

Outcome Comparison of Endoscopic and Transpalpebral Decompression for Treatments of Frontal Migraine Headaches

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Abstract

Background: This study was designed to compare the efficacy of the transpalpebral versus endoscopic approach to decompression of the supraorbital and supratrochlear nerves in patients with frontal migraine headaches.

Methods: The medical charts of 253 patients who underwent surgery for frontal migraine headaches were reviewed. These patients either underwent transpalpebral nerve decompression (TPND, n=62) or endoscopic nerve decompression (END, n=191). The preoperative and ≥ 12 month postoperative migraine frequency, duration, and intensity were analyzed to determine the success of the surgeries.

Results: Forty-nine (79%) of 62 patients in the TPND group and 170 (89%) of 191 patients who underwent END experienced a successful outcome (at least 50% decrease in migraine frequency, duration, or intensity) after one year from surgery. END had a significantly higher success rate than TPND ($p < 0.05$). Thirty-two (52%) patients in the TPND group and 128 (67%) patients who underwent END observed elimination of migraine headaches. The elimination rate was significantly higher in the END group than in the TPND group ($p < 0.03$) (Figure 1).

	TPND	END	p-value*
Success Rate	79%	89%	$p < 0.05$
Elimination Rate	52%	67%	$p < 0.03$

Figure 1. Success and Elimination Rates; *p-value calculated from chi-square tests

Conclusions: END was found to be more successful at reducing or eliminating frontal migraine headaches than TPND and should be selected as the first choice whenever it is anatomically feasible.

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