

NON TRAUMATIC MSK PAIN

Learners Guide

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PRE READING AND RESOURCES FOR LEARNERS

Expectation is for the learners to have understood the basics before the session.

[Anatomy video](#)

[Assessment tips](#)

If possible or for further resource

[Apophysitis, avulsions, Spondylolysis](#)

[Rheumatology](#)

CASE SCENARIO 1

Marie is a 12-year-old girl who presents to you complaining of anterior knee pain. She is an active volleyball player and is trying hard to make her school team. The pain is getting worse over the past month and is now affecting her ability to train. She denies any trauma.

What are your differential diagnoses?

What factors in the history and exam would you like to elicit in order to narrow the diagnosis?

You feel she has apophysitis of her tibial tuberosity.

What is the pathophysiology of apophysitis?

Can you name any other common sites affected by apophysitis?

What investigations would you like to perform?

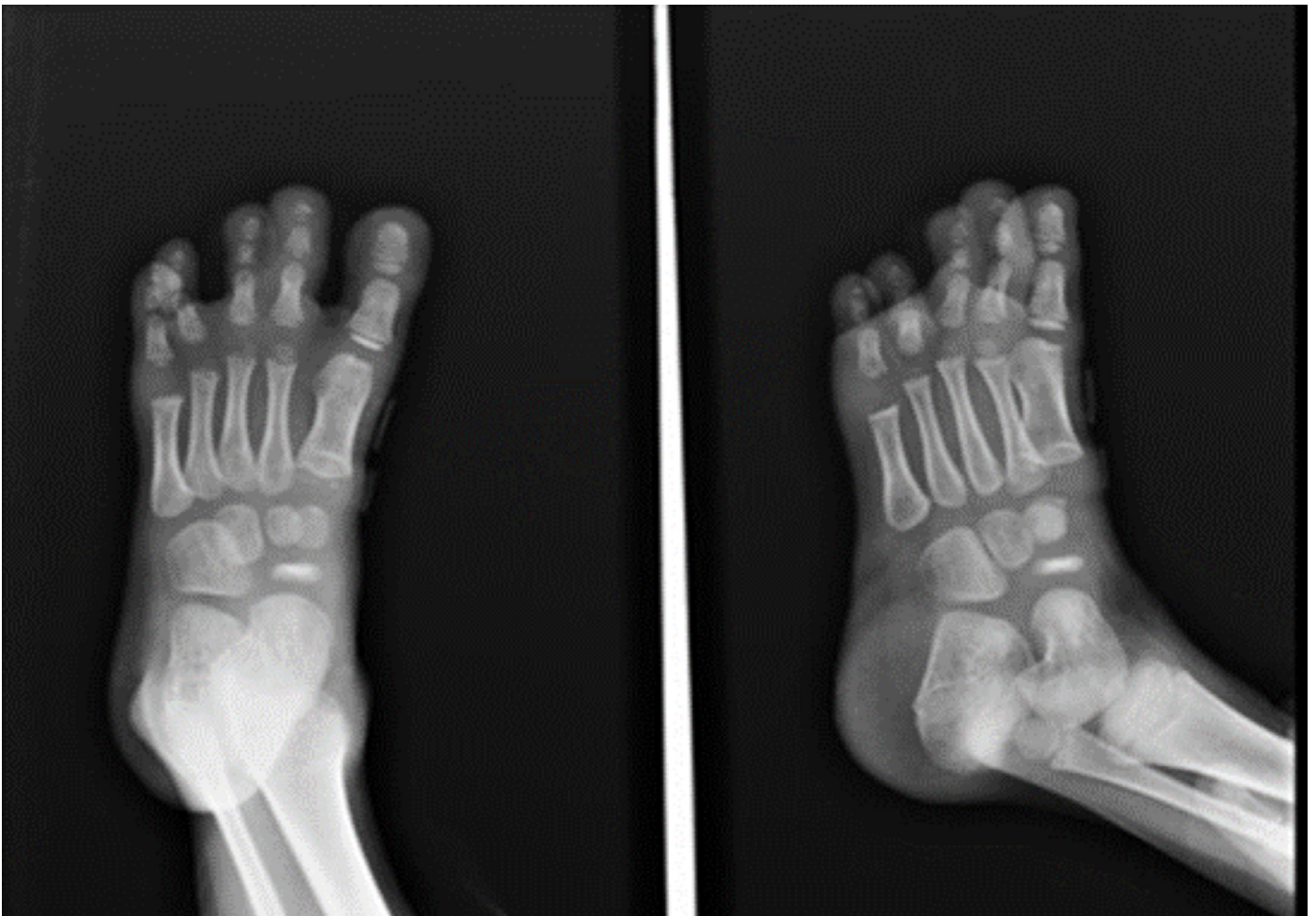
What is your treatment plan?

CASE SCENARIO 2

Katie is a 9-year-old complaining of left foot pain. The pain has been getting worse over the past month and she is now beginning to develop some stiffness. She is a keen athlete and trains five times per week. She denies any trauma and is systemically well.

What are some of the differential diagnoses?

You organise an x-ray. What x-ray changes do you see?



What is the diagnosis?

What is the pathophysiology of osteochondrosis?

Can you name any other anatomical sites that can be affected by osteochondrosis?

