Reviewer's report

Title: Incidental findings on MRI scans of patients presenting with audiovestibular symptoms

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Reviewer: Tsutomu Nakashima

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Authors described incidental findings on MRI scans in patients with audiovestibular symptoms.

My questions and suggestions are as follows;

1) Audiovestibular symptoms must be explained in details. What is the number of patients only with audiological symptoms or vestibular symptoms? Because vertigo may be a sign of impaired cerebral circulation, were incidental findings with WML much in patients with vestibular symptoms than in patients only with hearing impairment?

2) Authors should describe more advanced technique in MRI. (1) Authors wrote that MRI with gadolinium enhancement is a gold standard for diagnosis of acoustic tumor. Using the advanced technique of MRI, however, sensitivity of MRI diagnosis of acoustic tumor is now 100% without gadolinium enhancement for screening of the acoustic tumor although gadolinium enhancement is necessary to confirm the acoustic tumor. (Fortnum H, et al, The role of magnetic resonance imaging in the identification of suspected acoustic neuroma: a systematic review of clinical and cost effectiveness and natural history. Health Technol Assess, 2009 Mar;13(18):iii-iv, ix-xi, 1-154. Review) (2) Using 3 Tesla 3D-FLAIR MRI, precontrast signal was observed in two-thirds of the ears with sudden sensorineural hearing loss, post contrast gadolinium enhancement was observed in one third of the ears with sudden sensorineural hearing loss due to disruption of the blood-labyrinthine barrier. (Yoshida T, et al, Three-dimensional fluid-attenuated inversion recovery magnetic resonance imaging findings in sudden sensorineural hearing loss. Laryngoscope, 2008, 118: 1433-7. (3) Regarding relationship between the vascular loop and the audiovestibular symptoms, authors cited only papers describing negative results. However, positive results have been described in several papers. Special attention should be paid to a paper evaluating both vestibulocochlear and facial nerves (Gorrie A, et al, Is there a correlation between vascular loops in the cerebellopontine angle and unexpected unilateral hearing loss? Otology and Neurotol, January issue, 2010)

Level of interest: An article whose findings are important to those with closely
related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.