

Arthritis

MCQs

• The natural history of arthritis in patients suffering from rheumatoid arthritis with no regular treatment. Select one:

- a. **Progressive ?**
- b. Intermittent
- c. Migratory
- d. Regressive
- e. Stable with occasional exacerbation

• This is a 55-year female patient presents with acute left knee mono-arthritis. The most likely diagnosis is:

- a. Septic arthritis.
- b. Hem-arthritis.
- c. Gouty arthritis.
- d. Early rheumatoid arthritis.
- e. **Calcium pyrophosphate disease (Pseudo-gout).**

السؤال ناقصه معلومات 🙄

• A 50-year-old man presented with an acutely painful and swollen left knee joint. He has a long history of hypertension and is on Diuretic therapy. The pain has been severe for the past few hours. On examination the knee is hot and tender. There is swelling with moderate effusion. The knee joint aspiration revealed Knee joint aspirate white cell count 18000/cuml. Which one of the following is the most likely diagnosis?

- a. Pseudo gout.
- b. Rheumatoid arthritis.
- c. Osteoarthritis
- d. **Acute gouty arthritis.**
- e. Septic arthritis.

• 54-year-old female presented with a two-month history of symmetrical poly arthritis of hands and feet associated with morning stiffness more than two hours. Rheumatoid factor and Anti CCP are positive. Which one of the following is the treatment of choice?

Select one:

- a. Aspirin.
- b. Ibuprofen.
- c. Méthylprednisolone.
- d. Cyclophosphamide
- e. **Methotrexate.**

- A 26-year-old woman seeks preconception counseling. She has a 3-year history of rheumatoid arthritis and she is on methotrexate, hydroxychloroquine, low dose prednisolone, and folic acid. Currently her disease is under excellent control. Which of the following is the most appropriate next step in the management?

Select one:

- Discontinue hydroxychloroquine
- Discontinue methotrexate**
- Discontinue prednisolone
- Discontinue hydroxychloroquine, methotrexate, and prednsiolone
- Keep the treatment unchanged

Answer: B

woman taking methotrexate must discontinue this medication 3 months prior to attempting to conceive (teratogenic)

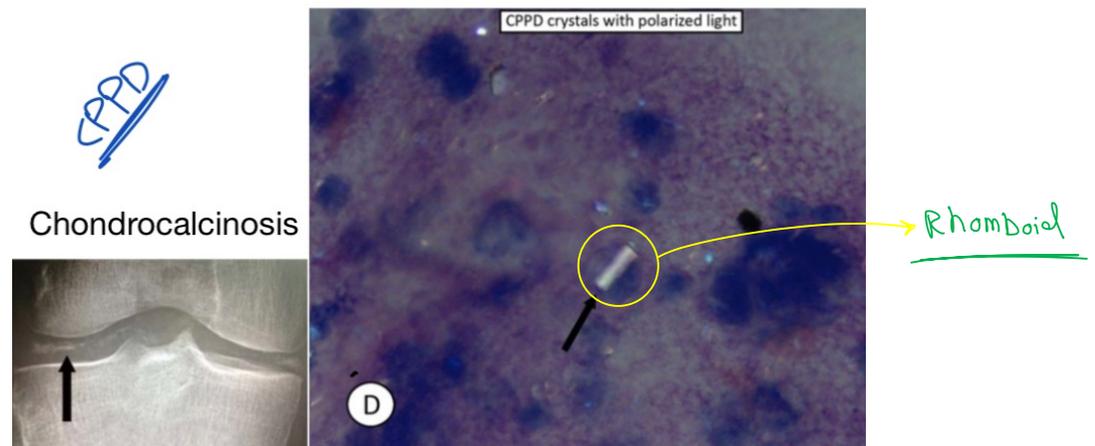
- A 25-year-old male patient with no previous medical illnesses, presented with 2-day history off right knee pain, swelling, and severe limitation of movement. He gave history of fever, chills, and was not able to attend his work. One of the following is correct

Select one

- Streptococcus pyogenes is the most likely causative microorganism.
- joint drainage is a very crucial step in the management.**
- The presence of rash and tenosynovitis should direct evaluation to the possibility of non-gonococcal arthritis
- joint aspiration is needed only at diagnosis.
- Treatment should include antibiotics to cover both Gram positive and Gram-negative organisms

- A 70 year-old woman presents with acute knee arthritis. Radiographs show meniscal calcification (chondrocalcinosis). Analysis of the synovial fluid reveals weakly positive birefringent rhomboid-shaped crystals. The crystals are most likely?

