NECK MASSES

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Neck masses - Introduction

- Common in children

  Lymphadenopathy – response to infection

- Less common in adults

  Malignant until proven otherwise

Neck masses - Children

- Larger lymphoid mass
- Brisk lymphoreticular response
- Present with lymphadenopathy after minor infections
- Nodes may continue to enlarge after initiation of treatment and resolution of infection

Neck masses - Children

- Causes **- benign** 80% - bacterial
  - viral
  - TB
  - HIV

(Drainage from throat, nose, ear, scalp)

- malignant 20% - lymphoma

Neck masses - Causes

- Congenital (present at birth)
- Developmental
- Neck space infections
- Salivary glands
- Thyroid

Causes - Congenital

- Lymphangiomata : Simple and cavernous
  Cystic hygroma
- Dermoids : Epidermoid
  True dermoid
  Teratoid
- Thyroglossal cysts : along tract of thyroglossal duct
  90% midline
  may be **only** functioning thyroid tissue

Causes - Developmental

- Branchial cysts - various theories
  - can become infected
  - treat with aspiration and antibiotics
  - excision when infection settled

Causes – Neck space infections

- Parapharyngeal abscesses :
  - tonsillitis, quinsy,
    lower 3rd molar abscess
  - swelling posterior to sternomastoid
  - stridor
- Prevertebral / retropharyngeal abscess
  - acute suppurative otitis media

Causes – Salivary gland, Thyroid

- Salivary gland : - Mumps
  - Parotitis
  - HIV
- Thyroid : - Goitre
  - Cysts

Management

- Clinical history and examination

- Masses requiring investigation :
  - clinically suspicious
  - not responding after appropriate treatment (4 – 6 weeks)
- Fine Needle Aspiration

Neck masses: Adults:

Neck masses - Epidemiology

- Heavy smoking
- Heavy smoking and alcohol abuse
- Adult male population (> 40 years)
- Painless, slow growing mass (level II/III)
- Radiation exposure in the past
- Curative treatment in the distant past for other malignancy

Neck masses - Adults

- Always assume to be pathological
- Commonest neck masses are lymph nodes
  - Of these, 80 % malignant
  - 80% squamous carcinoma
  - 80% primary from URT mucosa

Squamous carcinoma of the URT: Causes:

- Smoking
- Alcohol
- Other carcinogens –Asbestos exposure
  -Previous radiation
  -HPV
- Adult male population (> 40 years)
  -M:F 7:1

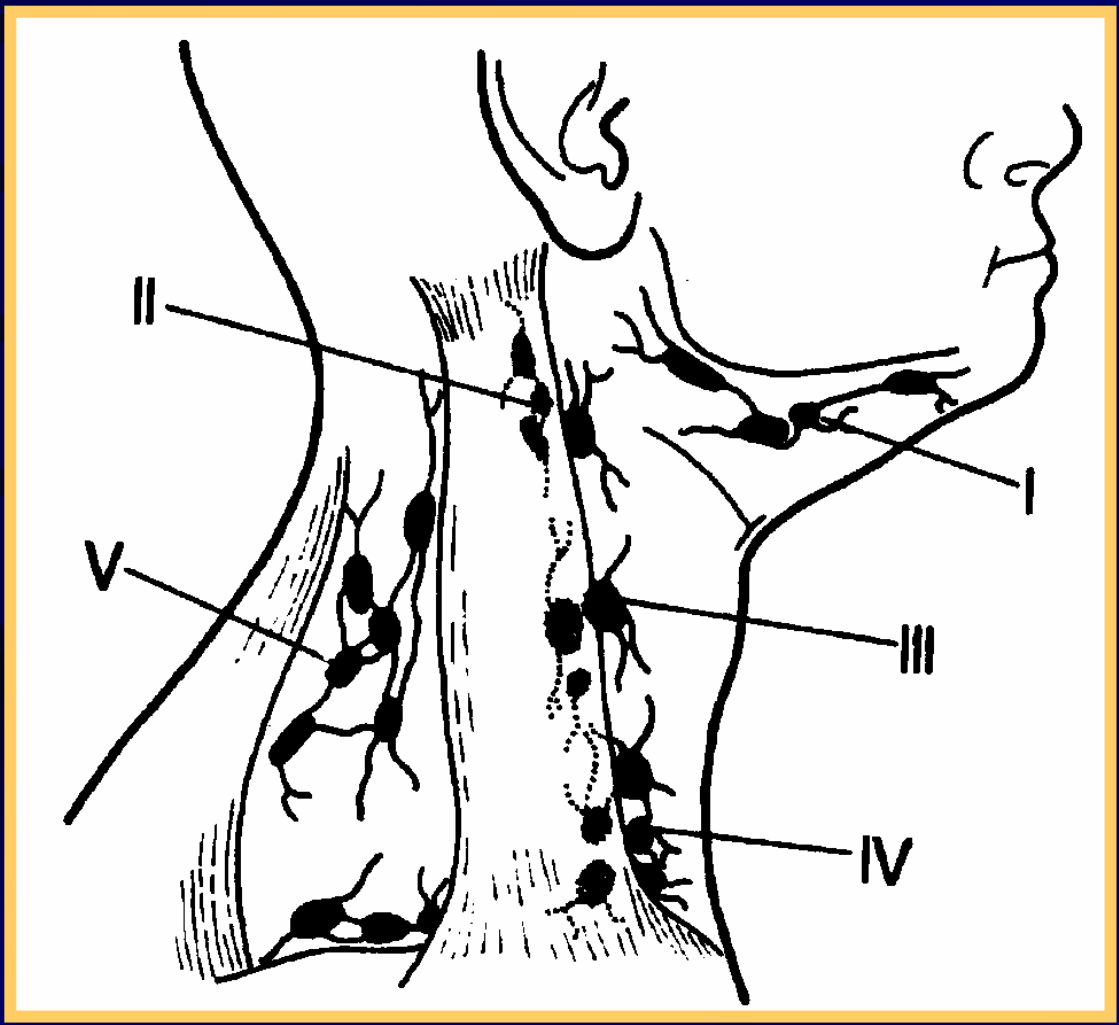
Squamous carcinoma of the URT: Sinister history / Symptoms:

