Office-Based Injection Laryngoplasty for Vocal Fold Paralysis

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Introduction

- Field of Laryngology is rapidly expanding
- Increased training opportunities
- Technological advancements
  - Distal chip endoscopy
- Increasing number of procedures performed in-office
  - Decreased cost

Office Based Injection Laryngoplasty

- IRB approval
- Retrospective chart review
- University of Wisconsin-Madison
- Three year period: 2007-2009
Results

Indication for Office Based Injection Laryngoplasty (n=194)

- Paralysis (42%)
- Paresis (8%)
- Presbylarynges (31%)
- Vocal fold scar (12%)
- Other (7%)

Unilateral Vocal Fold Paralysis (UVFP)

- 56 individuals
- 82 injections

- 38– left vocal fold
- 18– right vocal fold

Etiology of UVFP

<table>
<thead>
<tr>
<th>Etiology</th>
<th>Percentage of patients</th>
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</thead>
<tbody>
<tr>
<td>Thoracic</td>
<td>36%</td>
</tr>
<tr>
<td>Idiopathic</td>
<td>30%</td>
</tr>
<tr>
<td>Cervical</td>
<td>21%</td>
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<tr>
<td>Cerebral</td>
<td>10%</td>
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<tr>
<td>Intubation</td>
<td>3%</td>
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</tbody>
</table>

Approach for OBIL

- Transoral (85%)
- Transcricothyroid membrane (10%)
- Transthyrohyoid membrane (3%)
- Transthyroid ala (1%)
Results

• Average pain score recorded – 1.4
• Average amount injected – 0.64 cc

Disposition of patients with UVFP

- Thyroplasty or Ansa-RLN Reinnervation 30%
- Died 14%
- Self-resolved 22%
- Lost to follow-up 25%
- No further intervention 9%
- Lost to follow-up 25%

Discussion


Approach

• Transoral approach
  – Single person
  – Surgeon directs his/her own view
• Limitations
  – Prominent gag reflex
  – Large tongue
  – Retroflexed epiglottis
Office Based Injection Laryngoplasty

- Well tolerated
  - Pain = 1.4 / 5

- Average amount injected = 0.64 cc
  - Average amount in cadaveric larynx
    - Male – 0.62 cc
    - Female – 0.41 cc


Disposition

- 30% sought more durable treatment
  - 29% of patients required thyroplasty

- 22% with documented return of function

- Literature review of individuals with UVFP
  - Complete recovery of voice: 52 +/- 17%
  - Some degree of voice recovery in 61 +/- 22%


Lack of follow-up

- 25% in this series
  - Similar to other studies 1-4

- Large drawing radius
- Tertiary care center
- Unknown: % which recovered voice


Conclusions

- Office-based injection laryngoplasty is an important tool in the management of UVFP

- Well-tolerated
- Familiarity with multiple approaches is beneficial

- Disposition of patients is variable