



## Transposition of Megadolichoectatic Basilar Artery in Trigeminal Neuralgia: 3-Dimensional Operative Video

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### Key words

- 3-D surgical video
- Basilar
- Dolichoectatic
- Neuralgia
- Transposition
- Trigeminal

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### CRedit AUTHORSHIP CONTRIBUTION STATEMENT

**Rodrigo Uribe-Pacheco:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Resources, Software, Supervision, Visualization, Writing – original draft, Writing – review & editing. **Marcos V. Sangrador-Deitos:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Resources, Visualization, Writing – original draft, Writing – review & editing. **Gerardo Y. Guinto-Nishimura:** Conceptualization, Formal analysis, Methodology, Software, Supervision, Validation, Visualization, Writing – review & editing. **Juan F. Villalonga:** Conceptualization, Funding acquisition, Methodology, Resources, Software,

Trigeminal neuralgia is usually associated with vascular compression of the nerve entry zone. However, a dolichoectatic basilar artery represents the cause in only up to 3% of cases.<sup>1</sup> This is characterized by dilation, elongation, or tortuosity of the vertebrobasilar arteries.<sup>2</sup> In 10%–30% of cases, pain relief is not achieved with medical treatment. Thus, microvascular decompression techniques have been proven the most effective. In such cases, repositioning the offensive vessel has the highest success rate.<sup>3,4</sup>

Hereby, we present the case of a 75-year-old man with a 10-year history of typical trigeminal neuralgia on the left side of the face. Multiple pharmacologic trials were attempted, with no pain alleviation, even at maximum dosages. Magnetic resonance imaging revealed compression over the left trigeminal nerve along its trajectory within the prepontine cistern, caused by a megadolichoectatic basilar artery. Surgical treatment was performed using a retrosigmoid approach, aiming for the decompression and mobilization of the offending vessel. This surgical video illustrates anatomic nuances and critical aspects of the retrosigmoid approach as a safe and adequate access for microvascular decompression in a rare case of a megadolichoectatic basilar artery (Video 1). The patient consented to the procedure and the publication of his images. Institutional review board/ethics committee approval was not required nor sought due to the nature of this paper.

Supervision, Validation, Writing – original draft. **Matías Baldoncini:** Conceptualization, Data curation, Funding acquisition, Project administration, Resources, Supervision, Visualization, Writing – review & editing. **Mauro A. Segura-Lozano:** Conceptualization, Formal analysis, Funding acquisition, Project administration, Resources, Validation, Visualization, Writing – review & editing. **Alvaro Campero:** Conceptualization, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Writing – review & editing.

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