HEY!
WANNA COME PLAY IN THE SNOW WITH US?
Acute Emergencies in Rheumatology

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Acute Rheumatological Emergencies

- The Acute Hot joint
- Inflammatory back pain
- Systemic lupus erythematosus (SLE)
- Inflammatory muscle problems
- Adults onset Stills Disease
The Acute Hot joint!

The GOUT.
Should we aspirate this?
What is the differential Diagnosis?

• Acute crystal arthritis
• Urate crystals- gout
  – Calcium pyrophosphate
  – Pseudo gout
  – Hydroxyapatite-
  – Milwaukee shoulder
• Septic arthritis
• Osteomyelitis
• New presentation of inflammatory arthritis
How should it be diagnosed?

• Do we need this?

• Do you know where to send it?

Calcified hyaline and fibrocartilage with linear and spotty appearances and well-preserved joint space
Challenges with the Acute Hot Joint

- Missing the acute septic arthritis
- Missing the osteomyelitis.
- Crystals not obtained from the joint.
Challenges with Acute Hot Joints

- Diagnosis
- ??
Back Pain?
Have you got... The S factor?

Spinal pain & stiffness in a young adult

Spinal pain & stiffness lasting more than 3 months in a young adult could be inflammatory if you tick 4 out of 5 boxes:

- It started before the age of 40
- It started slowly: it did not come on suddenly
- You have noticed improvement with exercise
- There is no improvement with rest
- You experience pain at night (with improvement on getting up)

This could be inflammatory arthritis

See your doctor now!
Delay can cause long term disability

For further information see www.arthritisresearchuk.org
inflammatory back pain

ASAS Criteria (Sieper J et al Ann Rheum Dis 2009;68:784-8): Back pain of more than 3 months duration is inflammatory if:

- Age at onset less than 40 years
- Insidious onset
- Improvement with exercise
- No improvement with rest
- Pain at night (with improvement on getting up)

The criteria are fulfilled if at least 4 of 5 parameters are present
and 50% of people with AS have other associated problems........
Diagnostic Pyramide for Axial Spondyloarthritis

- Chronic low back pain
- Inflammatory back pain + LR 3.1
- Heel pain (enthesitis) + LR 3.4
- Peripheral arthritis LR 4.0
- Dactylitis LR 4.5
- Acute anterior uveitis LR 7.3
- Pos. Family history LR 6.4
- Good response to NSAIDs LR 5.1
- Elevated acute phase reactants LR 2.5
- HLA-B27 + LR 9.0
- MRI + LR 9.0

LR = likelihood ratio

3.1 x 3.4 x 9.0 x 9.0 = 853.7 (LR product)

Disease Probability

5% 98%

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5% Disease Probability

98% Axial SpA

Spondyloarthritides

- This group have a similar prevalence to RA
- They share common clinical lesions.
- Inheritance of HLA-B27 is common to all the SpA. The prevalence of these disorders relate to HLA-B27.
- Diagnosis of Ankylosing spondylitis is often delayed
- Identification of inflammatory back pain is very important in determining the diagnosis.
- Use of Anti- tumour necrosis factor biologic drugs has revolutionised the treatment of severe AS.
Percentage Prevalence of HLA-B27 in Indigenous Populations of the World

Khan MA Curr Opin Rheumatol 1995;7:263-9
Long-term Clinical Efficacy of TNFα-Blocker in AS
Results over 7 years

Infliximab

N = number of patients on therapy

Baraliakos X et al. EULAR 2008, Paris, FRI0290
Connective tissue diseases. Acute presentations
Case Study AT

- 24yr old vegetarian Asian female
- presented via emergency dept.
- Vomiting, 5kg wt loss, night sweats
- Productive cough & pleurisy

- Initial Diagnosis Pulmonary Tuberculosis

- Investigation. Hb 7.8g/dl(low). blood white cells 3.5(low)
- ESR 105mm/hr  C reactive protein <4(n)
Reviewed 24hrs later

- Facial rash, alopecia, febrile, chest X ray clear
- Diagnosis Probable SLE
- ? Why??
AT (2)

• Further investigations. ANA 1/2560 homogenous (very high)
• DNA binding .>300; (HIGH)
• IgG 26.7; IgA 6.9 IgM 2.4; g/l(raised)
• C3 0.3 C4 0.05; g/l Complements (-low)
• Coombs (+) creatinine 105umol/L 24hr urinary protein 2.35 grams/24hrs

• Renal Biopsy WHO Class IV (Diffuse Proliferative Glomurulonephritis)
• Treatment Intravenous Methyl Prednisolone 1gram X3
• Dramatic recovery!
Recognizing SLE

“Typical bloods”

- Anaemia
- Lymphopaenia
- Normal/low platelets
- High ESR
- Low C3 and C4
- Autoantibodies

Characteristic rashes
Is it a connective tissue disease?

- Raynauds syndrome of recent onset.
- Non specific inflammation with no infection
- Screen for autoantibodies positive.(ANA/DNA)
- Raised ESR with normal C reactive protein.
- Low white cell count with low lymphocyte count and low platelets.
- Rashes.
- Multisystem disease.
I can’t get out of my chair!
Mrs AU age 35 presented to the dept unable to get out of a chair with severe pain and weakness.

• Facial rash
• Rash on the hands and fingers
• Shortness of breath
• Weakness and muscle pain for 4 weeks
• ?Raynauds syndrome
• Generally unwell.
• Raised ESR, Raised muscle enzymes.
• Raised anti nuclear antibody 1/2500
Dermatomyositis - facial rash
Dermatomyositis - Gottron’s papules
Anti JO 1- mechanic’s hands
Acute Myositis
Dermatomyositis

- Rash
- Abnormal muscle enzymes
- Abnormal muscle biopsy and electrical studies and MRI of the thighs.
- Autoantibodies- positive ANA and Extractable nuclear antibodies:--
- Treatment steroids and cyclophosphamide
- Intravenous Immunoglobulin.
- Rituximab???
Myositis and anti synthetase syndrome

- Mechanic hands
- Myositis
- Anti Jo1 antibodies
- Other antibodies positive – anti tRNA synthetase
- Manual identification - Ku etc
Periodic fevers!
Patient with Fever and acute arthritis
miss LR

- Pyrexia often Periodic, at night.
- Rose coloured rash on the body and face
- Acutely swollen joints
- General Malaise and weight loss over 2 weeks.

- Abnormal liver function tests.
- Raised ESR
Adult onset Still’s disease.

- Fever, rash +/- arthritis, pharyngitis, serositis
- Raised inflammatory markers
- Negative RF/ANA
- High ferritin $>20,000$
- (normal less than 150)
Still’s Disease Rash
Treatment

• Anti inflammatories
• Steroids
• Biological therapy- Tocilizumab-Anti IL-6
Raynauds
Small vessel ischaemia