Stroboscopy Rounds

February 8, 2008

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Stroboscopy Rounds

- Compartmentalization of the larynx
  - Sites and subsites
    - Supraglottis
    - Glottis
    - subglottis
  - Spaces
    - Pre-epiglottic space
    - Para-glottic space
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- Supraglottis subsites
  - Suprahyoid epiglottis
  - Infrahyoid epiglottis
  - Aryepiglottic folds*
  - Ventricular bands

- Glottis subsites
  - TVC, anterior and posterior commisures
  - 1 cm horizontal plane inferior to lateral aspect of ventricle

- Subglottis
  - Lower boundary of glottis to inferior margin of cricoid cartilage.
Stroboscopy Rounds

Cummings 99-1
Stroboscopy Rounds

- Supraglottis Structure:
  - Lingual and endolaryngeal surfaces
  - Suprahyoid and infrahyoid epiglottis

- Injection of dye and radiotracer spreads bilaterally and is limited by inferior false cord.

- Fenestrations due to submucosal glands, high rate of pre-epiglottic space spread, esp in infrahyoid epiglottis.
Stroboscopy Rounds

- Krstic, Plate 62
- McMinn, Figure 152
Stroboscopy Rounds

- Cummings 99-2
Stroboscopy Rounds

- Pre-epiglottic space:
  - Hyoid and hyoepiglottic ligament (superior)
  - Thyrohyoid membrane (anterior)
  - Epiglottic (posterior).
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- Rohen Plate 154

Cartilages of the larynx and the hyoid bone (anterior aspect).

Cartilages and ligaments of the larynx (lateral aspect). (Schematic drawing.)

Cartilages of the larynx (oblique-posterior aspect).
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- Rohen Plate 157
Stroboscopy Rounds

- Paraglottic space:
  - Conus elasticus (anterior and medial)
  - Thyroid cartilage (lateral)
  - Quadrangular membrane (inferior)
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- Cummings 99-3,4
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- Rohen Plate 157
Krstic, Plate 63
- CE
- Epi
- Cell types
Fig. 2. Frontal sections of male larynx, 56 yr, 600 µm, plane of section cf. Figure 1a. T = thyroid cartilage, C = cricoid cartilage, TM = thyroarytenoid muscle, CT = cricothyroid muscle, VF = vestibular fold with groups of glands, L = airway lumen, PES = preepiglottic space, small black arrowheads = vocal cords, dotted line = laryngeal ventricle. (a) x 2.5. The PGS can be recognized as a layer of adipose tissue containing blood vessels (dark), immediately adjacent to the thyroid cartilage. It is separated from the PES by a distinct collagenous fiber septum (small arrows), which is attached to the perichondrium of the upper rim of the thyroid cartilage. Inferomedially, the PGS extends between the thyroarytenoid muscle and the cricothyroid muscle and is bordered by the conus elasticus (long arrow). Large black arrowheads = projections of anterior extremity of epiglottic cartilage. (b) x 4.0. In the anterior part of the larynx, the PGS (white arrowhead) appears as a small region of adipose tissue with conspicuous blood vessels (dark) between the thyroarytenoid muscle and the thyroid cartilage. Superiorly, the PGS is bordered by a collagenous fiber layer (arrows) fanning out between the superior surface of the thyroarytenoid muscle and the thyroid cartilage.
Staging Moments

AJCC Cancer Staging Sixth Edition

Larynx Staging Schema
Staging Moments Outline

- Site-Specific Information
  - Definitions of T, N, M
  - Stage Groupings

- Provided as a reference to the Staging Moments larynx cases
Primary Tumor (T)

- TX  Primary tumor cannot be assessed
- T0  No evidence of primary tumor
- Tis Carcinoma *in situ*

**Supraglottis**

- T1  Tumor limited to one subsite of supraglottis with normal vocal cord mobility
- T2  Tumor invades mucosa of more than one adjacent subsite of supraglottis or glottis or region outside the supraglottis (e.g., mucosa of base of tongue, vallecula, medial wall of pyriform sinus) without fixation of the larynx
Primary Tumor (T)