- Monosodium urate
- Calcium hydroxyapatite
- Cholesterol
- Calcium pyrophosphate dihydrate**
- Dicalcium phosphate dihydrate (Brushite)



- A 21 year old bisexual man has a 4 week history of intermittent diarrhea, urethral discharge, and pain in the right knee and left second toe. He has several oral ulcers, a clear urethral discharge, a scaly papular rash on palms and soles, onycholysis, sausage-like swelling of the left second toe, and heat and swelling of the right knee. The results of Gram stains and cultures of urethral discharge are negative. Rheumatoid factor is not present. The most likely diagnosis is?

a. Reiter's syndrome

also known as reactive arthritis

b. Gonococcal arthritis

c. Behcet disease

d. Acquired immune deficiency syndrome

e. Psoriatic arthritis

- A 30 old man with urethritis, conjunctivitis and arthritis. What is the most likely diagnosis?

a- Septic arthritis

b- Gout

c- Ankylosing spondylitis

d- RA

e- Reiter's syndrome

- A 55 year old woman, with past history of rheumatoid arthritis, presents with progressive shortness of breath and dry cough a few months ago, on examination bilateral fine inspiratory crackles. What is the Dx?

a. Pulmonary edema

b. Consolidation

c. Pleural effusion

d. Pulmonary fibrosis

e. Lung cancer

- All the following are causes of monoarthritis except one:

a) Gout

b) Trauma

c) Septic arthritis

d) Pseudogout

e) RA

- One is wrong about psoriatic arthritis?

chronic posterior uveitis

- All of the following are characteristic extra-articular manifestations of rheumatoid arthritis except?

- a) Anemia
- b) Cutaneous vasculitis
- c) Pericarditis
- d) Caplan's syndrome
- e) **Thrombocytopenia**

- achilles enthesitis seen in :
reactive arthritis ?

Enthesitis refers to inflammation at the sites where tendons or ligaments attach to the bone, and it is a characteristic feature of reactive arthritis.

- most common organism causing septic arthritis :
staph aureus

- Correct about psoriasis:

- a. Can cause sacroiliitis
- b. Psoriatic arthritis present in 60% of patients

- Which disorder is diagnosed by the presence of calcium pyrophosphate in synovial fluid:

- A)Chondro calcinosis.**
- B)Gouty arthritis.
- C)Psoriatic arthritis.
- D)Psoriatic arthritis.
- E)O.A

- All of the following are indications for the treatment of Gouty arthritis except for:

- A)Chronic Gouty arthritis.
- B)Renal stones.
- C)Renal failure.
- D) Serum uric acid more than 8mg in men. More than 15 in men**
- E)All of the above.

- One of the following isn't a characteristic for spondylo arthropathy:
 - A) Strong association with HLA-B27.
 - B) Occasional Aortitis.
 - C) Association with chronic inflammatory bowel disease.
 - D) Tendency for posterior Uveitis ?**
 - E) Entesitis.

- The isn't a cause of secondary sjogren:
 - A) Reactive arthritis.**
 - B) SLE.
 - C) Scleroderma.
 - D) RA.
 - E) Hypothyroidism.

- Differential diagnosis of sacroiliitis includes all of the following except for:
 - A) Psoriatic.
 - B) Behcet disease.**
 - C) Ankylosing spondylitis.
 - D) Reactive arthritis.
 - E) Crohn disease.

- Boutonniere deformity is seen in:
 - A) RA.**
 - B) Psoriatic arthritis.
 - C) Reactive arthritis.
 - D) Osteoarthritis.
 - E) Tenosynovitis of hand.

- One of the following deformities can't be caused by RA:
 - A) Swan neck deformity.
 - B) Genu valgum.
 - C) Elbow flexion.
 - D) Bouchard nodules.**
 - E) Z deformity of thumb.

- RF is positive in all of the following, except:
 - A. Subacute bacterial endocarditis
 - B. Adult onset Still's disease.**
 - C. Vasculitis

Answer: B.

