Rheumatologic Emergencies
It’s not just swollen joints

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Or is it?
Disclosures

- No relevant conflicts of interest regarding the content of this presentation
- Disclosure: We will not be reviewing long term care of the conditions included in the talk
  - Focus on acute assessment and care
Learning Objectives

- To recognize the typical presentation of polymyalgia rheumatica and temporal arteritis
- To compare and contrast the features of gout vs septic arthritis
- To recognize the typical presentation of lofgren’s syndrome
- To outline appropriate investigations, consultations and initial management of these conditions
Case

- 70 year old lady presents with a 6 week history of increasing difficulty managing at home
- On further questioning she describes:
  - Abrupt onset of symptoms
  - Difficulty mobilizing/getting moving
  - Weak/stiff/sore
- Examination reveals difficulty rising from a chair
- Mild tenderness to palpation of proximal muscles
Differential Diagnosis

- Muscular or neurologic?
- Primary mechanical arthritis (hip and knee)
- Rotator cuff
Key Features

- **70 year old** lady presents with a 6 week history of increasing difficulty managing at home

- On further questioning she describes:
  - **Abrupt onset of symptoms**
  - **Difficulty mobilizing**/getting moving
  - Weak/stiff/sore

- Examination reveals **difficulty rising from a chair**

- Mild tenderness to palpation of proximal muscles
Investigation

- Examine for any focal neurologic signs
- If diffuse weakness
  - Rule out electrolyte disturbance
  - Consider medication side effects
  - Look for elevated inflammatory markers
    - With a classic history any elevation in ESR/CRP can be significant
Confirmation of Diagnosis

- Requires a therapeutic trial of **LOW** dose prednisone (*10mg daily X 7 days*)
- Requires follow up to determine if there was complete resolution of symptoms
  - Consider it the same as planting a mantoux
- In the ER you could initiate the trial and ensure follow up within 7 days by primary care or an urgent consultant rheumatologist or internal medicine
- If patients present with a story like this, have tried short course prednisone with good effect but symptoms return once prednisone stopped = supportive of PMR
Case

- Same lady

- On further probing:
  - Unilateral headache, over the temple
  - Hurts to touch this area, may hurt to wear eyeglasses, comb hair or have shower water hit head
  - Jaw aching or fatigue develops when chewing tough substance
  - Blurred vision or double vision

TEMPORAL ARTERITIS
When to refer for a temporal artery biopsy

- **Conservative approach**
  - All cases of suspected temporal arteritis

- **Measured approach**
  - All maybe cases (symptom/lab disconnect)
  - Not necessarily the low probability
  - Not necessarily the slam dunk presentation

- **Practical considerations:**
  - Who can you get to do a biopsy?
  - How fast can they see the patient
Initiating Treatment

- Unlike PMR, temporal arteritis has significant morbidity if treatment is delayed

- **Permanent Blindness**

- If the diagnosis is suspected, treatment should be started at time of ER visit

- Risk of blindness is still present for the next 48-96 hours

- Biopsy should remain positive even if done 7-10 days post initiation of steroid
Treatment

- Prednisone 1mg/kg PO daily
  - Some ophthalmologists believe IV steroid should be used if vision is threatened

- ASA 81mg daily
Questions about PMR or Temporal Arteritis?
Gout vs Septic arthritis

- To compare and contrast the features of gout vs septic arthritis
Case

- 50 year old male with HTN presents with redness, swelling and pain in his foot X48 hours
- Low grade fever
- How do we differentiate between gout and septic arthritis?
Helpful features

- Case includes only non specific features that could be consistent with either diagnosis

- Look for:
  - Features that may suggest Gout:
    - Past history of symptoms in toes
    - Renal insufficiency
    - Transplant recipient
    - Classic appearance of podagra
    - Tophi/ olecranon bursitis
  - Features that may suggest Septic arthritis:
    - Open skin lesion or other portal for sepsis
    - Systemically unwell
    - Diabetic or other co-morbidity that increases risk of sepsis
    - Prosthetic joint
Podagra
**Role of Joint Aspiration**

- Joint aspiration and analysis of synovial fluid can be helpful in differentiating these two conditions

<table>
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<tr>
<th>Fluid Type</th>
<th>Gross Appearance</th>
<th>Cell count per mm$^3$</th>
<th>%PMNs</th>
<th>Special tests</th>
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<tr>
<td>Normal</td>
<td>Clear</td>
<td>0-200</td>
<td>&lt;10%</td>
<td>N/A</td>
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<tr>
<td>Non inflammatory</td>
<td>Clear/slight turbid</td>
<td>200-2000</td>
<td>&lt;20%</td>
<td>N/A</td>
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<tr>
<td>Inflammatory</td>
<td>SL turbid</td>
<td>2000-50,000</td>
<td>20-75%</td>
<td>Crystal analysis</td>
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<tr>
<td>Septic</td>
<td>Marked Turbid</td>
<td>&gt;50,000</td>
<td>&gt;75%</td>
<td>Gram stain and culture</td>
</tr>
</tbody>
</table>
Is joint Aspiration Practical?

- Toe is challenging to aspirate
- Relative contraindications:
  - Bleeding diatheses
  - Coumadin with INR>4
  - Overlying cellulitis
- Studies have shown that arthrocentesis can be done in patients on warfarin using small gauge needle (22 or smaller) and applying prolonged pressure post procedure
- Remember to do blood cultures
Acute Treatment

- NSAID in patients with no contra-indications
- Colchicine 0.6mg PO BID in patients with no contraindications
  - Renal insufficiency dose down to OD
  - May cause myopathic problems in patients on calcineurin inhibitors
- Corticosteroids
  - Intraarticular (usually knee)
  - Oral (if multiple small joints)
- Remember that Allopurinol should not be started during acute gout

If patients are on a stable dose of allopurinol, it can be continued throughout the attack
Questions regarding Gout vs Septic Arthritis?
Case

- 25 year old female presents with a 1 week history of bilateral ankle swelling, pain and redness
Key Features

- 25 year old female presents with a 1 week history of bilateral ankle swelling, pain and redness
Differential?

- Reactive arthritis
- GC arthritis
- Crohn’s disease
- Behcets
- And…………….
Lofgren’s syndrome

- Acute sarcoidosis
- Triad of arthritis, erythema nodosum and hilar adenopathy
- Associated with DR3 HLA antigens in Caucasians of northern European ancestry
- May show seasonal predominance in spring and fall
- 75% will have a normal serum ACE level
Investigation

- ESR, CRP to confirm inflammatory state
- CXR to look for hilar adenopathy
Lofgren’s

- Natural History
  - >90% will have permanent remission and will not progress to full sarcoidosis
  - Arthritis lasts weeks to months
Treatment

- Supportive:
  - NSAIDs
  - Low dose corticosteroids (10-20mg tapered over 4-6 weeks)

- Need follow up to ensure:
  - Symptoms resolve
  - Hilar adenopathy resolve
  - Do not progress to pulmonary sarcoid
Questions regarding Lofgren’s syndrome?
When and How to Refer

- Sometimes a phone call can give you advice you need
- Urgent outpatient visit may facilitate discharge from the ER