Approach to Cervical Lymphadenopathy

Dr. Sasan Dabiri – Assistant professor
Department of Otorhinolaryngology – Head & Neck surgery
Amir A’lam hospital
Tehran University of Medical Sciences
Epidemiology

• Incidence of Head & Neck Cancers:
  3% of all new cancers

• Incidence of Occult Primary in Head & Neck:
  3% of all head & neck cancers

• Overall 5-year Survival : 50%
Cancer of Unknown Primary  -  Approach to Cervical Lymphadenopathy

Evaluation

• History
  – Sun exposure
  – Smoking or alcohol

  – Symptoms
    • Head & Neck Pain
    • Odynophagia
    • Nasal obstruction
    • ...

...
Cancer of Unknown Primary - Approach to Cervical Lymphadenopathy

Evaluation

• Complete Head & Neck Examination  
  (Physical & Fiberoptic examination)
  – Nasal cavity & Nasopharynx
  – Oral Cavity & Oropharynx
  – Larynx & Hypopharynx
  – Thyroid
  – Salivary Glands
  – Skin (face, scalp, neck)
Evaluation

• First step: Biopsy
  – The best modality: Fine Needle Aspiration (FNA)
  – Multiple FNA before Open Biopsy
    • easily performed
    • little morbidity
    • less likely to seed tumor
  – Open biopsy is the last option
  – Preparation for Neck Dissection before open biopsy
    (for squamous cell carcinoma or poorly differentiated carcinoma)
Cancer of Unknown Primary  -  Approach to Cervical Lymphadenopathy

Evaluation

• Biopsy report
  • Squamous cell carcinoma (>90%)
  • Poorly diff. carcinoma
  • Adenocarcinoma
  • Thyroid carcinoma
  • Melanoma
  • Lymphoma

? HPV & EBV test

Thyroglobulin stain
Calcitonin stain
Evaluation

• Primary Imaging
  – Head & Neck:
    • CT with contrast (skull base to thoracic inlet)
    or
    • MR with gadolinium
  – Chest:
    • CXR or CT

• Secondary Imaging
  • PET-CT
Cancer of Unknown Primary - Approach to Cervical Lymphadenopathy

PET-CT
Cancer of Unknown Primary - Approach to Cervical Lymphadenopathy

PET-CT
Evaluation

- Panendoscopy & Direct Biopsy
  - Oropharynx
    - Tonsillectomy (1st)
    - Base of Tongue (2nd)

The most common sites

Ipsilateral or Bilateral Tonsillectomy?
Evaluation

• Panendoscopy & Direct Biopsy
  – Oropharynx
    • Tonsillectomy (1st)
    • Base of Tongue (2nd)
  – Nasopharynx
  – Hypopharynx (piriform sinus)
  – Laryngo-bronchoscopacy
  – Esophagoscopacy

The most common sites
Evaluation

In every patient that is candidate for open biopsy, frozen section evaluation should be done.

If SCC or poorly diff. Ca. was reported;
- Panendoscopy & Biopsy
- Neck dissection
Cancer of Unknown Primary - Approach to Cervical Lymphadenopathy

Prognosis

• Lymph node Stage

<table>
<thead>
<tr>
<th>N in Head &amp; Neck TNM</th>
<th>Nasopharynx</th>
<th>Other H &amp; N</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1</td>
<td>Unilateral cervical ≤ 6 Cm</td>
<td>Single ipsilateral ≤ 3 Cm</td>
</tr>
<tr>
<td>N2</td>
<td>Bilateral cervical ≤ 6 Cm</td>
<td>&gt; 3 Cm and ≤ 6 Cm</td>
</tr>
<tr>
<td>N3</td>
<td>&gt; 6 Cm or Supracalavicular</td>
<td>&gt; 6 Cm</td>
</tr>
</tbody>
</table>

• Supraclavicular involvement

• Extracapsular involvement
Cancer of Unknown Primary - Approach to Cervical Lymphadenopathy

Management

- Surgical
  - Neck Dissection
    - Radical (I – V)
Cancer of Unknown Primary - Approach to Cervical Lymphadenopathy

Management

• Surgical
  – Neck Dissection
    • Radical (I – V)
Management

- Surgical
  - Neck Dissection
    - Radical (I – V)
  - Modified radical
    - saving SCM muscle
    - saving Accessory nerve
    - saving Internal Jugular vein
  - Selective

Cancer of Unknown Primary - Approach to Cervical Lymphadenopathy
Management

- Surgical
  - Neck Dissection
    - Pathology report:
      - N1 without extracapsular spread: Radiotherapy or Observe
      - N2-3 without extracapsular spread: 1 - Radiotherapy or 2 - Chemoradiotherapy
      - Extracapsular spread: Chemoradiotherapy

Cancer of Unknown Primary - Approach to Cervical Lymphadenopathy
Management

• Medical
  – Chemoradiotherapy
    higher level of evidence
    than only radiotherapy

• Field of radiation includes:
  – Bilateral Neck
  – Oropharynx in upper neck node
Management

- Medical
  - Chemoradiotherapy  
    higher level of evidence than only radiotherapy

- Field of radiation includes:
  - Bilateral Neck
  - Oropharynx in upper neck node
  - Larynx – Hypopharynx in lower neck node
Cancer of Unknown Primary  -  Approach to Cervical Lymphadenopathy

Management

- **Adenocarcinoma** *(Calcitonin & thyroglobulin are negative)*
  - Upper neck level $\rightarrow$ ND ± Parotidectomy then RT
  - Lower neck level $\rightarrow$ search for infraclavicular source
    $\rightarrow$ ND if indicated

- **Thyroid Neoplasm**
  - Thyroidectomy + Neck Dissection

- **Lymphoma**
  - Chemoradiotherapy

- **Melanoma**
  - Surgery + Neck Dissection
Summary of Approach

- Hx & Examination (physical/fiberoptic)
- Bx of LN (FNA)
- Imaging
- Panendoscopy
  Direct Bx of sources
- Neck Dissection
- Radiotherapy
  if needed
Special Thanks for Your Attention