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MR findings in the Ramsay Hunt syndrome.

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Abbreviated Reports

MR Findings in the Ramsay Hunt Syndrome

To our knowledge, the MR findings have not been described in an inflammatory process such as herpes zoster oticus (Ramsay Hunt syndrome) involving an internal auditory canal.

Case Report

A 68-year-old woman had a 1-week history of vertigo and right-sided ear pain, hearing loss, and tinnitus followed by the abrupt onset of total right facial paralysis. Vesicles noted on the right pinna suggested the diagnosis of Ramsay Hunt syndrome. Neurotologic studies showed absent caloric response on the right, total loss of facial nerve excitability, and profound neurosensory hearing loss. To exclude a tumor affecting cranial nerves VII and VIII, axial and coronal MR imaging was performed on a 1.5-T GE Signa system, using 3-mm slice thickness, 600/20/2 (TR/TE, excitations), 256 × 256 matrix, and a 20-cm field of view. The MR study showed poor definition of the cranial nerves in the right internal auditory canal and more soft tissue in the right canal than in the left (Fig. 1A). A subsequent air-CT cisternogram (Fig. 1B) showed incomplete filling of the normal-sized right internal auditory canal and a concave medial soft tissue-air interface. Because the patient had had no improvement in symptoms for 3 months after their onset and because an intracanalicular tumor was possible, a translabyrinthine approach was used to totally decompress the right facial nerve from the stylomastoid foramen

through the internal auditory canal. At surgery, cranial nerve VII appeared edematous in the lateral half of the right internal auditory canal and at its horizontal segment. Cranial nerve VIII was normal in size in the proximal canal but enlarged to fill the canal laterally and appeared consistent with a small intracanalicular tumor. The vestibular and cochlear branches of cranial nerve VIII were transected and removed. Histologic examination of the nerves showed vesicular degeneration and lymphocytic infiltration consistent with Ramsay Hunt syndrome. No evidence of neoplasm was found. Postoperatively, the patient's balance has improved significantly, but her right-sided facial paralysis has persisted.

Discussion

In the Ramsay Hunt syndrome, multiple cranial nerves can be affected by the herpes zoster virus, and several clinical subgroups can occur [1]. Herpes auricularis with facial paralysis is associated with temporary or, less frequently, permanent facial paralysis from cranial nerve VII, possible involvement of the geniculate ganglion, and skin lesions. Herpes auricularis with facial palsy and auditory symptoms may have accompanying neurosensory hearing loss and vestibular abnormalities due to direct involvement of cranial nerve VIII. Treatment for facial nerve paralysis in herpes zoster oticus, including both antiinflammatory therapy and surgical decompression, remains controversial [2].

This case shows that edematous seventh and eighth cranial nerves may be difficult to differentiate from an intracanalicular tumor in MR imaging of the internal auditory canal. Tumor within the canal obscures cranial nerves VII and VIII and may have a slightly greater signal intensity than the nerves on short TR and TE images [3, 4].

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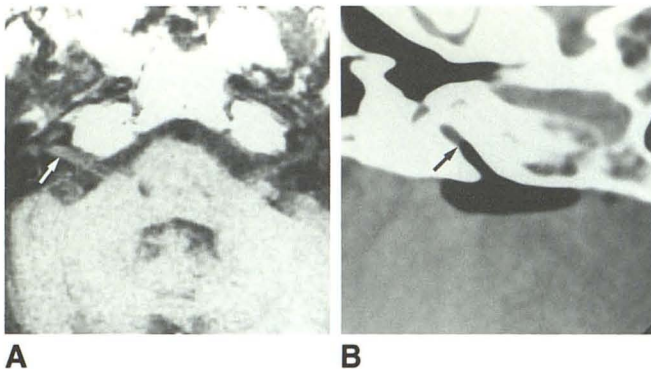


Fig. 1.—Ramsay Hunt syndrome in a 68-year-old woman.

A, MR image 600/20 shows edematous cranial nerves in right internal auditory canal (arrow) that could be misinterpreted as intracanalicular tumor.

B, Air-CT cisternogram shows incomplete filling (arrow) of right internal auditory canal.

REFERENCES

1. Paparella MM. Otological manifestations of viral disease. *Adv Otorhinolaryngol* 1973;20:144-154
2. May M, Blumenthal F. Herpes zoster oticus: surgery based upon prognostic indicators and results. *Laryngoscope* 1982;92:65-67
3. Daniels DL, Herfkens R, Koehler PR, et al. Magnetic resonance imaging of the internal auditory canal. *Radiology* 1984;151:105-108
4. Daniels DL, Schenck JF, Foster T, et al. Surface coil magnetic resonance imaging of the internal auditory canal. *AJNR* 1985;6:487-490