Rheumatic disorders — Patients may have detectable serum RF in a variety of rheumatic disorders, many of which share similar features, such as symmetric polyarthritis and constitutional symptoms. These include [36]:

- Rheumatoid arthritis — 26 to 90 percent (see below)
- Sjögren's syndrome — 75 to 95 percent
- Mixed connective tissue disease — 50 to 60 percent
- Mixed cryoglobulinemia (types II and III) — 40 to 100 percent
- Systemic lupus erythematosus — 15 to 35 percent
- Polymyositis/dermatomyositis — 5 to 10 percent

Nonrheumatic disorders — Nonrheumatic disorders characterized by chronic antigenic stimulation (especially with circulating immune complexes or polyclonal B lymphocyte activation) commonly induce RF production (table 1). Included in this group are [36]:

- Indolent or chronic infection, as with SBE or hepatitis B or C virus infection. As an example, studies have demonstrated that hepatitis C infection, especially when accompanied by cryoglobulinemia, is associated with a positive RF in 54 to 76 percent of cases [44-47]. RF production typically ceases with resolution of the infection in these disorders. These molecules may be produced by activated hepatic lymphocytes [48]. (See "[Clinical manifestations and diagnosis of essential mixed cryoglobulinemia](#)".)
- Inflammatory or fibrosing pulmonary disorders, such as sarcoidosis.
- Malignancy.
- Primary biliary cirrhosis

CLASSIFICATION CRITERIA — There is no specific test or combination of tests that can be used to establish the diagnosis of ASD. As a result, at least seven sets of diagnostic criteria have been proposed [15-21].

Yamaguchi criteria — There are four major Yamaguchi criteria:

- Fever of at least 39°C lasting at least one week
- Arthralgias or arthritis lasting two weeks or longer
- A nonpruritic macular or maculopapular skin rash that is salmon-colored in appearance and usually found over the trunk or extremities during febrile episodes
- Leukocytosis (10,000/microL or greater), with at least 80 percent granulocytes

- Which statement about rheumatoid arthritis is not correct?
 - a. The commonest cause of anemia seen in pts with the disease is due to hemolysis?**
 - b. Synovitis characteristically involves Metatarsophalangeal joints
 - c. RF is of an IGM type
 - d. Joint effusions occur in the first several months
 - e. Felty's disease is more common in seropositive patients
- Answer: A (Anemia of chronic disease)**

- Which of the following is true about septic arthritis?
 - Hematogenous spread is the most common route of infection**
 - Joint involvement is typically episodic recurrent polyarticular
 - Almost always occur in normal joints
 - Presence of urate crystals exclude its diagnosis
 - Gram negative bacteria is the leading cause

- All of the following help differentiate between inflammatory and non-inflammatory arthritis, except:
 - Favorable response to NSAIDs
 - Mornign stiffness for 2 hours
 - Pain improves with continued ambulation
 - Presence of extra-articular features
 - Hottness and rednes of the affected joint**

- All of the following are consistent with the diagnosis of rheumatoid arthritis, except:
 - Symmetrical involvemtn of the small joints of the hands?
 - Elevated ESR
 - Wan neck deformities in the fingers
 - Nodes of the distal interphalangeal Heberden's joint**
 - Erosive changes othe MCP joints on x-ray

Answer: D (osteoarthritis)

- A positive rheumatoid factor can be seen in all of the following conditions, except:
 - RA
 - TB**
 - Hepatic C
 - Malignancies
 - Combinedimmunodeficiencysyndrome →Correct

- All of the following are extra-articular features of rheumatoid arthritis, except:
 - Posterior uveitis**
 - Cutaneous vasculitis
 - Pulmonary fibrosis
 - Sicca syndrome (secondary sjogren's)
 - Pericarditis

Answer: A (Eyes: Scleristis, episcleritis, scleromalacia perforans, and Sicca syndrome)

- A healthy patient who is HLA-B27 is most likely to develop ONE of the following.
 - a- psoriatic arthritis
 - b- enteropathic spondylitis
 - c- gonococcal arthritis
 - d- Reiter's disease
 - e- ankylosing spondylitis**

- All the following are true about gout except:
 - a- Is caused by deposition of monosodium urate monohydrate crystals in the joints.
 - b- It is an asymmetric arthritis.
 - c- Can be caused by thiazide diuretics.
 - d- It is commoner in females than males 4:1.**
 - e- Attack of gout can be triggered by dehydration.

