



# MSS

## Musculoskeletal System

Doctor 2019 | Medicine | JU

NO.  
8

### Microbiology

Writer

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Scientific  
correction

Grammatical  
correction

Doctor

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## case 1

• A 10 years old boy is brought to the ER , he has fever and chills for the last few days , he has dull pain just over his left knee , he has no history of recent trauma other than minor scrapes to his knees and elbows while playing outside , (physical examination —» a lot of tenderness 3 cms above the knee cap ) , no effusion (the knee is not swollen inside the joint) , X ray shows soft tissue swelling and periosteal reaction over the lower end of the femur, in this patient, what is the most likely organism that is responsible for his symptoms ??

- staphylococcus aureus is the most common causing agent for acute hematogenous osteomyelitis in otherwise healthy people

notes :

- if the child has sickle cell disease, you might see the staph aureus with salmonella

- in some one who is diabetic , you will look at diabetic foot

## case 2

• a 70 years old female came to the clinic complaining from **progressively worsening** back pain , she has renal disease, diabetes and hypertension , she has no leg weakness , she has been treated several weeks ago for staph bacteremia associated with dialysis catheter , now she has fever (38°C) , she has tenderness above her lumbar vertebrae , the skin is not changed , which is the best following step to manage this patient??

- the most likely diagnosis is **vertebral hematogenous osteomyelitis (spreading from the catheter)**
- the organism is most likely staph aureus or CoNS  
( If there is no history of staphylococcus infection, Gram-negative bacteria such as klebsiella are also a common cause of osteomyelitis in such cases )
- you have to do blood cultures and MRI in order to diagnose the patient

### case 3

- A 45 years old woman came to the clinic complaining from joint pain, swelling, and stiffness , she has recently emigrated from her original country where she has no access to medical care , when you did the examination, you found that the Proximal interphalangeal & Metacarpophalangeal joints are tender and swollen bilaterally , what is the diagnosis?
- **the joints are affected bilaterally —» autoimmune disease —» most likely rheumatoid arthritis**
- note : rheumatoid factor is an antibody against the Fc portion of IgG**

### Case 4

- you have a female patient, she is 38 , she came to the clinic with abdominal pain , Two weeks ago, she had increasingly severe abdominal pain with watery diarrhea , the patient has a history of crohn's disease , she was treated with adalimumab ( a human IgG monoclonal antibody ) to control the symptoms , vital signs are normal but she has slightly high temperature (38°C)

the examination shows that she has moderate tenderness with her right lower quadrant with no peritoneal signs , you did a lab test to look for the monoclonal antibody medication in her body and you didn't find it, do you think the case is an inflammation or a flare up of the crohn's disease ?

- it is most likely a flare up of crohn's disease because we didn't find the drug in her system (why?) because her immune system has developed tolerance against the drug
- the mechanism of tolerance ( extra info ) : the drug is a protein so it is not hepatic or renal tolerance , so the way that tolerance happens is by developing antibodies against the drug

### Case 5

- a 28 man came to the ER , he had foot pain and swelling in his right foot for several hours because he stepped in an old nail , he has fever, his blood pressure and pulse are normal , his right foot is swollen and he has erythema around the injury sight , the radiograph imaging shows gas in the tissue what is the causing agent in this case?

- g+ve rods , most likely clostridium

### Case 6

- a 28 man has 2 months history of low back pain with morning stiffness and the patient doesn't recall any recent trauma , sports and NSAIDs did not help , the patient was sleeping on his back but now he has to sleep in his side because of the pain , vital signs are normal , he doesn't have fever

the x ray shows narrowing of the sacroiliac joints , which of the following is most probably associated with this patient's disease??

- 1- specific human HLA type 1 antigen
  - 2- specific human HLA type 2 antigen
  - 3- autoreactive immunoglobulin antibodies
  - 4- a selective immunoglobulin deficiency
- he has Ankylosing spondylitis which is associated with a specific **human leukocyte antigen** known as the **HLA-B27** antigen.

### Case 7

- a 22 female came to the clinic with history of increasing neck and low back pain and it is more severe in the morning , her pain improves as the day passes , the patient has no history of trauma , what do you think this patient has ??
- it is another case of Ankylosing spondylitis and the Interleukin involved here is IL-17

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لإستزادة بآخر نص ساعة من المحاضرة للي بيحب يرجعهم 🌸