

Older Patients Have Greater Improvements in Pain Score Following Microvascular Decompression

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Introduction

TN is more common in elderly patients, and recent studies have demonstrated safety of MVD in this patient population (1 -3). TN is rare in young adults, and MVD may be less effective in this age group (4). To date elderly age has not been correlated with efficacy of MVD. We evaluated the role of age and gender in predicting outcome after MVD in patients with typical TN.

Methods

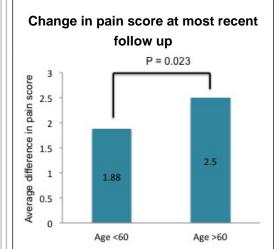
Inclusion criteria included typical TN, demonstrated neurovascular compression on preoperative imaging, and having undergone MVD between 1/1/2004 and 12/31/2013. Information was obtained by review of medical records and conducting telephone interviews. Predictive factors investigated included age, gender, type of vascular compression seen at surgery, side of surgey, duration of symptoms, previous procedures, preoperative trigger points, preoperative medication responsiveness, pain distribution, and presence of hypertension. Patients were divided into under 60 and 60 or older age groups for analysis. We additionally performed multivariate analysis using a general linear model.

BNI pain intensity score

- 1 No pain, not taking any medications
- Occasional pain, not requiring any medication
- Some pain, adequately controlled with medication
- Some pain, not adequately controlled with medication
- Severe pain, no relief

Results

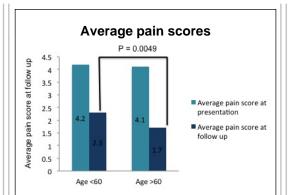
The study included 124 patients, 82 under 60 and 42 over 60



Patients under 60 had a smaller average change in pain score at most recent follow up than patients aged 60 and older (p = 0.023, Wilcoxon rank sum test).

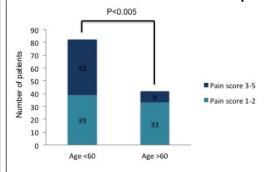
Characteristic	Age <60	Age >60	P value
Average age	45.8	67	<0.005
Percent women	58%	50%	0.34
Average length of follow up (months)	35.5	31.5	0.42
Arterial compression	75%	96%	0.0025
Right side	65%	58%	0.43
Average disease duration (years)	490%	700%	0.045
Previous procedure	11%	19%	0.22
Preoperative trigger points	53%	48%	0.54
Preoperative medication responsiveness	70%	87%	0.031
V1	26%	29%	0.68
V2	73%	77%	0.6
V3	48%	38%	0.22
Hypertension	29%	52%	0.0082

Comparison of predictive factors between the two age groups. Continuous variables were compared using the Wilcoxon rank sum test, while categorical variables were compared between groups using the Chisquare test.



Patients aged 60 and over had significantly lower pain score at most recent follow up than patients under 60 (p = 0.0049, Wilcoxon rank sum test). There was no difference in initial pain scores (p = 0.69, Wilcoxon rank sum test).

Pain score at most recent follow up



A greater proportion of patients aged 60 and older had a pain score of 1 or 2 at most recent follow up compared to patients under age 60 (p<0.005, Chi-square test). There was no significant difference in preoperative pain scores.

Conclusions

Patients aged 60 and older had better outcomes after MVD than younger patients. These results may help to guide future patient selection.

Characteristic	P value
Age	0.035
Gender	0.018
Arterial compression	0.98
Side	0.31
Disease duration	0.23
Previous procedure	0.8
Preoperative trigger points	0.46
Preoperative medication responsiveness	0.49
V1	0.2
V2	0.00011
V3	0.71
Hypertension	0.15

Results of multivariate regression analysis. Older age and male gender were associated with greater change in pain score, while V2 distribution of pain was associated with worse outcome.

References

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