- Rheumatoid factor is positive in all the following diseases except:
 - a- Rheumatoid arthritis
 - b- dermatomyositis
 - c- ankylosing spondylitis**
 - d- discoid lupus erythematosus
 - e- mixed connective tissue diseases.

- A 25-year old man presents with urethritis, painful swollen left knee and conjunctivitis. ONE of the following is most likely diagnosis.
 - a- SLE
 - b- Gonococcal arthritis
 - c- Gout
 - d- Reiter's syndrome**
 - e- Ankylosing spondylitis

- All the following are true about rheumatoid arthritis except.
 - a- it is chronic disease, but curable.**
 - b- it is commonly associated with positive rheumatoid factor
 - c- antimalarial treatment is one of the lines of management.
 - d- the patients with the disease are liable to infection
 - e- this disease may affect the patients functionally.

- A 20-year-old male is complaining of arthritis and eye irritation. He has a history of burning on urination. On examination, he has Right knee effusion and dermatitis of the glans penis. Which of the following is ONE most correct statement about this patient?
 - a- *Nisseria gonorrhoeae* is likely to be cultured from the glans penis
 - b- B- the patient is likely to have positive rheumatoid factor
 - c- An infectious process of the GI tract may precipitate this disease**
 - d- The anti-nuclear antibody is very likely (highly) to be positive
 - e- There is strong association with HLA-B8 antigen.

Comment:

Reactive arthritis (Reiter syndrome) is a reactive polyarthritis that develops several weeks after an infection such as nongonococcal urethritis (NGU) or gastrointestinal infection caused by *Yersinia enterocolitica*, *Campylobacter jejuni*, or *Salmonella* or *Shigella* species. Reiter syndrome is characterized as a triad of oligoarticular arthritis, conjunctivitis, and urethritis. The disease is most common among young men and is associated with the histocompatibility antigen, HLA-B27. Circinate balanitis is a painless red rash on the glans penis that occurs in 25% to 40% of patients. Other clinical features may include keratoderma blennorrhagicum (a rash on the palms and soles indistinguishable from papular psoriasis) and spondylitis. ANA and rheumatoid factor are usually negative. CPK would be elevated in polymyositis or dermatomyositis but not in reactive arthritis. Gonorrhea rarely precipitates Reiter syndrome, and a negative urethral culture would be expected.

- ONE of the following is not a disease –modifying anti-rheumatoid arthritis drug.

- a- sulfasalazine
- b- NSAIDs**
- c- methotrexate
- d- leflunamide
- e- sodium aurothiomalate (Gold)

- HLA-B27 is commonly associated with all of the following Except.

- a- it may present normally in general population
- b- ankylosing spondilitis
- c- polymyositis**
- d- reactive arthritis
- e- Reiter's disease

- a case of RA and takes etanercept, what statement is correct?

There is risk of reactivation of TB
 etanercept, as it is an immunosuppressive medication.

- All the following statements regarding the uric acid are true Except.
 - a- two third of the body uric acid pool is dietary in origin.
 - b- two third is from endogenous purine metabolism.
 - d-normal serum uric acid level dose not exclude acute gouty arthritis.
 - e- there are variation in normal values between male and female.

- Anti ccp, pain and swelling in mcp
- RA

- All the following joint are usually affected at onset of RA except one :
 - a) Proximal interphalangeal joints
 - b) Distal interphalangeal joints
 - c) Metacarpophalangeal joints
 - d) Wrists
 - e) Metatarsophalangeal joints

- All cause erythema nodosa except :
TB - OCP - beta hemolytic strep – leukemia , RA

- Most common eye finding in RA ??---
sjogren or sicca syndrome???-episcleritis

- RA, patient in pain, he takes indomethacin, next step:
 - a. Methotrexate
 - b. Corticosteroid therapy

- A joint deformity that is not present in RA:
 - a. Heberden
 - b. Botnunnier
 - c. Z-deformity

The Z-deformity is typically associated with a swan neck deformity seen in conditions like rheumatoid arthritis (RA). Heberden and Bouchard nodes are characteristic deformities associated with osteoarthritis, not RA.