- Dysphagia for solids or liquids
- Odynophagia
- Hoarseness / Dysphonia
- Stridor
- Loss of weight

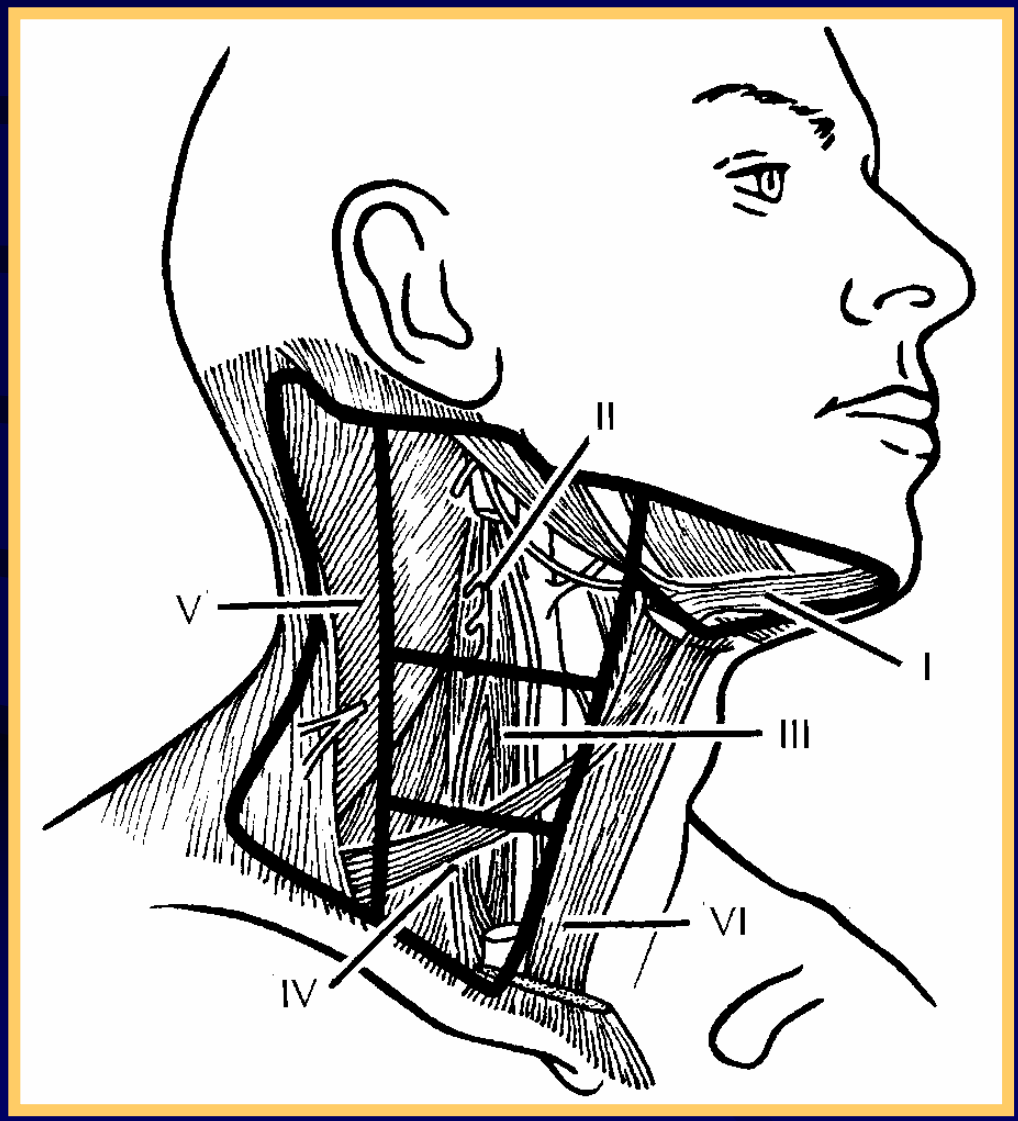
Squamous carcinoma of the URT: Examination:

