**Vascular Lesions of the Upper Airway: Characterization of Anatomic Distribution**

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**Introduction:**

While cutaneous and deep neck space vascular lesions are familiar to Otolaryngologists, the relevance of the upper aerodigestive tract (UADT) to the management of these disorders can be overlooked. Experience shows that Hemangiomas, Lymphatic Malformations and Venous Malformations can affect the oral cavity, pharynx and larynx. Our objective was to assess the pattern of distribution of these lesions and the therapy required by each.

**Methods:**

We performed a retrospective chart review of all patients presenting to a private practice specializing in vascular anomalies. Patients with Head and Neck manifestations were identified and segregated according to diagnosis. Those whose charts contained complete information were included in the current data set.

<table>
<thead>
<tr>
<th></th>
<th>Head &amp; Neck</th>
<th>M:F ratio</th>
<th>UADT involvement</th>
<th>Larynx</th>
<th>Trach</th>
<th>Laser</th>
<th>Sclerotherapy</th>
<th>Surgical Excision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemangioma</td>
<td>1226</td>
<td>1:10</td>
<td>16</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>N/A</td>
<td>0</td>
</tr>
<tr>
<td>Venous Malformation</td>
<td>87</td>
<td>1:1.8</td>
<td>25</td>
<td>10</td>
<td>3</td>
<td>54 (23 pts)</td>
<td>15 (10 pts)</td>
<td>24 (16 pts)</td>
</tr>
<tr>
<td>Lymphatic Malformation</td>
<td>138</td>
<td>1:1.2</td>
<td>84</td>
<td>5</td>
<td>24</td>
<td>32 (12 pts)</td>
<td>19 (16 pts)</td>
<td>63 (25 pts)</td>
</tr>
</tbody>
</table>

**Discussion:**

Vascular malformations of all 3 types occur throughout the UADT. Involvement of the larynx, however, is uncommon. When present, it is associated with cutaneous involvement of the V3 dermatome in both hemangiomas and venous malformations; this relationship was not seen in lymphatic malformations. Across the spectrum of vascular malformations, tracheostomy was infrequently required to relieve airway obstruction. This was more often used to compensate for supraglottic, rather than glottic, obstruction. Particularly noticeable was the incidence of this in LMs, which required the highest rate of tracheostomy in the absence of direct laryngeal disease (supraglottic disease). While our patient population may be skewed towards more complicated cases, the rare use of tracheotomy in our practice emphasizes the potential for early recognition and treatment to prevent progression of airway obstruction. Large congenital LMs and VMs, of course, are exceptions to this.

**Selected References:**