- What is swan neck deformity in RA :

A)Hyper flexion of proximal interphalangeal (PIP) and hyper extension of distal interphalangeal (DIP).

B) Hyper extension of PIP and hyper flexion of DIP.

C) Hyper extension of PIP and hyper extension of DIP.

D)Subluxation of Metacarpophalangeal.

E)Non of the above.

- A disease modifying anti rheumatic drugs (DMARD) include all of the following except for :

A)Salazopyrine.

B)Hydroxychloroquine.

C)Colchicine.

D)Methotrexate

E)leflunomide

- Boutonniere deformity is seen in:

a) RA.

b) Psoriatic arthritis.

C)Reactive arthritis.

D)Osteoarthritis.

E)Tenosynovitis of hand.

- patient with right ankle arthritis, which statement is correct?

Previous two attacks of gouty arthritis in the 1st MTP raises the suspicion of gout in this joint

- A 72-year-old male patient is using 100 mg of aspirin because of a previous CVA. He is expected to have:

Select one:

a. Aspirin is expected to impair excretion of uric acid.

b. No effect on uric acid

c. Reduces uric acid

d. Increase chance of gout despite no change in uric acid

e. Increases excretion of uric acid.

- Treatment with thiazide diuretics may lead to all of the following except:

a. Increase in Kloss

b. Precipitate uremia in patients with impaired renal function

c. Precipitate gout

d. Increase in circulating renal level

e. Improve carbohydrate tolerance

- Pt with gout ,, what is the goal uric acid level :

<8 <7 <6 <5 <4

- Case of young patient with monoarthritis at ankle what is true :

* erythema over dorsum of foot suggestive of gout (most like answer)

* Recurrency and 1st metatarsal involvement suggestive of gout (may be the answer)

- Most cause cause of gout ?

decrease renal excretion

- All of the following statement about gout are true, except:

a. In adult men the solubility of monosodium urate is 7 mg/dL

b. Women of child-bearing age have lower serum uric acid

c. Initial treatment of acuteattack should include NSAIDs, colchicine, and allopurinol

d. Diuretics should elevate serum uric acid

e. Attacks can be precipitated by acute MI.

Answer: C (allopurinol and colchicine never in acute treatment)

- ONE of the following statements is true about treatment of pulmonarytuberculosis.

a- pyrazinamide may precipitate hyperurecemic gout

b- INH can cause optic neuritis

c- renal impairment with rifampicine

d- streptomycin is causing reversible damage to vestibularnerve

e- hepatitis is usually caused by ehambutol

Mini-OSCE

Q11

Dx of Rheumatoid arthritis :

- Anti-citrullinated protein antibodies (ACPAs)
- RF

Q20: All of the following are differential diagnosis except:

- SLE
- Viral arthritis
- Calcium pyrophosphate disease (CPPD) ?



Not sure about the exact answer 😊

Q19: one of the following is wrong regarding this condition:

- Reversible deformity



Station 5

1) What is your diagnosis?

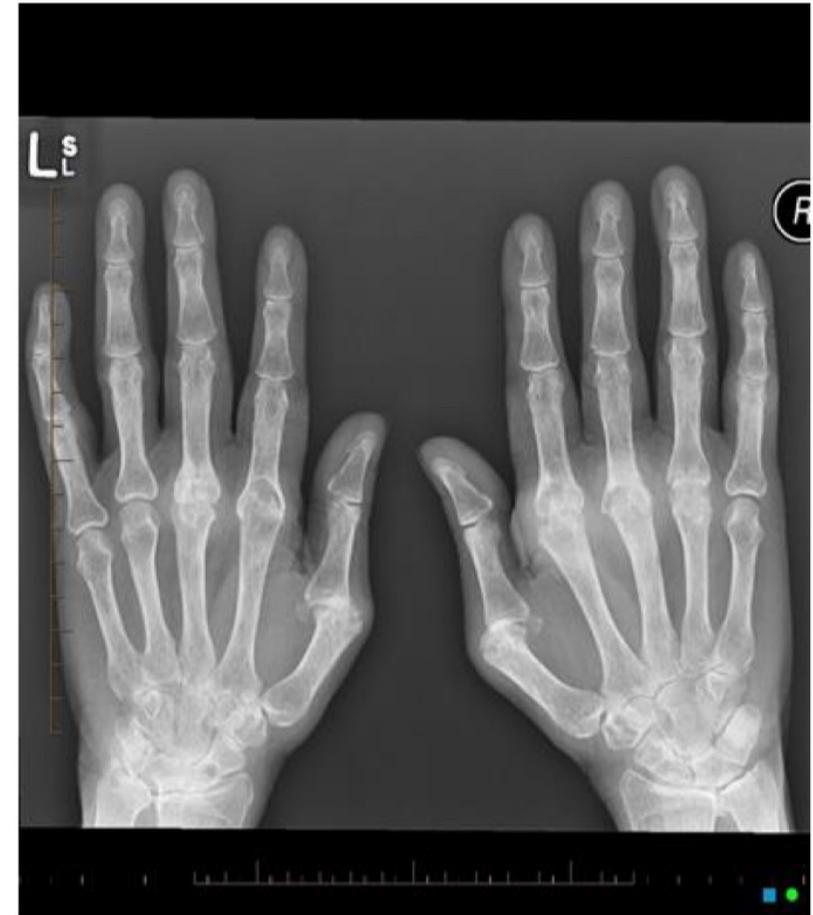
Rheumatoid Arthritis

1) List three findings on the x-ray?

Marginal erosion – Joint space narrowing –
peri-articulate osteopenia

1) List two serological tests to confirm your
diagnosis?

anti-CCP – RF



Station 16



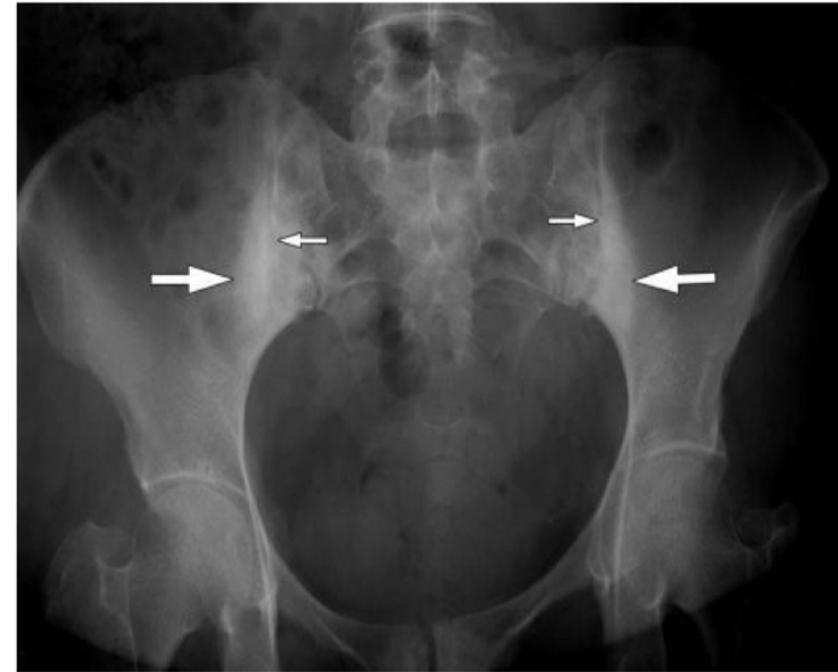
Finding : **Subluxation**
diagnosis : **RA**

Pt with these findings presents with low back pain and morning stiffness more than one hour

