EAGLE SYNDROME

- Elongated styloid process or calcified stylohyoid ligament is thought to contribute to odynophagia and neck pain through compression of glossopharyngeal nerve.1
- Diagnosis: combination of history and physical exam, computed tomography (CT) imaging, and resolution of symptoms with injection of local anesthetic into the region.1

TRANSORAL STYLOIDECTOMY

- Most common surgical treatment is excision of the styloid process and calcified portions of the stylohyoid ligament.
- Multiple approaches have been described, including transoral combined with tonsillectomy, tonsil-sparing transoral robotic surgery (TORS), and transcervical. 2,3,4
- Minimal evidence confirming the safety or efficacy of any specific technique.3

BACKGROUND

Five consecutive patients between the ages of 28 and 69 underwent surgical transoral styloidectomy. Patients were invited to follow up as needed after this visit. No further follow up was requested after initial post surgery observation.

METHODS

- Retrospective chart review of a single fellowship-trained head and neck oncology surgeon's academic practice between 2015 and 2021
- Five consecutive patients between the ages of 28 and 69 underwent surgical transoral styloidectomy.
- All 5 patients attended follow up visits 4 weeks after each procedure.
- Outcomes were assessed in terms of intraoperative and postoperative complications and patient satisfaction postoperatively.

RESULTS

- Five patients underwent eight styloidectomy procedures via a transoral approach.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Measure</th>
</tr>
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<tbody>
<tr>
<td>Women, no. (%)</td>
<td>4 (80 %)</td>
</tr>
<tr>
<td>Age, mean (range) yrs</td>
<td>48 (28–69)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Side</th>
<th>Length of L, R Styloid (mm)</th>
<th>Symptoms</th>
<th>Symptoms resolved</th>
<th>Complications</th>
<th>30 Day ER Visits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Right</td>
<td>32.50</td>
<td>Mild throat, ear pain</td>
<td>Full</td>
<td>None</td>
<td>7</td>
<td>Admitted post-op day #1-5 days for fluid resuscitation, pain control</td>
</tr>
<tr>
<td>2 Both</td>
<td>26.26</td>
<td>Moderate neck, ear pain, globus</td>
<td>Full</td>
<td>None</td>
<td>0</td>
<td>Normal styloid process length, but stylohyoid ligament calcified more distally</td>
</tr>
<tr>
<td>3 Both</td>
<td>54.40</td>
<td>Moderate neck, ear pain</td>
<td>Full</td>
<td>Dehiscence managed conservatively</td>
<td>0</td>
<td>Dehiscence healed by secondary intention</td>
</tr>
<tr>
<td>4 Right</td>
<td>38.37</td>
<td>Severe throat pain</td>
<td>No improvement</td>
<td>Small bleed managed conservatively</td>
<td>3</td>
<td>Monitored in ER after history of minor intraoral bleed, no rebleeding. Contralateral procedure abandoned after no benefit from initial procedure</td>
</tr>
<tr>
<td>5 Both</td>
<td>46.25</td>
<td>Severe throat pain</td>
<td>Full</td>
<td>None</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

DISCUSSION

- No patients required reoperation
- All patients were discharged home the same day as surgery
- Complications were minimal and managed conservatively
- Patient #2 benefited despite styloid process length within normal limits – calcifications of the stylohyoid ligament were a factor in this case and must also be considered.
- These cases are limited to a 4-week follow up period – patients were invited to follow up as needed after this visit. No further follow up was requested after initial post surgery assessment.
- Procedure does carry potential risks including postoperative pain and risk of hemorrhage. Patient must be aware that intervention may not significantly improve symptomology (failure as high as 45% in some studies)6.
- In this study population 80% of patients had significant resolution of symptoms with no significant long-term complications identified.
- Careful patient selection is required to determine who may benefit, and shared decision-making is recommended.

CONCLUSION

Transoral styloidectomy as a same day surgery procedure is a safe and viable option for treating appropriately selected symptomatic Eagle syndrome patients.