Supraglottis

- **T3** Tumor limited to larynx with vocal cord fixation and/or invades any of the following: postcricoid area, pre-epiglottic tissues, paraglottic space, and/or minor thyroid cartilage erosion (e.g., inner cortex)

- **T4a** Tumor invades through the thyroid cartilage and/or invades tissues beyond the larynx (e.g., trachea, soft tissues of neck including deep extrinsic muscle of the tongue, strap muscles, thyroid, or esophagus)

- **T4b** Tumor invades prevertebral space, encases carotid artery, or invades mediastinal structures
Primary Tumor (T)

*Glottis*

- T1  Tumor limited to the vocal cord(s) (may involve anterior or posterior commissure) with normal mobility
- T1a Tumor limited to one vocal cord
- T1b Tumor involves both vocal cords
- T2  Tumor extends to supraglottis and/or subglottis, and/or with impaired vocal cord mobility
Primary Tumor (T)

Glottis

- **T3** Tumor limited to the larynx with vocal cord fixation and/or invades paraglottic space, and or minor thyroid cartilage erosion (e.g., inner cortex)

- **T4a** Tumor invades through the thyroid cartilage and/or invades tissues beyond the larynx (e.g., trachea, soft tissues of neck including deep extrinsic muscle of the tongue, strap muscles, thyroid, or esophagus)

- **T4b** Tumor invades prevertebral space, encases carotid artery, or invades mediastinal structures
Primary Tumor (T)

Subglottis

- **T1**  Tumor limited to the subglottis
- **T2**  Tumor extends to vocal cord(s) with normal or impaired mobility
- **T3**  Tumor limited to larynx with vocal cord fixation
- **T4a** Tumor invades cricoid or thyroid cartilage and/or invades tissues beyond the larynx (e.g., trachea, soft tissues of neck including deep extrinsic muscles of the tongue, strap muscles, thyroid, or esophagus)
- **T4b** Tumor invades prevertebral space, encases carotid artery, or invades mediastinal structures
Regional Lymph Nodes (N)

- **NX**: Regional lymph nodes cannot be assessed
- **N0**: No regional lymph node metastasis
- **N1**: Metastasis in a single ipsilateral lymph node, 3 cm or less in greatest dimension
- **N2**: Metastasis in a single ipsilateral lymph node, more than 3 cm but not more than 6 cm in greatest dimension, or in multiple ipsilateral lymph nodes, none more than 6 cm in greatest dimension, or in bilateral or contralateral lymph nodes, none more than 6 cm in greatest dimension
- **N2a**: Metastasis in a single ipsilateral lymph node, more than 3 cm but not more than 6 cm in greatest dimension
Regional Lymph Nodes (N)

- **N2b** Metastasis in multiple ipsilateral lymph nodes, none more than 6 cm in greatest dimension
- **N2c** Metastasis in bilateral or contralateral lymph nodes, none more than 6 cm in greatest dimension
- **N3** Metastasis in a lymph node, more than 6 cm in greatest dimension
Distant Metastasis (M)

- MX  Distant metastasis cannot be assessed
- M0  No distant metastasis
- M1  Distant metastasis
Stage Grouping

- **Stage 0**
  - Tis
  - N0
  - M0

- **Stage I**
  - T1
  - N0
  - M0

- **Stage II**
  - T2
  - N0
  - M0

- **Stage III**
  - T3
  - N0
  - M0

- **Stage IVA**
  - T4a
  - N0
  - M0

- **Stage IVB**
  - T4b
  - Any
  - M0

- **Stage IVC**
  - Any T
  - N3
  - M0

  - Any T
  - Any N
  - M1
Schematic Diagram of Larynx

AJCC Cancer Staging Atlas
Staging Moments

Summary

- Site-specific information & rules
- Clinical Staging
  - Based on information before treatment
  - Used to select treatment options
- Pathologic Staging
  - Based on clinical data PLUS surgery and pathology report information
  - Used to evaluate end-results (survival)
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