

Microvascular Decompression in an Elderly Patient with Refractory Trigeminal Neuralgia: Case Report

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Isis Franco Martin,¹ Fernanda Cittadella Alves,¹ Juliana Araujo Rech Lima,¹ Talita Sousa Brito,¹ Isabela Ormond Bataglia Herrero,¹ Yasmin Utuari De Oliveira,¹ Bruna Durigan Baia,¹ Emanuele Pires Canela Dos Santos.²

¹ Centro Universitário De Várzea Grande. Brazil.

² Universidade Do Estado De São Paulo- Usp. Brazil.

Corresponding author: Isis Franco Martin email:isisfranco@outlook.com

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Abstract

Introduction: Trigeminal neuralgia (TN) is characterized by severe, shock-like facial pain, often triggered by light stimuli. While pharmacological therapy (e.g., Carbamazepine or Oxcarbazepine) is effective for most patients, a significant proportion develop refractory pain requiring surgical intervention. Microvascular decompression (MVD) is considered the gold-standard etiological treatment, offering high long-term pain relief.¹ Recent studies confirm its safety and effectiveness, especially in patients with well-defined neurovascular contact.² Minimally invasive alternatives, such as percutaneous radiofrequency rhizotomy and stereotactic radiosurgery, are valid options in selected cases.³

Clinical description: A 64-year-old female presented with a 5-year history of right-sided facial pain, described as electric shock-like episodes affecting the maxillary and mandibular branches, with progressive worsening. Prior pharmacologic treatment included carbamazepine, oxcarbazepine, and baclofen, with only partial relief and significant side effects. Brain MRI revealed vascular contact between the superior cerebellar artery and the right trigeminal nerve root. Given the pain refractoriness and clear compressive etiology, MVD was indicated. Surgery was performed via a retrosigmoid approach with vascular dissection and interposition of a Teflon patch. The patient had no new neurological deficits and reported immediate and complete pain relief. At 6-month follow-up, she remained pain-free, with good control on low-dose carbamazepine monotherapy. She reported marked

improvement in quality of life, resuming domestic and social activities without limitations or adverse effects.

Discussion: Classical TN with neurovascular conflict is the most responsive subtype to MVD. Prospective studies show pain relief in up to 86% of cases, especially in patients with nerve morphological changes.² A retrospective study showed that after 43 months, 83% achieved substantial relief, often with reduced medication.³ Compared to percutaneous techniques, MVD offers lower recurrence and fewer sensory complications.³ Proper patient selection and multidisciplinary assessment are key.

Conclusions: MVD remains a safe, effective option for refractory TN with neurovascular conflict. This case illustrates the benefits of early surgical intervention, leading to pain remission, monotherapy, and significant quality-of-life gains.

References

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