



# Microvascular Decompression and Gamma Radiosurgery for Trigeminal Neuralgia: A Study on Long Term Efficacy and Patient Satisfaction

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## Introduction

Microvascular decompression and gamma radiosurgery are both accepted modalities of treatment for intractable trigeminal neuralgia. The aim of our study was to evaluate the long term efficacy of both these modalities with respect to pain relief and patient satisfaction.

## Methods

We excluded those patients no longer living at time of the survey, those who had a prior intervention and those requiring an additional intervention following initial treatment. 122 patients met the criteria. Telephone interview was conducted to assess the pain status and patient satisfaction survey. Only 61 patients responded to the interview and survey. Of these 45 patients underwent treatment by gamma radiosurgery (GKS) and 16 underwent microvascular decompression (MVD). Pain status was assessed using the Barrow Neurological Institute (BNI) pain scale.

## Results

The median follow up was 5.2 years. There was no significant difference between the two groups with respect to initial pain relief (MVD 82%, GKS 100%,  $P=0.07$ ). There was no significant difference in pain recurrence between the two groups (GKS 40%, MVD 19%,  $P=0.124$ ). At last follow up 81.3% of patients who underwent MVD had total pain relief (BNI scale I) when compared to only 37.8% of patients who had GKS. This difference was statistically significant ( $P=0.003$ ). There was no significant difference in the patient satisfaction with respect to undergoing the same procedure again (MVD 94%, GKS 71%,  $P=0.17$ ) and recommending it to family members (MVD 94%, GKS 84%,  $P=0.34$ ).

## Conclusions

From our study microvascular decompression offered total pain relief in significantly higher number of patients than gamma radiosurgery. There was no significant difference in the patient satisfaction rate between the two groups.

## Learning Objectives

To understand the long term efficacy of microvascular decompression and radiosurgery for trigeminal neuralgia with respect to pain relief.

