Rheumatology

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Approach to Acute Joint & Bursa Pain

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“the swollen painful joint”

- Ortho Approach
- Past
- Present
the swollen painful joint/bursa

Get me tissue!

Meg Wilkes
Aspirate
Analysis of synovial fluid should be performed as part of the diagnostic evaluation in all patients with a new effusion.

All joints can be aspirated.

Bursas can also be aspirated for diagnostic purposes.
Risks of Arthrocentesis

- Iatrogenic infection
- Bleeding
- Pain
Contraindications for Arthrocentesis

 Absolute: None

 Relative: Cellulitis, prolonged INR or other bleeding tendencies

 Informed consent
Arthrocentesis Technique

- Examine the patient carefully and decide your approach
- Mark the area (if possible)
- Use sterile technique
- Always use universal precautions
Analyze
Analyze

Synovial Fluid Analysis
Analyze

- Cell Count
- Crystal Analysis
- Culture/Gram Stain
- Chemistry
Analyze: Cell Count

- Normal <200 WBC
- >200 <2000 WBC Non-inflammatory
- >2000 <100,000 WBC Inflammatory
- >100,000 WBC Septic
Crystal Analysis

- Monosodium Urate (MSU) crystals cause gout.
- Calcium Pyrophosphate Dihydrate (CPPD) crystals cause pseudogout.
Crystal Analysis

- Calcium hydroxyapatite
- Calcium oxalate
- Cholesterol
- Glucocorticoids
- Immunoglobulins
- Talc
Chemistry Analysis

Glucose measurement:
- Normal is nearly equal to blood
- If inflammatory lower than blood
- If septic very low
- Other measurements not necessary
Culture Fluid

- Bacterial
- Fungal
- AFB
Appropriate Therapy
Case #1

50 year old man.....
Case #2

50 year old man.....
Case #3

50 year old man.....
Case #4

50 year old man......
Case #5

50 year old man......
Case #6

50 year old man.....
Case #7

50 year old man......
Case #8

50 year old man.....
Figure 1
Knee monoarthritis with inflammatory signs.
Case #9

50 year old man......
Case #10

50 year old man.....