# Combined hemihypoglossal and masseteric nerve transfer for facial nerve palsy

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## Objectives

✧ Various dynamic procedures are available for facial nerve palsy.

✧ When used as isolated procedures, they often provide suboptimal results.

✧ Combined hemihypoglossal and masseteric nerve transfer (CHMNT) is a novel technique that may offer optimal reinnervation with improved outcomes when compared to isolated hemihypoglossal or masseteric nerve transfer.

## Methods

✧ 56-year-old male with complete left facial nerve palsy following cerebellopontine angle tumor resection underwent CHMNT in 2015.

✧ The trunk of facial nerve was innervated with a split hypoglossal nerve, while the buccal branch of facial nerve was innervated by the masseteric branch of trigeminal nerve.

✧ The patient was evaluated with the House-Brackmann Classification and Sunnybrook Facial Grading System pre- and postoperatively.
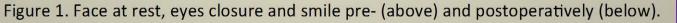
## Results

✧ Pre- and 18 months postoperative House-Brackmann grade was VI and III, while Sunnybrook Facial Grading System score (for resting symmetry, voluntary movement and synkinesis) was 0 and 51, respectively (See Figure 1).

✧ Time to recovery was 11 months for facial tone and 6 months for smile.

✧ After 18 months of follow-up, smile symmetry and significant movement of oral commissure were present.

✧ No significant impairment of masticatory function, atrophy of tongue or speech difficulties were noticed.

## Conclusions

Our new technique, which is a combination of two well-known procedures, hypoglossal and masseteric transfer, seems to provide satisfactory outcomes, as the hypoglossal nerve provides baseline tone to facial musculature and masseteric nerve valuable dynamic smile.

Figure 1. Face at rest, eyes closure and smile pre- (above) and postoperatively (below).