1) what is your diagnosis (ankylosing spondylitis) note some say that is RA

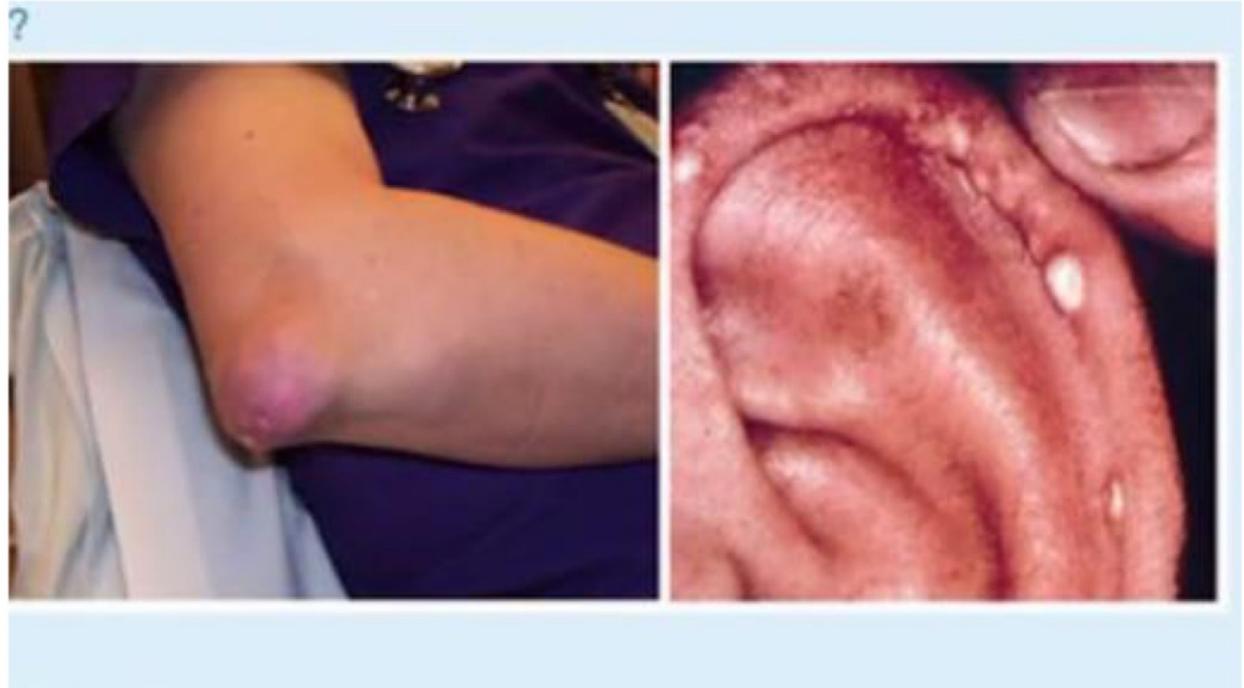
2) give 2 radiological signs you will see in this patient (sacroiliitis, Bamboo spine)

3) what 2 lab investigations you will order (antiCCP/ RF / gene detection for HLA B27)



13-This patient had multiple attacks of joint pain , redness and swelling this year .
The medication used to prevent further attacks is ?

- a. **Allopurinol**
- b. NSAID's
- c. Infliximab
- d. Immunosuppressive drugs
- e. Simple analgesia



Q11 : all precipitate the attack except :

a synthetic compound that promotes increased excretion of uric acid and is used to treat gout.

Chemical formula $C_{13}H_{19}NO_4S$.

- Physical stress
- Diuretic
- Alcohol
- **Probenecid**
- Trauma



Q7) what is the most common presentation of the condition that is shown with this X-ray ?

- Pseudogout
- Pseudorheumatoid
- **Asymptomatic**
- Pseudoosteoarthritis



- *the X-ray shows Chondrocalcinosis which is found with pseudogout and the most common presentation is asymptomatic*

RHUMATOLOGY SECTIONS

Q1: 69 YEARS , female patient

All the following possible finding ,
EXCEPT ?

- A. Swan Neck
- B. Botreni
- C. Ulnar deviation
- D. Pain with passive movement

E. Reducible deformity

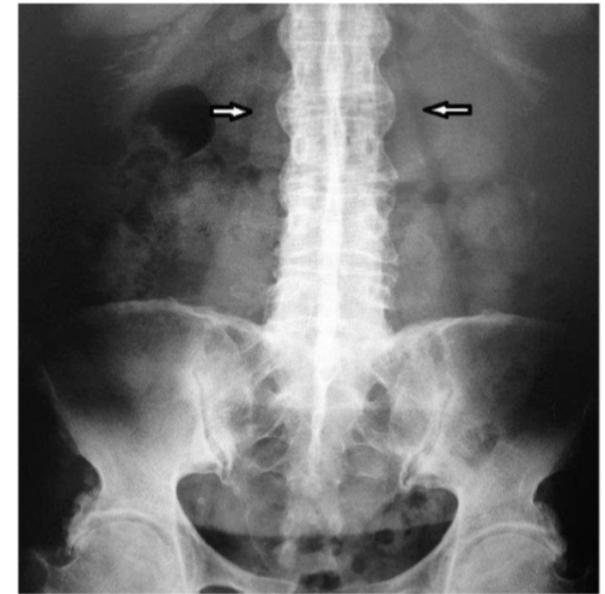
****One of these drugs not for
this lesion :**

