

## Rheumatology Made Easy



**Simplified proposed Guide for classification and Major presentation of any Rheumatological disease**

### (Rheumatology Mindmap)

➤ Rheumatological diseases are

Either

↳ Musculoskeletal disease

Or

↳ Multi-system Collagen/connective tissue disease

➤ **Musculoskeletal diseases** are either

**A] Articular disease** (mainly) = joint problem

#### \* Inflammatory (arthritis)

➔ Rheumatoid\_arthritis

- Peripheral symmetrical arthritis mainly affecting hand joints

(Pain + swelling + stiffness)

- The most common affected joints are MCP, PIP, wrist joints sparing the DIP joints

- The pain improves with movement & worsens at the morning

With stiffness for at least 1 hour

- If untreated, deformities like Swan neck, boutonniere, Z shaped thumb would occur

- It is chronic disease in which arthritis persists more than 6 weeks

- It is "seropositive", RF and or Anti-CCP

## ➔ Seronegative Spondyloarthritis (axial)

Spine + sacroiliac joints

Inflammatory back pain + stiffness

± Peripheral a symmetric oligoarthritis

± Skin lesions ± eye affection + Positive HLA-B27)

## ➔ Ankylosing Spondylitis

➔ Psoriatic arthritis (Psoriatic rash/nail changes)

➔ Enteropathic arthritis (IBD + other features)

➔ Reactive arthritis (Reiter's syndrome)

Triad of Arthritis + urethritis + conjunctivitis after infection)

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## \* Degenerative joint diseases

➤ Non inflammatory

+ Cartilage degeneration with formation of osteophytes ( bony projections with narrow joint spaces )

↳ **Peripheral** = Osteoarthritis

Mechanical joint pain without swelling or stiffness affecting weight bearing joints ( kness, hips ) in LL and DIPs , PIPs , CMC joints in UL.

↳ **Axial**

➔ Cervical spine (cervical Spondylosis)

Mechanical neck pain with movement with or without compression on nerve roots or cord

➔ Lumbar spine (lumbar Spondylosis)

Mechanical low back pain with movement with or without root or cord compression

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## \* Metabolic joint diseases

Crystal arthropathy: deposition of crystals on joints)

↳ **Gout:** formation of monosodium urate needle shaped crystals in joints

---> Arthritis (pain, marked tenderness, limitation of movement)

Either monoarthritis (knees, MTP joint)

Or oligoarthritis

Chronic gout --> tophi in kidneys (stones), Ears, hands

↳ **Pseudogout** (deposition of Calcium pyrophosphate)

Often associated with metabolic conditions like hypercalcemia & hemochromatosis

It is either monoarthritis like gout

Or oligoarthritis (2 - 4 joints) without tophi

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## \* Infectious joint problem

Either Bacterial or Viral

↳ **Bacterial** 🔄

- Septic arthritis: Acute monoarthritis
  - Caused by bacteria (e.g staph)
  - Affects older people with comorbidities
  - Affected joint: swollen, hot, red, tender with limitation of movement
  - DX: joint aspiration (microscopy for Neutrophils, Gram stain & culture)
  - It is an emergency: start IV antibiotics

↳ **Viral** (Parvovirus B19, HBV, HIV) 🔄

- Acute polyarthritis, migratory
- Parvovirus B19 polyarthritis is acute migratory polyarthritis associated with rash (contact with children is important risk factor)

## **B] Bone disease (metabolic)**

↳ **Osteomalacia** (vitamin D deficiency)

- defect in osteoid tissue formation -> proximal myopathy + bone pain

Risk factors: decreased sun exposure, Vitamin D malabsorption, etc

X ray: looser zones

↳ **Osteoporosis**

- increased osteoclastic activity --> Bone resorption --> decreased bone mass
  - > Risk of fragility fractures
- Risk factors:
  - postmenopausal women
  - Steroid use, etc

DX: DEXA scan (special imaging)

↳ **Paget's disease:**

Metabolic bone disease in which there is increased bone formation (active osteoblasts) + increased bone resorption (active osteoclasts)

- Disease of old age
- bone deformities (large skull, bowing of legs)
- Metabolic effects (deafness, tinnitus)
- Congestive heart failure.
- Others

**C] Muscle disease** (inflammation of the muscles: myositis)

- Autoimmune condition characterized by the presence of autoantibodies against the muscles leading to myopathy ( proximal myopathy )

It has two types ↴

- > Polymyositis (muscles without skin affection)
- > Dermatomyositis (muscles affection + skin affection)

### ↳ **Muscle affection:** proximal myopathy ↻

- UL: can't comb the hair or can't raise the arms over the head level
- LL: can't stand from seated position without support
- Muscles of swallowing: dysphagia, choking, and aspiration
- Muscles of respiration: respiratory failure (rare)

### ↳ **Skin affection:**

- Face: heliotrope rash in eye lids
- Trunk /back: shawl sign
- Hands: Gottron's papules (knuckles)
- Search for underlying malignancy
- EMG is essential in diagnosis.

## **D] Pain Syndrome**

Diffuse muscle pain or localized pain

Either ↻

### ↳ **Muscle pain (myalgia)**

#### ◆ **Fibromyalgia**

- diffuse muscle pain all over the body

With the presence of multiple tender points

- It could be primary (mostly psychosomatic disease related to depression, stress with or without

Overlapping Chronic fatigue syndrome

- It could be secondary to any collagen disease like SLE

- If it primary, the general condition is good, labs are all normal

#### ◆ **Polymyalgia Rheumatica (axial)**

- Autoimmune disease characterized by

Muscle pain (myalgia) which affects the shoulder, or pelvic girdle with stiffness at the morning that improves with movements

- It is the disease of old people
- It is usually associated with feature of inflammatory disease ( night sweats , weight loss , fever) high ESR
- It is often associated with Temporal arteritis ( type of large vessel vasculitis )

### ↳ **Localized pain syndromes**

#### # **Complex regional pain syndrome**

Severe pain with allodynia

#### # **Specific syndromes**

- Shoulder, Adhesive capsulitis (frozen shoulder)
- Rotator calf tendinitis
- Elbow (e.g tennis elbow)

N.B: Multi-system Connective tissue diseases

Have another post 🙌🙌🙌🙌🙌