

Immediate and Long-term Microvascular Decompression Outcomes for Mixed Atypical and Classic Trigeminal Neuralgia

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Introduction

Classic trigeminal neuralgia (TN) consists of sporadic, sharp shooting pain, whereas atypical TN presents with constant aching, numbness or burning that can appear along with classic features, leading to a mixed presentation. Microvascular decompression (MVD) is an effective treatment for classic TN, but its utility in treating mixed TN is not well-established.

Methods

We retrospectively studied 74 adult patients with a mixture of classic and atypical TN symptoms who underwent MVD between August 2008 and October 2016. Recorded variables included patient demographics, baseline symptoms, radiologic and intraoperative findings, and surgical and pain outcomes.

Table 1: Patient demographics (n=74)

	Frequency	Percent
Female	58	78.4
Age	Mean: 52.6 ± 13.4 months	
<i>Distribution of Pain</i>		
Right-sided	33	44.6
V1	30	40.5
V2	61	1.4
V3	53	71.6
Duration of symptoms	Mean: 68.3 ± 81.7 months	
<i>Past Medical History</i>		
Alcohol Hx	11	14.9
Smoking Hx	15	20.3
Headaches	17	23.0
Dental problems	7	9.5
Other pain syndromes	14	18.9
Previous History of Interventions	25	33.8
Previous Rhizotomy	21	28.4
Previous Radiosurgery	6	8.1
Previous Microvascular Decompression	2	2.7
<i>Pre-operative Medications</i>		
Pre-operative anticonvulsants	74	100
Pre-operative narcotics	10	13.5

Results

The average age of our cohort was 52.6 ± 13.4 years with a female predominance of 78.4%. 71 patients (95.9%) had at least 1 month of follow-up. The immediate post-operative (within 1-3 months) outcomes for those 71 patients were: 51 (71.8%) had complete pain relief (Grade I outcome) including improvement of atypical pain symptoms, while six patients (8.5%) had no pain relief (Grade IV outcome). Risk factors associated with having any residual pain following MVD (Grade II-IV outcome) included male gender (p=0.032) and absence of pre-operative use of narcotic medications (p=0.012). Risk factors associated with Grade IV outcome include absence of pre-operative use of narcotic medications (p=0.024) and no nerve compression on pre-operative MRI (p=0.011). Mean length of follow-up was 11.9 ± 12.3 months. In that time, 43 patients (60.6%) developed recurrence of classic or atypical TN pain. 20 patients (28.2%) developed recurrence of specifically classic TN symptoms, and no risk factors were found to be significantly associated.

Conclusions

Patients with mixed TN suffer from both classic and atypical TN symptoms. 71.8% of our cohort reported complete pain relief including improvement of atypical pain following MVD in the immediate post-operative stage. MVD can offer pain relief for patients with a mixture of typical and atypical TN pain.

Learning Objectives

By the conclusion of this session, participants should be able to: 1) define mixed trigeminal neuralgia pain, 2) describe the efficacy of MVD for treatment of mixed trigeminal neuralgia pain.

References

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