

# Microsurgical Decompression of Trigeminal Neuralgia Caused by Simultaneous Double Arterial (SCA and AICA) and Petrosal Vein Complex Compression

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## Abstract

Trigeminal neuralgia is a chronic pain disorder affecting the face. In approximately 80% of cases, it is most commonly caused, when the root entry zone (REZ) of the trigeminal nerve is compressed by the superior cerebellar artery (SCA). The etiology of the remaining 20% of cases is distributed among venous, arteriovenous malformations, posterior fossa tumors, multiple sclerosis plaque compressions, and other pathologies. Combinations of those compressive factors are very rare.<sup>1–4</sup> Herein, we present a video clip of microvascular decompression (MVD) in a 73-year-old female, who has failed conservative treatment with 6 medications over 10 years. She was affected by a unique triple compression of the right REZ by the SCA, anterior inferior cerebellar artery (AICA), and petrosal vein complex (►Fig. 1A). Right-sided microsurgical decompression of the REZ of the trigeminal nerve through standard retrosigmoid craniotomy was performed by the senior author (K.I.A.). The SCA and AICA were separated from the nerve using Teflon pledgets. The petrosal vein complex was coagulated and divided, freeing up the right trigeminal nerve (►Fig. 1B). The patient was discharged home on the third postoperative day with complete resolution of trigeminal neuralgia. The link to the Video can be found at: <https://youtu.be/PYVvImGW0yE>.

## Keywords

- trigeminal neuralgia
- microvascular decompression
- suboccipital craniotomy
- arterial compression
- venous compression



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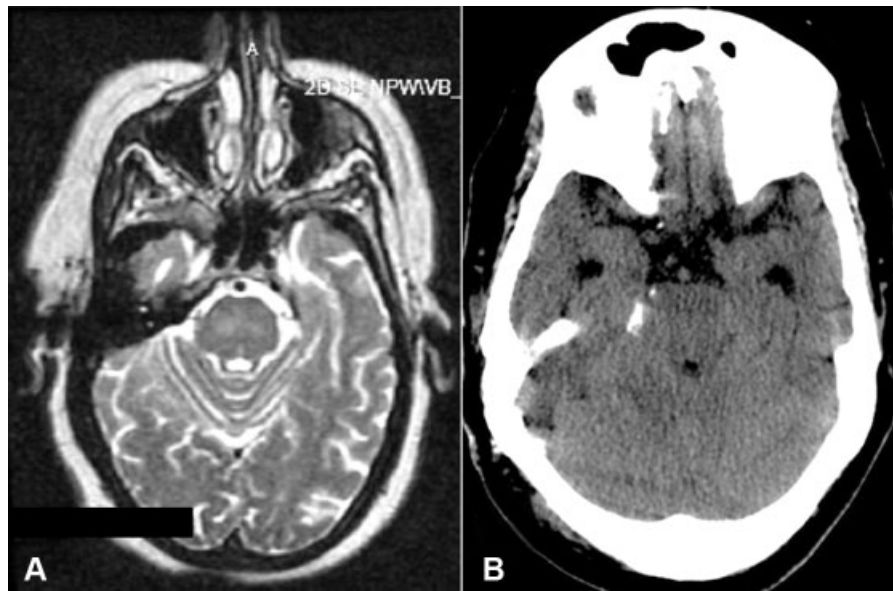
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**Fig. 1** (A) Preoperative T2-weighted axial magnetic resonance imaging (MRI); (B) Postoperative noncontrast axial computed tomography (CT) of brain.

#### Conflict of Interest

None.

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