

Retractorless Microvascular Decompression for Trigeminal Neuralgia: Technical Nuances and Results in 22 Cases Zachary Scott Mendelson BS; Ahmed Sheikh; James K. Liu MD [Rutgers University, New Jersey Medical School]

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Introduction

Operative microsurgery of skull base lesions without the use of fixed retractors has gained increased popularity due to less morbidity and brain injury from retractor-induced complications. In microvascular decompression procedures, cerebellar retraction can increase the risk of postoperative hearing loss and cerebellar injury. The authors present a series of patients with trigeminal neuralgia (TN) who underwent a retractorless microvascular decompression (RMVD). The operative nuances and technical pearls are described and assessment of pain relief and postoperative complications are reported.

Methods

A retrospective chart review was performed on 20 patients diagnosed with TGN. All patients were treated by way of RMVD through a retrosigmoid approach. Data were extracted regarding patient demographics, presenting symptoms, affected trigeminal branches, intra-operative complications, post-operative complications, degree of pain relief, and recurrence.



a:left rMVD showing compression of REZ by SCA, b: post MVD

Results

Twenty patients (13 females, 7 males) underwent 22 RMVD procedures. There were no complications of hearing loss, facial palsy, trigeminal dysfunction, cerebellar injury or CSF leakage. There were 15 "excellent" outcomes defined by being completely pain free upon last follow up and not taking medication. There were 3 "pain free recurrences" defined by being initially pain free for longer than 3 months and then experiencing symptoms of TGN, 2 of these underwent reoperation again by RMVD and currently have "excellent" outcomes. One patient who experienced "pain free recurrence" underwent radiosurgery. Three patients had a "good" outcome defined by significant but not total pain relief. One patient was considered a "poor" outcome defined by persistent pain and medication use. On final outcome, 15 (75%) patients were defined as "excellent", 3(15%) "good" outcome, 1(5%) "pain free recurrence," and 1 (5%) "poor" outcome.



a: retrosigmoid exposure without retractors; b; retrosigmoid exposure with a retractor does not increase the working corridor



a: right RMVD showing compression of REZ by SCA; b and c: post MVD

Conclusions

RMVD is a safe and effective strategy for surgical treatment of TGN. The avoidance of fixed retractors minimizes the risk of postoperative hearing loss and cerebellar injury.

Learning Objectives

By the conclusion of this session, participants should be able to:

1) Describe the advantages of a retractorless technique for microvascular decompressions.

2) Discuss the expected outcomes after RMVD for trigeminal neuralgia.

Understand the etiologies of trigeminal neuralgia.

References

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