INTRODUCTION:
Infantile hemangiomas are the most common tumors of the head and neck in the pediatric population.

Subglottic hemangiomas account for 1.5% of all congenital laryngeal anomalies.

Symptoms of respiratory distress with biphasic stridor develop when the proliferative phase commences (6-12 weeks of age). Patients are commonly misdiagnosed as having croup.

Treatment modalities include tracheotomy, open surgical excision, laser ablation, intraleisional steroid injection, systemic steroids, and recently, oral Propranolol.

The purpose of this study was to review the TCH experience with subglottic hemangiomas and to highlight the importance of close surveillance regardless of which treatment modality is used. The effectiveness of use of oral Propranolol as primary treatment will also be highlighted through a case presentation of a female patient who presented at 1 month of age.

METHODS:
An IRB-approved retrospective review of patients diagnosed with subglottic hemangioma from January 2005 to January 2010 was conducted at Texas Children’s Hospital in Houston, Texas, with follow-up ranging from 3 months to 2 years.

Medical records were reviewed for epidemiological, clinical, pathologic, treatment, and follow-up data.

The TCH experience was then analyzed and compared with results from various reports in the literature.

RESULTS:

Table 1: Patient characteristics, treatments, and outcomes

<table>
<thead>
<tr>
<th>Patient #</th>
<th>Year of dx</th>
<th>Gender</th>
<th>Age at dx</th>
<th>Stridor</th>
<th>Skin Hemangioma</th>
<th>Diagnosis</th>
<th>C/L R</th>
<th>Treatment</th>
<th>Medical</th>
<th>Surgical</th>
<th>Propranolol</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2005</td>
<td>female</td>
<td>4 months</td>
<td>Yes</td>
<td>None</td>
<td>CT chest</td>
<td>No</td>
<td>Graped</td>
<td>CO2 laser</td>
<td>No</td>
<td>No</td>
<td>Resolved</td>
</tr>
<tr>
<td>2</td>
<td>2005</td>
<td>male</td>
<td>2 months</td>
<td>No</td>
<td>None</td>
<td>None</td>
<td>Yes</td>
<td>None</td>
<td>CO2 laser</td>
<td>No</td>
<td>No</td>
<td>Resolved</td>
</tr>
<tr>
<td>3</td>
<td>2006</td>
<td>female</td>
<td>5 months</td>
<td>Yes</td>
<td>None</td>
<td>CT neck</td>
<td>No</td>
<td>Yes with</td>
<td>Prednisone</td>
<td>YAG laser</td>
<td>No</td>
<td>Resolved</td>
</tr>
<tr>
<td>4</td>
<td>2007</td>
<td>female</td>
<td>4 months</td>
<td>Yes</td>
<td>None</td>
<td>Plain film neck</td>
<td>No</td>
<td>Decadron</td>
<td>CO2 laser</td>
<td>x 3</td>
<td>No</td>
<td>Resolved</td>
</tr>
<tr>
<td>5</td>
<td>2007</td>
<td>female</td>
<td>1 month</td>
<td>Yes</td>
<td>None</td>
<td>Plain film neck</td>
<td>Yes</td>
<td>Graped</td>
<td>Tracheotomy</td>
<td>CO2 laser</td>
<td>x 2 with decannulation</td>
<td>No</td>
</tr>
<tr>
<td>6</td>
<td>2009</td>
<td>female</td>
<td>1 month</td>
<td>Yes</td>
<td>None</td>
<td>Plain film neck</td>
<td>Yes</td>
<td>Graped</td>
<td>Tracheotomy</td>
<td>CO2 laser</td>
<td>x 3</td>
<td>No</td>
</tr>
<tr>
<td>7</td>
<td>2009</td>
<td>female</td>
<td>1 month</td>
<td>Yes</td>
<td>None</td>
<td>None</td>
<td>Yes</td>
<td>No</td>
<td>None</td>
<td>Yes</td>
<td>No</td>
<td>Improved</td>
</tr>
<tr>
<td>8</td>
<td>2010</td>
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<td>1 month</td>
<td>Yes</td>
<td>None</td>
<td>None</td>
<td>Yes</td>
<td>No</td>
<td>None</td>
<td>Yes</td>
<td>No</td>
<td>Improved</td>
</tr>
<tr>
<td>9</td>
<td>2009</td>
<td>female</td>
<td>1 month</td>
<td>Yes</td>
<td>MPA neck</td>
<td>None</td>
<td>Yes</td>
<td>Graped</td>
<td>Tracheotomy</td>
<td>Yes</td>
<td>No</td>
<td>No significant improvement</td>
</tr>
</tbody>
</table>

RESULTS (continued):

- Females presented with subglottic hemangiomas more commonly than males.
- Nearly 50% of patients with subglottic hemangiomas also had cutaneous lesions.
- Average age at presentation was 10 weeks.
- Propranolol had one successful outcome and two cases of limited success after a short course of treatment at maximum dose of 3 mg/kg/day.

DISCUSSION:
Subglottic hemangiomas are rare but essential in the differential diagnosis of biphasic stridor.

- Propranolol has recently been touted as the “wonder drug” for treatment of hemangiomas. Our study demonstrates the limitation of this modality for use in subglottic hemangiomas.

- Further studies are necessary in order to determine the effectiveness of propranolol, including time course of treatment, dosage, and predictors of success.

REFERENCES: