

# MusculoSkeletal SSystem – Clinical Notes



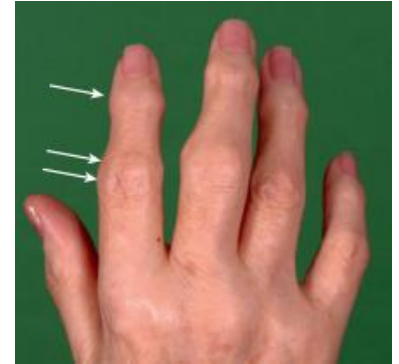
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CLINICOSIS

# MSS Clinical Notes

## Arthritis

### 1-Osteoarthritis

- a) Affects patients over the 40
- b) Better in the morning, gets worst by moving the joint
- c) Progressive
- d) Affects the medium-large joints mainly
- e) Hand findings
  - a. Bouchard's (on PIP) and Heberden's (DIP) Nodules
  - b. Bony expansion in the carpometacarpal joint of the thumb
- f) Do not affect the MCP's
- g) May affects the shoulder

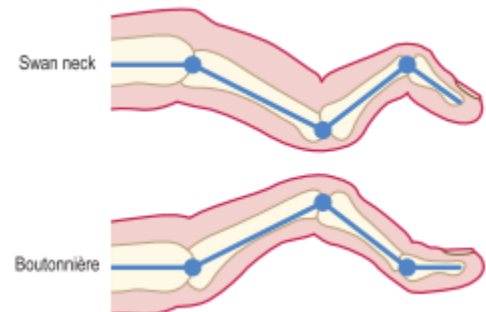


### 2-Saccoidosis

- a) Think of a patient present with respiratory symptoms (Cough mainly), with polyarthritis

### 3-Rheumatoid

- a) Inflammatory disorder associated with HLA-DR4
- b) Worst in the morning, gets better by exercising
- c) Affects Knee, MCPs and PIPs, not the spine
- d) Hand Findings
  - a. Swan Neck → Hyperextension of PIP and flexion of DIP
  - b. Boutonnière hand → Hyperextension of the DIP and flexion at the PIP
  - c. Ulnar Deviation at the MCP
  - d. Wasting of the interossei
- e) May cause
  - a. Palmar Erythema
  - b. Pleural pain
  - c. Pleural effusions
  - d. Conjunctivitis, Scleritis and Episcleritis
  - e. If long standing, the RA may cause a condition called scleromalacia, characterized by a blue sclera (but it is more commonly associated with osteogenesis imperfecta)
- f) Associated with other autoimmune diseases
- g) Character → Flitting pain that starts in one joint and moves to the others
- h) Weight loss, malaise, and low grade fever can happen
- i) Felty Syndrome
  - a. Rheumatoid + Splenomegaly + Neutropenia
- j) Smoking is risk factor



- k) Rheumatoid Nodules →
  - a. Most commonly on the extensor surface of the forearm
  - b. Also happens in the sites of friction → Achilles tendon and the sacrum
  - c. May also the occur in the lungs
- l) Atlantoaxial Instability
  - a. Instability in the joint between the atlas vertebrae (C1) and the axial vertebra (C2)
  - b. May cause severe spinal cord compression
  - c. Occurs late in the disease



#### 4-Gout

- a) Deposition of monosodium urate crystals in the joints
- b) Most common location → First metatarsophalangeal joint (big toe)
- c) Presents as acute attack associated with pain, redness, and warmth in the affected joint
- d) Develops overnight
- e) Associated with warmth and erythema of the involved joint
- f) Can be exacerbated by alcohol consumption
- g) Gouty tophi (resembles the rheumatoid nodules)
  - a. Occurs in the olecranon bursa, hands, knees and toes
  - b. If superficial, they may ulcerate and produce secondary infections
- h) May cause scleritis and episcleritis



#### 5-Pseudogout

- a) Deposition of calcium pyrophosphate crystals
- b) Commonly affects the knee rather than the big toe
- c) Associated with warmth and erythema of the involved joint

#### 6-Psoriatic Arthritis

- a) Affects the medium – large joints mainly
- b) Causes also nail pitting and onycholysis
- c) Skin changes in the psoriatic Arthritis may be hidden in the umbilicus, the scalp and the natal cleft

#### 7-Fibromyalgia

- a) Widespread chronic pain in the body
- b) Poorly controlled by analgesia
- c) The patient presents with history of pain for several years with normal examination
- d) Affect joints around the neck, elbows and knees
- e) Cause Depression
- f) Associated with irritable bowel syndrome

#### 8-Arthritis Associated with IBD

- a) Think of a patient that presents bloody diarrhea, back pain and mouth ulcers

#### 9-Systemic Sclerosis

- a) Thickened, tight skin produces
- b) flexion contractures, calcium deposits in the finger pulps
- c) tissue ischemia leading to ulceration
- d) telangiectasias are purplish, blanch with pressure and are most common on the hands and face.
- e) Causes Raynaud's phenomenon and Dysphagia



#### 10-Reactive Arthritis

- a) Arthritis that occurs after remission of a certain infection
- b) Characterized by the triad of
  - a. Arthritis
  - b. Conjunctivitis
  - c. Urethritis
- c) Can't see, Can't pee, Can't climb a tree

#### 11-Axial Spondylarthritis

- a) Arthritis that commonly affects the spine
- b) May cause acute painful and red eye
- c) May present as insidious onset of back or buttock ache with stiffness in the sacroiliac joint
- d)
- e) Ankylosing spondylitis
  - a. Subset of the axial spondylarthritis
  - b. Increases Lordosis
- f) Associated with IBD (Diarrhea + Back Pain)

#### 12-Septic Arthritis

- a) Pain develops over two days
- b) Gonococcal Arthritis
  - a. Flitting pain that starts in one joint and then affects the adjacent ones (also associated with Rheumatic fever)
  - b. Sexual history is extremely relevant
- c) Pain is continuous (with rest and exercise)
- d) Causes effusion within few hours

#### 13-Complex regional Pain syndrome

- a) Chronic severe pain
- b) Not relieved by analgesia

#### 14-SLE

- a) Autoimmune diseases
- b) Causes arthritis that affects the small joints mainly
- c) Associated with photosensitivity (rash induced by sun exposure)
- d) Butterfly rash on the cheeks and the nose
- m) May cause pericardial effusion, pulmonary fibrosis, diaphragmatic paralysis and Raynaud's phenomenon and

- n) Weight loss, malaise and low grade fever
- o) Positive Antinuclear Antibodies
- p) Worsened by ACEIs

## Bone and Muscle Disorders

### 1-Myositis

- a) Muscle pain causes generalized muscle weakness
- b) Dermatomyositis → Myositis accompanied by rash
- c) Worsened by statins and ACEI

### 2-Osteomyelitis

- a) Localized bone pain
- b) Presents with fever and malaise (it is an infection Afterall)

### 3-Osteonecrosis

- a) Localized Bone pain
- b) Worsened by Glucocorticoids

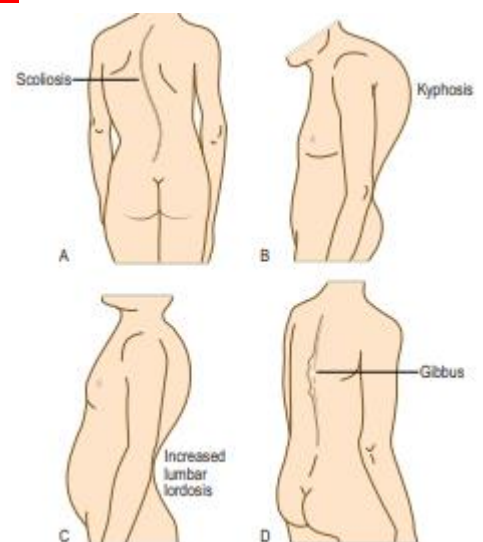
### 4-Osteomalacia

- a) Generalized Bone pain
- b) Mainly due to Vitamin D deficiency
- c) Worsened by Antiepileptics
- d) More common in Asian patients

