Lymphadenopathy
Learning Objectives

• Define lymphadenopathy
• Common presentations of lymphadenopathy
• Differential diagnosis according to presentation, symptoms and age
• Discuss treatment of common etiologies of lymphadenopathy
Lymphadenopathy – What is it?

- Abnormality in **size** and **consistency** of lymph nodes
- Lymphadenitis is when it occurs with an infectious or inflammatory process
- **KEY FACT:** Lymph nodes are normally not palpable in newborns
Presentation

• Acutely infectious lymph nodes are **tender**, potentially with erythema or warmth
  • Chronic infection may not have these signs or symptoms
• Tumor-bearing nodes are firm, nontender, and may be matted or fixed
• Generalized adenopathy is caused by systemic disease and will normally have abnormal findings in another system
• Regional adenopathy is frequently a result of infection in the involved node and/or its drainage
Infectious

• Most likely in children younger than 5
• Acute enlargement is likely to be viral or bacterial
• Fevers, rash, generalized pain, joint pain/swelling
• Cervical lymphadenopathy – look for sore throat, congestion, red eyes with discharge, oral ulcers, dental caries, and gingival swelling
Unilateral

- Usually **bacterial**
- S. aureus and GAS
  - 40 - 90% of cases
  - Normally in children < 5 yo
  - Recent hx of URI or impetigo
  - Nodes are tender, warm, erythematous, non-discrete, poorly mobile
  - Fever, tachycardia, malaise but nontoxic
  - Nodes can become suppurative and fluctuant

Bilateral

- Often benign self limiting **viral** URI (entero, adeno, influenza)
  - History of sick contact or current/recent symptoms
    - Sore throat, rhinorrhea, nasal congestion,
  - Nodes are small, rubbery, mobile and discrete, minimally tender w/o erythema or warmth
  - GAS pharyngitis is alternate cause
    - >3 years of age w/ abrupt onset
    - Sore throat, scarlantiform rash, palatal petechiae, tonsillar enlargement w/ or w/o exudate
    - Self resolving
Diagnosis and Treatment

Unilateral
- Assess for periodontal disease
- If draining – culture the fluid
- ESR and CRP
- Augmentin (MSSA and GAS); Clindamycin (MRSA)
  - Same if IV; in addition can use Ancef

Bilateral
- EBV testing; rapid Strep testing
- If ill-appearing
  - CBC, ESR, CMP, BCx
    - Gives information about systemic involvement
- Bacterial – Augmentin (MSSA and GAS); Clindamycin (MRSA)
  - Same if IV; in addition can use Ancef
- Viral treatments – supportive care; symptomatic treatment
Subacute/Chronic

Unilateral

• Nontuberculous mycobacteria (NTM, Scrofula)
  - Firm, nontender; grow over several weeks
  - Overlying skin can become violaceous and thin
  - Draining sinus tract

• Bartonella
  - Cat scratch (kitten) within 2 months
  - Node may drain at site of inoculation
    - Warm, tender, slightly erythematous

Bilateral

• EBV or CMV (mono or mono-like)
  - May have fever, exudative pharyngitis, lymphadenopathy, hepatosplenomegaly
Non-Infectious

• Neoplasm
  • Leukemia or lymphoma
  • Progressively non-tender, cervical/generalized LAD
  • No evidence of HIV, EBV, or CMV
  • Constitutional symptoms

• Kawasaki Disease
  • Young child; unilateral
  • Associated with ≥5 days fever, rash, nonexudative conjunctivitis, mucositis, and swelling of the hands and feet

• Other
  • Branchial cleft cyst – anterior to SCM; any age, most common in school aged children
  • Cystic hygroma – painless soft, superior to clavicle, posterior to SCM
    • May increase in size w/ URI
    • Transillumination and compressibility help distinguish
Diagnosis and Treatment

**Unilateral**
- CBC, ESR, CRP, CMP, UA, LDH
- PPD
- Consider excisional biopsy if suspicion of malignancy
- NTM; **excisional biopsy** for definitive diagnosis
  - FNA can cause sinus tract
  - Macrolide w/ ethambutol +/- rifampin
- Bartonella suspected – azithromycin, rifampin, or Bactrim

**Bilateral**
- CBC, ESR, CRP, CMP, UA
- PPD, EBV, CMV, HIV
- Typically symptomatic treatment, unless HIV
References


_Cervical lymphadenitis in children: Diagnostic approach and initial management._ Mary Torchia. April 2018. UpToDate.