



# Microvascular Decompression and Transposition of the 8th Cranial Nerve Using a Fenestrated Clip

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## Key words

- 8th cranial nerve
- Glow-800
- Microvascular decompression
- MVD
- Retrosigmoid craniotomy
- Vascular compression
- Vestibulocochlear nerve

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Neurovascular compression is a potential, yet rare cause of vertigo and unilateral tinnitus. Despite the high success rate of microvascular decompression (MVD) in other vascular compression syndromes, the outcome reported after MVD of the vestibulocochlear nerve is variable.<sup>1,2</sup> The presence of combined symptoms of tinnitus and vertigo treated by MVD has demonstrated a higher predictive value for success.<sup>3</sup>

In this video, we present the case of a 68-year-old male who presented with vertigo and tinnitus refractory to medical management and vestibular therapy. Audiologic evaluation was normal apart from mild sensorineural hearing loss. Vestibular testing was suggestive of uncompensated right peripheral vestibulopathy. Magnetic resonance imaging with fast imaging employing steady-state acquisition sequences revealed vascular compression by the right antero-inferior cerebellar artery (AICA) at the cisternal component of vestibulocochlear nerve. After a multidisciplinary discussion, a microvascular decompression was performed through a right retrosigmoid craniotomy. The AICA was mobilized off the vestibulocochlear nerve and was secured to the petrous dura using a fenestrated clip. Indocyanine green angiography with Glow-800 was conducted before and after AICA transposition to confirm adequate flow through the mobilized vessel. Postoperatively, the patient's vestibular symptoms improved significantly. This case demonstrates that microvascular decompression can provide a satisfactory outcome in patients with unilateral tinnitus and vertigo associated with vascular compression in appropriately selected cases (Video 1).

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*Conflict of interest statement:* The authors declare that the article content was composed in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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