## Spine and Limbs Disorders

### 1-Spine abnormalities

- a) Scoliosis → lateral curvature of the spine
- b) Kyphosis → curvature of the spine in the sagittal (anterior–posterior) plane, with the apex
- c) Lordosis
  - a. curvature of the spine in the sagittal plane, with the apex anterior
  - b. Increased by Ankylosing Spondylarthritis
  - c. Decreased by rheumatic fever, acute lesions and trauma
- d) Gibbus is a spinal deformity caused by an anterior wedge deformity of a single vertebra, producing localized angular flexion



## e) Torticollis

- a. Twisting of the neck to one side
- b. Caused by Sternocleidomastoid trauma / contracture, or pharyngeal infections



## 2-Neck Pain

- a) Most common symptom regarding cervical spinal abnormalities
- b) Usually felt in the posterior neck
- c) Radiates to the head and the shoulders

3-Cervical Disc Lesions → Causes pain in one of the arms, in the dermatome at the distribution of the affected nerve

## 4-Cervical Myelopathy

- a) Compromised cervical spinal cord, usually due to spinal stenosis
- b) Results in
  - a. lesion of the UMNs innervates the legs → UMN lesion symptoms in the lower limbs
  - b. Altered sensation in the lower limbs
  - c. Sphincter abnormalities (mainly causes urinary incontinence)

## 5-Sciatica

- a) Compression of the roots of the sciatic nerve
- b) Presents as paresthesia and burning sensation in the distribution of the sciatic nerve (from the buttock down to the posterior knee)

## 6-Acute Lumbar disc protrusion

- a) Usually presents as acute onset back pain in adults
- b) Mainly due to lifting of heavy weights, also with bending
- c) The pain is increased by coughing or straining (such when you strain to defecate)
- d) Spondylsthesis → Dislocation of one disc on the one below

## 7-Cauda Equina Syndrome

- a) Compression of the cauda equina, which is collection of spinal nerve below L2, where the spinal nerve ends
- b) Usually by prolapsed vertebral disc, or any other space occupying lesions
- c) Causes bladder dysfunction, decreased perianal sensation, and profound motor symptoms

## 8-Osteoporotic Fractures of the vertebrae

- a) Causes acute back pain
- b) Usually in middle aged men on corticosteroids, or postmenopausal woman
- c) The pain is exacerbated by flexing the spine

## 9-TB spine infection

- a) Back pain associated with weight loss, night sweats and malaise
- b) May extend to the sheath of the psoas muscle → Painful hip flexion

### 10-Lumbosacral spinal stenosis

- a) Stenosis in the spinal cord at the lumbosacral area
- b) Causes diffuse pain in the buttocks and the thighs upon walking or standing
- c) Pain is accompanied by tingling and numbness (distinguishes it from claudication)
- d) Relieved by spinal flexion

### 11-Carpal Tunnel Syndrome

- a) Compression of the median nerve in the carpal tunnel
- b) Causes of carpal tunnel syndrome include
  - a. Hypothyroidism
  - b. Renal Failure
  - c. Pregnancy
  - d. Overuse
- c) Symptoms
  - a. Thenar Atrophy (affects thumb movements)
  - b. Paresthesia in the lateral three and half fingers (palmar side)

### 12-Ligaments of the Knee

- a) Medial Collateral Ligament → Resists valgus stress
- b) Lateral Collateral Ligament → Resists Varus stress
- c) Anterior Cruciate Ligament → Prevents anterior subluxation of the tibia
  - a. Its rupture causes severe Hemarthrosis
- d) Posterior Cruciate Ligament → Prevents posterior subluxation of the tibia
  - a. Rupture of any of them gives the 'giving away instability of the knee joint'

### 13-Menisceal Tears

- a) Causes minimal effusion in 24 hours (compare to ACL tear → Swelling in minutes due hemarthrosis)
- b) May cause true knee locking