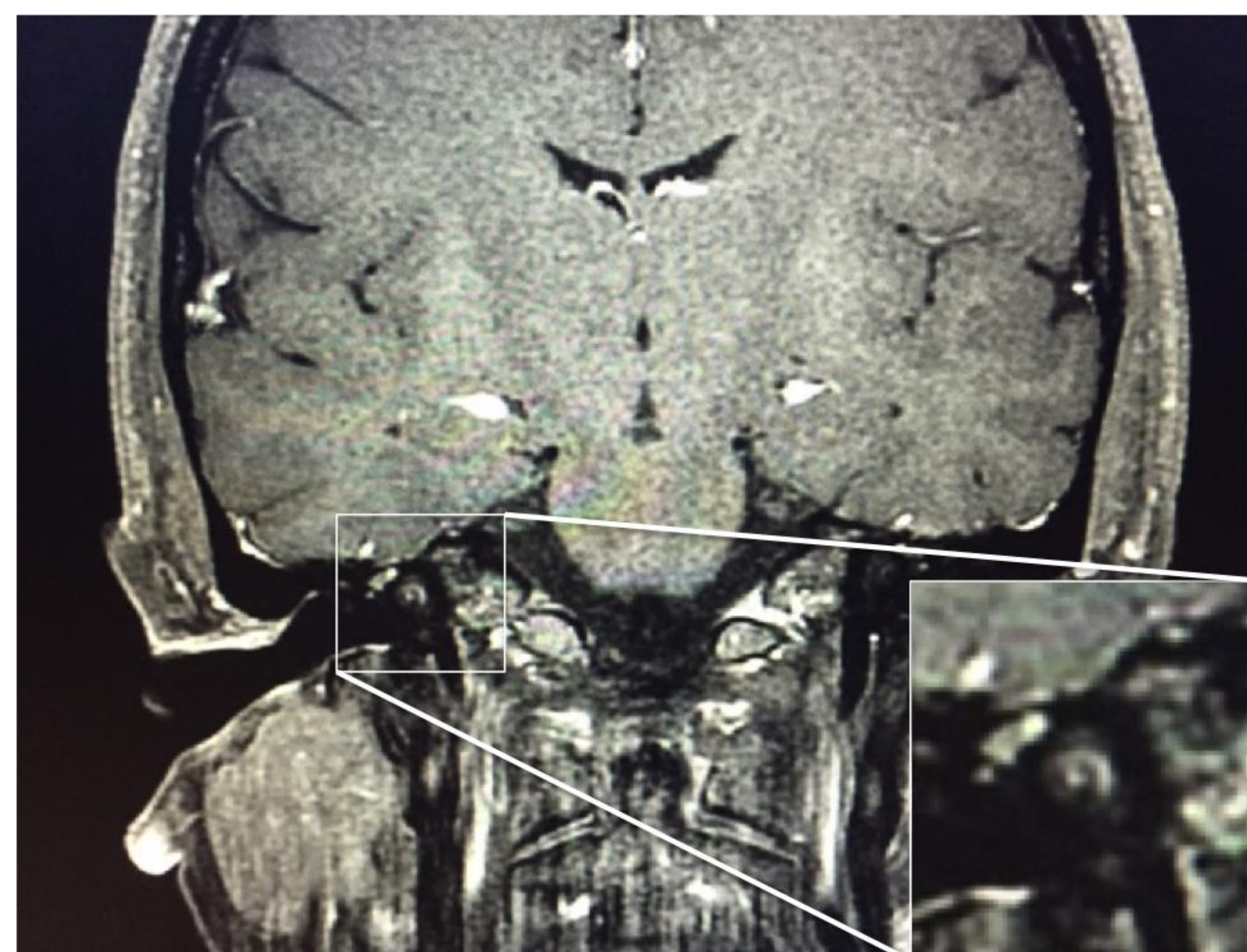


Figure 3. Coronal T1-weighted post-gadolinium with fat saturation. The spiral of the cochlea can be seen distinctly on this image. An enlarged image of this finding is shown in the lower right corner.

CASE REPORT

- 34 year-old otherwise healthy female presented to the ED with 10 days of right sided of decreased hearing and 5 days of nausea and vomiting
 - Occurred "all of a sudden"
 - No preceding trauma, noise exposure, drug-use or upper respiratory tract infection
 - No anti-platelet agents or anti-coagulants
 - CT temporal bone normal
 - Discharged with otolaryngology and audiology follow up
- Seen in clinic 6 weeks after the initial event
 - Audiogram (Figure 1) showed profound SNHL in right ear
 - Assumed to be sudden sensorineural hearing loss
 - MRI ordered to rule out retrocochlear process
 - Vestibular symptoms improving
- MRI (Figures 2 and 3) concerning for cochlear hemorrhage
 - Blood dyscrasia work-up unremarkable*
 - CBC with differential
 - Blood smear
 - Hemoglobinopathy panel
 - Coagulation panel
 - Russell anti-viper venom
 - Vestibular symptoms resolved
- Audiograms are unchanged
 - Using hearing aids
 - Undergoing evaluation for a cochlear implant

DISCUSSION

- Intralabyrinthine hemorrhage is a rare condition that results in permanent hearing loss
- Previously described etiologies include trauma and blood dyscrasias
- Spontaneous cochlear hemorrhage (without an identifiable cause) may also occur

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