

Introduction

Microvascular decompression (MVD) is considered as gold standard intervention in patients with medically refractory trigeminal neuralgias (TNs). In spite of this fact, failure rates especially in delayed fashion are considerable. In this study we have analyzed our intraoperative findings in predicting overall pain relief after MVD in TNs.

Methods

Clinical and operative data were evaluated of all patients undergoing MVD in TNs between the period 2012 and 2016. The operative videos were retrieved from the database and were evaluated by two independent neurosurgeons. Important operative findings were documented including the type of compression (arterial, venous, none), degree of compression (severe, mild, none), Location of compression (proximal, distal), thickness of arachnoid (normal or thickened), type of compressing vessel (SCA, AICA, PICA) etc. Post-operative pain score was recorded using Marseille's score at immediate post op, 1 year and 2 year follow up (where possible). Marseille's score III or better was considered as adequate pain relief.

Results

A total of 56 patients underwent MVD in the study period and amongst them, operative video could be retrieved for 44 patients. The inter-observer reliability of

the individual measurements of different operative findings were 0.98 (type of compression), 0.94 (degree of compression), 0.96 (location of compression), 0.89 (thickness of arachnoid) and 0.92 (compressing vessel). The overall adequate pain relief rate at the immediate post-operative period, 1 year and 2 years were 98%, 92% and 83% respectively. Only half of the patients of TN without significant compression had adequate pain relief at 1 year. Severe compression ($p=0.001$) and proximal compression ($p=0.02$) were most predictive of pain recurrence at 1 year.

Conclusions

Severe degree of compression at the proximal part of the trigeminal nerve has a greater predilection for poor pain resolution after microvascular decompression. Patients with obvious vascular compression have more predictable pain relief with surgery than without compression.

Learning Objectives

By Conclusion of this session, participants should be able to

1. Discuss the overall outcome of MVD in TNs
2. Discuss the intraoperative findings that can predict the long term pain relief