- A. Methotrexate
- B. Sulfasalazine
- C. Infliximab
- D. Hydroxychloroquine

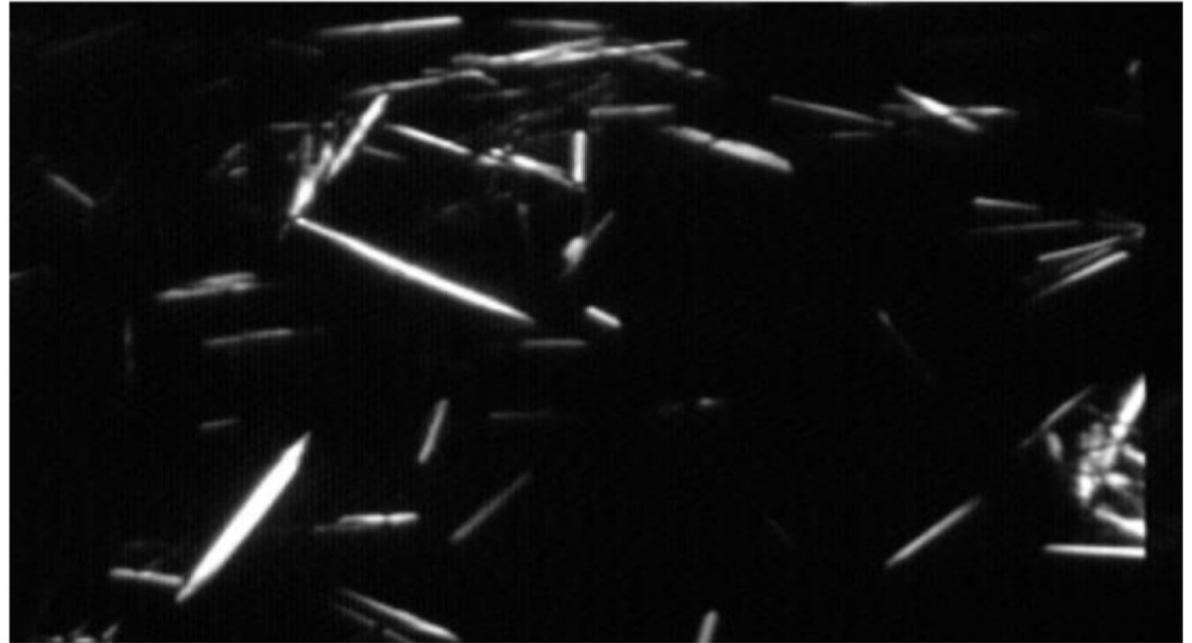
E. Chloramphenicol



- 35 yr old male with low back pain that is worse at morning and gets better with movements
- Diagnosis?
 - Ankylosing spondylitis
- findings on pic?
 - Bamboo spine
- Test to confirm the diagnosis?
 - HLA-B27



Station 14



what do you see ?

needle shaped mono sodium urate crystals

Diagnosis ?

Gout

Q1: Dx :

Gout

Q2: TTT:



TTT of gout :

1- avoid secondary causes of hyperuricemia : medications, obesity, alcohol, purine intake

2 Acute gout :

a- bed rest b- NSAIDs c- Colchicine (if no response to NSAIDs or C/I)

d- corticosteroids (if no response to NSAIDs and Colchicine)

3- prophylactic therapy : (initiate prophylactic ttt after 2-3 acute attacks)

- allopurinol or uricosuric drugs (e.g probenecid)

add colchicine or NSAIDs for 3-6 months (to prevent acute attack then discontinue)

Very important Note : DON'T give allopurinol during an acute attack of gout

**Side effect for allopurinol :
stevens-Johnson syndrome**