Immediate Facial Nerve Reconstruction after Radical Parotidectomy

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Objectives
❖ A common approach for facial reanimation following parotidectomy is nerve graft for smile and static procedure for eye closure.
❖ Outcomes are variable and dependent on the nerve graft.
❖ We describe an approach using dual nerve transfers and nerve grafting to maximize likelihood of pan-facial reanimation.

Methods
❖ Review of all patients who underwent immediate or delayed facial nerve reconstruction
❖ Measured outcomes, complications, and postoperative nerve function

Results
❖ 57 patients, 35 with preoperative paralysis (16 partial, 19 complete)
❖ 39 immediate, 18 delayed
❖ Mean follow up 32.2 months (range: 1-139 months)
❖ 48 (84%) still surviving at time of study
❖ 42 facial nerve grafting, 25 masseteric nerve transfer, 26 mini-hypoglossal transfer
❖ 38 videos of postoperative function were available, results summarized in table

Table 1: Postop function (Terzis Grading Scale)

<table>
<thead>
<tr>
<th>Function</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>6</td>
<td>10.5%</td>
</tr>
<tr>
<td>Fair</td>
<td>13</td>
<td>22.8%</td>
</tr>
<tr>
<td>Moderate</td>
<td>11</td>
<td>19.3%</td>
</tr>
<tr>
<td>Good</td>
<td>5</td>
<td>8.8%</td>
</tr>
<tr>
<td>Excellent</td>
<td>3</td>
<td>5.3%</td>
</tr>
</tbody>
</table>

Conclusions
❖ Dual nerve transfers in addition to nerve grafting reliably restores dynamic smile and eye closure.
❖ The specific technique is guided by the defect. Nerve to masseter for upper division function and mini-hypoglossal for lower division function reduces synkinesis.