- Painless, slow growing mass (level II/III)
- Consistency- hard
- Fixed to adjacent structures
- Size of LN < 3 cm N1
  3-6 cm N2
  >6 cm N3

Lymph drainage - Neck



Levels of the neck



Neck mass - Levels

- **Levels I to VI, Robbins (1991)**

- Level I – submental and submandibular
- Level II – upper jugular
- Level III – middle jugular
- Level IV – lower jugular
- Level V – posterior triangle
- Level VI – anterior compartment

Squamous carcinoma of the URT: Examination:

LOOK FOR THE PRIMARY:

- Careful head and neck examination
- In majority of cases a primary will be found
- Examination should include the following areas : oral cavity, nasopharynx, oropharynx, larynx, hypopharynx
- Examine skin, thyroid, salivary glands

Squamous carcinoma of the URT: Special Investigation:

- 1. HISTOLOGY:-CYTOLOGY (fnab)

- 2. LOOK FOR PRIMARY
- ENT examination
- Examination- CVS
  - Respiratory
  - Neurology- CN
- CxR

Neck mass – work-up

- Biopsy under LA if accessible
- Examination under anaesthetic + biopsy
- Gastroscopy if needed
- Imaging – CT/ MRI (extend of lesion)
  -Thalium scan (unknown primary)

THE MOST ACCEPTABLE TEST TO ESTABLISH THE DIAGNOSIS IS FINE NEEDLE ASPIRATION (CYTOLOGY)

Neck masses other than LNs:

- Thyroglossal duct cyst
- Sebaceous cyst
- Inflammatory –Adenitis(TB/ HIV)
  -Neck abscess
- Thyroid mass
- Salivary gland mass

Neck tumours other than Squ. Ca.

- Adeno Ca / Undif. Ca
- Lymphoma
- Melanoma
- Thyroid Ca
- Salivary gland tumours
- Soft tissue tumours- lipoma, osteoma, neurofibroma, rhabdomyosarcoma
- Carotid body tumor

Neck masses - Cytology

- Squamous cell carcinoma/undif. Ca

  * ENT examination
  * EUA
  *CT scan+/MRI

Neck masses - Cytology

- Adenocarcinoma : *ENT examination
  *EUA
  *CT scan, MRI Abdomen
  *thyroid / kidneys /adrenals
  lungs
  *examination of breast, prostate, endometrium

Neck mass – Cytology (cont)

- Non-Hodgkin's lymphoma :
  - *ENT examination
  - *EUA with guided biopsies
  - *CT scan thorax +abdomen
  - *BM biopsy +excision of single node
- Melanoma :
  - *ENT examination * Dermatological and ophthalmological examination,
  - *CT/ MRI head and neck

Neck masses - Summary

- Commonest cause in children is infective
- Give 4 – 6 weeks to resolve

- Commonest cause in adults is malignant
- FNA Cytology the only diagnostic tool
- Look for the primary
- DO NOT DO OPEN BIOPSY!