Endoscopic Posterior Costal Cartilage Graft LTP

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Outline

• Indications
• “Inglis Technique”
• Technical Modifications
• Outcomes
Endo PCCG: Indications

- Subglottic stenosis
- Glottic stenosis
- Bilateral TVC paralysis
Endo PCCG: The “Inglis Technique”

- Inglis et al. “We use a CO₂ laser in a continuous high energy pulse mode with settings of 150 mJ/pulse at 10 pulses/sec through a micromanipulator”
The “Inglis Technique”

Gerber M E et al. Otolaryngology -- Head and Neck Surgery
2013;148:494-502

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The “Inglis Technique”

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The “Inglis Technique”

Fig. 3. Geometric considerations for carving the graft. A tongue-in-groove bevel (left) provides a more secure fit but encroaches on the lumen more than the keystone bevel (right).

Endoscopic Posterior Cricoid Split and Rib Grafting in 10 Children.
Inglis, Andrew; Perkins, Jonathan; Manning, Scott; Mouzakes, Jason
Typical Posterior Graft

Gerber M E et al. Otolaryngology -- Head and Neck Surgery
2013;148:494-502

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The “Inglis Technique”

“Graft insertion is challenging...During insertion, the graft itself produces this distraction, and considerable force must be applied to get it to snap into place.”

-Inglis AF, et al. 2003
Technical Modifications

Why not use the CO2 laser?

• Cost
• Potential for airway fire
• Potential for thermal injury/scarring
• Inability to accomplish the cricoid split with the CO2 laser
TOUCH THE FUTURE

One versatile system for soft tissue and fine bone dissection.

SONOPET®
Ultrasonic Aspirator
Pediatric Endoscopic PCCG
Pediatric Endoscopic PCCG
Outcomes—General

• Less pain
• Shorter LOS
• Reduced need to stent
• 25/28 (89%) in Gerber, et al 2013 achieved decannulation or acceptable airway (if no history of a tracheostomy)
<table>
<thead>
<tr>
<th>Patient</th>
<th>Age</th>
<th>Indication</th>
<th>Split Technique</th>
<th>Stent (wks)</th>
<th>Outcome</th>
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<tbody>
<tr>
<td>1</td>
<td>62y</td>
<td>PGS</td>
<td>CO2-Micro.</td>
<td>4</td>
<td>Failed</td>
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<tr>
<td>2</td>
<td>3y</td>
<td>PGS</td>
<td>CO2-Micro.</td>
<td>3</td>
<td>Decann</td>
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<tr>
<td>3</td>
<td>14y</td>
<td>PGS</td>
<td>CO2-Micro.</td>
<td>0 (ss)</td>
<td>Good Airway</td>
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<td>39y</td>
<td>PGS</td>
<td>CO2-Micro</td>
<td>3</td>
<td>Decann</td>
</tr>
<tr>
<td>5</td>
<td>4y</td>
<td>PGS</td>
<td>CO2-OmniGuide</td>
<td>0</td>
<td>Decann</td>
</tr>
<tr>
<td>6</td>
<td>66y</td>
<td>Bil TVC Immobility (RA)</td>
<td>CO2-Micro.+scissors</td>
<td>4</td>
<td>Decann</td>
</tr>
<tr>
<td>7</td>
<td>33y</td>
<td>PGS</td>
<td>Scissors</td>
<td>3</td>
<td>Decann</td>
</tr>
<tr>
<td>8</td>
<td>57y</td>
<td>PGS</td>
<td>Sonopet</td>
<td>3+2</td>
<td>Capping</td>
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<tr>
<td>9</td>
<td>3y</td>
<td>Bil TVC Paralysis</td>
<td>Laryngeal knife</td>
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<td>Healing</td>
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<tr>
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<td>4y</td>
<td>PGS</td>
<td>CO2-OmniGuide+scissors</td>
<td>0</td>
<td>Healing</td>
</tr>
<tr>
<td>11</td>
<td>24y</td>
<td>PGS</td>
<td>Sonopet</td>
<td>3</td>
<td>Capping</td>
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</tbody>
</table>
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THANK YOU