Vascular Leiomyoma of the Larynx

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Head & Neck Cancer

- 6th most common CA in the world
- Affects 65,000 Americans & > 500,000 worldwide/year
- ~ 300,000 deaths/year
Head & Neck Cancer

• Aggressive surgical resection cornerstone of treatment
  – Disfiguring

- Quality of life
Laryngeal Anatomy
Vocal Cords
Vocal Cord Findings

Examination of Vocal Cords

- Normal vocal cords
- Contact ulcers
- Polyp
- Nodules
- One-sided paralysis
- Cancer

Examination Findings
Case Report

- Pt. *TM*: 66 yo male with a 25 pack-year smoking history
  - 2004:
    - c/o progressive hoarseness over the preceding ten years
    - work-up revealed the presence of a vocal cord polyp, which was removed w/o event
Case Report

• After removal of the polyp, hoarseness diminished greatly, but then he noted its progressive return, and sought medical attention after a period of 2 years.

• 2006:
  – Hoarseness was the only presenting symptom
  – Denied: dysphagia, dyspnea, cough, sore throat, or weight loss
Case Report

• Physical examination:
  – L TVF was medially displaced with a cherry-red mass attached to its undersurface
  – B TVF mobile
  – No significant airway compromise
  – No cervical LAD

• CXR within normal limits
Case Report

• Computed tomographic imaging revealed:
  – 5 x 5 mm enhancing soft tissue mass on the undersurface of the L TVF in its anterior 1/3
  – Thyroid cartilage, ventricle, and FVF all within normal limits
  – No LAD noted
CT Neck, Pt. TM
Case Report

• The pt was taken to the OR where a biopsy of the mass was taken

• Biopsy specimen showed:
  – Well-circumscribed nodule composed of dilated vascular channels surrounded by smooth muscle walls
Histopathology, Pt. TM
Vascular Leiomyoma

- Uncommon type of smooth muscle tumor
- Origin: probably from smooth muscle cells within blood vessel walls (Anderson, 2000)
- Rarely seen in the head & neck
- Hachisuga (1983): review of 562 cases:
  - only 48 seen in the head & neck (lips, auricle, nostrils, cheeks)
  - most commonly arise in the female genital tract, the gi system, and the pilar arrector muscles of the skin
Vascular Leiomyoma of the Larynx

- Very rare
- Most in middle-aged and elderly men
- Laryngeal subsites evenly represented
- Tumors are slow-growing and the duration of symptoms is reported from 2-16 years (Nuutinen, 1983)
Vascular Leiomyoma of the Larynx

• **Symptoms:**
  – Common: hoarseness, dyspnea, cough
  – Uncommon: pain, dysphagia

• Most common symptom is a rapidly progressive dyspnea, where tracheostomy is a necessary life-saving measure (Shibata, 1980)
Vascular Leiomyoma: Histopathology

- Encapsulated and consist of smooth muscle bundles amongst numerous vascular spaces
- DDx: hemangioma, vascular leiomyosarcoma
- Morimoto (1973): three histologic subtypes:
  - Solid (capillary): smooth muscle bundles surround vascular slit-like channels
  - Cavernous: dilated vascular channels, less smooth muscle
  - Venous: vascular channels with thick muscular walls; most common type in the head & neck
- Malignant variants are rare:
  - Absence of mitosis is the most useful indicator of a benign lesion
Vascular Leiomyoma of the Larynx: Treatment

• Complete surgical extirpation
  – Three reports of recurrent vascular leiomyoma of the larynx (Nall, 1997)
    • All had mitotic figures noted histologically
  – Small tumors via endoscopic approaches
  – Larger tumors require external approaches

• Due to the tremendous vascularity of these tumors, there is a high risk of significant bleeding
Conclusion

- Vascular leiomyoma:
  - an uncommon type of smooth muscle tumor
  - rarely seen in the head & neck area, especially the larynx

- As surgical options are not without risk, patients should be selected carefully

- If there is evidence of malignancy, or compromise of the patient’s airway or vocal quality
  - Complete surgical excision
  - New therapies: organ preservation