The Rheumatological Exam

R Kadanoff M.D
Loyola University Medical Center

History

• Acute vs Chronic
• Mono vs polyarticular
• Inflammatory or non-inflammatory

INFLAMMATION

• Pain
• Heat
• Red
• Swelling
• Duration of AM stiffness
### Categories of Rheumatic Disease

<table>
<thead>
<tr>
<th>Pathology</th>
<th>Prototype</th>
<th>Useful Test</th>
<th>Typical Rx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synovitis</td>
<td>RA</td>
<td>RF ESR</td>
<td>NSAID MTX</td>
</tr>
<tr>
<td>Enthesopathy</td>
<td>A-S</td>
<td>S-I X-ray</td>
<td>B27 Indocin</td>
</tr>
<tr>
<td>Cartilage Deg. OA</td>
<td>OA</td>
<td>X-ray</td>
<td>Analgesic</td>
</tr>
<tr>
<td>Crystal ind. Syn. Gout</td>
<td>Fluid exam</td>
<td>Colchicine</td>
<td></td>
</tr>
<tr>
<td>J. Infection</td>
<td>Staph</td>
<td>Fluid C&amp;S</td>
<td>Antibiotics</td>
</tr>
<tr>
<td>Myositis</td>
<td>PM</td>
<td>CK, Biopsy, EMG</td>
<td>Steroids</td>
</tr>
<tr>
<td>Focal soft tissue</td>
<td>Tennis E.</td>
<td>None, X-Ray</td>
<td>Local</td>
</tr>
<tr>
<td>General</td>
<td>Fibromyalgia</td>
<td>NONE</td>
<td>Exercise + Elavil + NSAID</td>
</tr>
</tbody>
</table>

#### RA

- **Inflammatory**
- Systemic: anemia, tired, lack of energy
- Polyarticular
- 70% insidious; 30% acute onset
- Distribution: symmetrical MCPs, PIPs, wrists
- Sjogren: sicca eyes, mouth, vagina, skin
- Felty spleen, low WBC, long standing RA
- Baker cyst
- CTS
SLE
• Arthritis, Alopecia, Raynaud’s, Photosensitivity
• Rashes, ANY but specifically malar (nasolabial fold sparing) and discoid.
• Easy bruising, anemia, low white count
• DVT, miscarriages, MI, strokes
• Mouth and nose sores
• Lung (SOB pain on inspiration), heart, and kidney (foaming urine, edema)
• Seizures, psychosis

PMR/TA
• Shoulder girdle stiffness and pain
• Bursitis in PMR in all by US
• Systemic: tired, anemic, etc
• Scalp tenderness, jaw claudication, temporal pain, visual changes in particular amaurosis fugax and HEADACHE
• RA questions
• Rx: steroid 10mg/day for PMR; 80 for TA
• Tinnitus (more Wegener)

Spondyloarthropathies
Associated conditions
• Psoriasis
• IBD, Erythema Nodosum
• STD, Dysentery
• Iritis, Enthesopathy
• Low back pain, stiffness
• S-I joint pain
Distribution in Spondyloarthropathy
• Psoriatic can be with/without back involvement
• Symmetric; like RA
• DIP with near involved nail
• Asymmetrical “sausage” digits
• Can be with or without skin involvement
• Peripheral arthritis activity correlates with skin or bowel disease activity.

Back Pain in spondylo
• Improves with exercise
• In A-S, IBD involvement goes from bottom to top. In PA and Reiter, skips
• Schober test positive
• S-I maneuvers positive
• S-I asymmetrical in R PA
OA-DJD

- Distribution: knees, back, neck
- Traumatized joints
- Stiff 1/2 hour, jells
- Pain worse at end of day
- Early no night pain, no pain at rest
- Cartilage worn
- Treatment, gentle ROM, analgesics, injection, joint replacement
Gout & Pseudogout

- Gout is mostly acute; lasts 5-10 days
- Can be on top of chronic, intercritical
- Pseudogout acute lasts longer
- Is on top of OA and pseudorheumatoid, chronic.
- Surgery common antecedent.
- Distribution.

Joint Infection

- Non-Gonococcal; rapid, destructive
- Gonococcal; rapid, non-destructive
- TB and Fungal; slow, chronic, & destructive
Synovial Fluid Analysis

class I | class II | class III

| color | Clear/yellow | Yellow/white | Yellow/white |
| clarity | transparent | translucent/opaque | opaque |
| viscosity | high | variable | low |
| Mucin clot | firm | variable | friable |
| WBC | <2000 | 2000-100,000 | >100,000 |
| differential | <25% PMN | >50% PMN | >95% PMN |
| Culture crystals | Negative | Negative | Positive |
| crystals | none | +/- crystals | +/- crystals |

Myositis

- Polymyositis: proximal weakness, 40% time starts with some pain too. Combing hair, getting up from chair without hands.
- Dermatomyositis (path more perivascular)
  - Gottron patches, heliotrope rash
- Myositis with SLE, Scleroderma
- PM & DM associated with malignancy; DM is at least 25%.
- Childhood dermatomyositis: more vasculitis, coxsackie infection related.
Focal conditions

- Tendonitis
- Bursitis
- Cervical radiculitis
- Carpal tunnel: TSH, ? Immune fixation, ascending
- De Quervain tenosynovitis
- Local measures: splints, PT, local injection of steroids, NSAIDs

Low back pain

- Schober will be positive too.
- Stiffness does not improve, is not worse in AM
- Worse with bending and standing
- Low back pain treatment: analgesic and rest a couple of days, then activity as tolerated.
  - Age > 50: plain film to R/O cancer
  - Neurological findings: MRI as may need surgery
Bone Pain

Thoracic spine
- Metastatic cancer
- Multiple myeloma
- Osteoporosis and compression fractures

Long Bone
- Sarcoid

Periosteal Elevation
- Osteomyelitis
- Hypertrophic Osteodystrophy
  - lung cancer, liver disease, lung disease
Fibromyalgia

- HA Hx
- Irritable BD
- Costochondritis
- Poor sleep
- No exercise
- Depression
- Family Hx

Extraarticular organs in rheumatological diseases

- Skin
- Eye
- Arteries
- Lung
- Heart
- Kidneys
- Muscle
- Bursae
Skin
• Rashes in SLE (ears)
• Sun sensitivity: SLE & dermatomyositis
• Erythema Nodosum: (strep, IBD, sarcoid)
• Erythema marginatum and circinatum
• Erythema chronicum migrans
• Purpura - (Henoch Shonlein)

Ocular
• Spondylo
• Behcet
• RA
• Temporal arteritis
Joint Exam

- Swelling
- Instability
- Deformity
- ROM