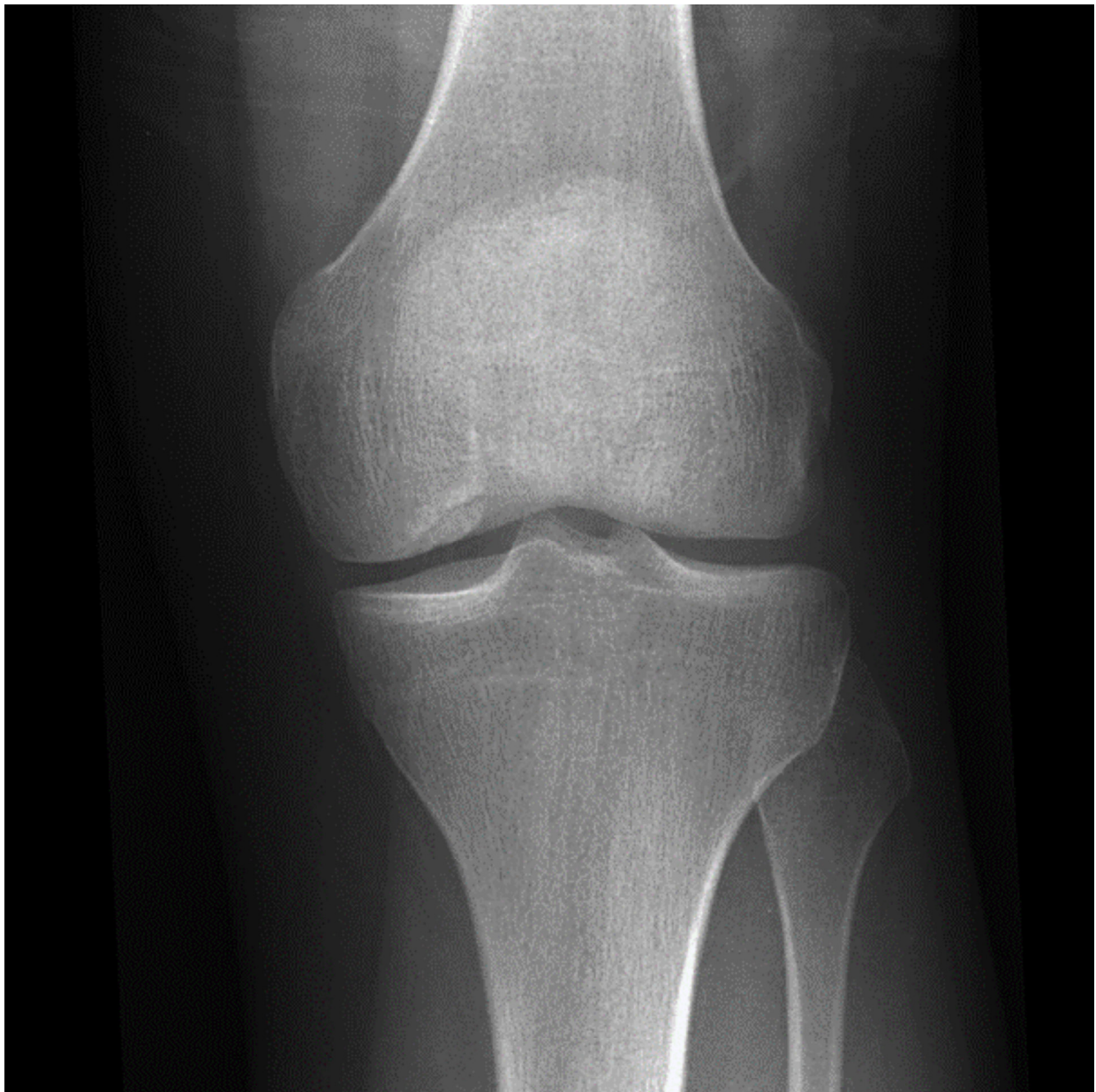
What is your treatment plan for this patient?

ADVANCED DISCUSSION (20 MINS PER CASE)

ADVANCED CASE SCENARIO 1

A 15-year-old girl attends with intermittent pain and swelling to her left knee for the past two months. She is a keen soccer player but pain on the medial aspect of her knee is affecting her ability to run. She complains that after every game her knee swells and is now taking increasingly longer to subside. On exam she is walking with a limp, her knee is swollen and she has pain to the medial joint line. Her knee feels stable with all ligaments intact on testing.

You decide to do an x-ray:



Describe the x-ray findings.

Are you aware of any grading system used for Osteochondritis dissecans?

What would you like to do with the above patient?

Further investigations? Treatment? Specialist opinion?

ADVANCED CASE SCENARIO 2

Judith is a 10-year-old girl who is attending with pain and stiffness to bilateral wrists with intermittent swelling to fingers. She has no history of trauma. You think she may have arthritis.

What will you want to decipher during your history and exam?

Our patient has bilateral wrist, metacarpophalangeal and proximal interphalangeal joints involvement. She complains of some morning stiffness but denies any previous medical problems. She cannot remember any trauma and has not had any temperatures or rashes.

What are your differentials?

You think this patient has Juvenile idiopathic arthritis. What is JIA?

What investigations will help with this diagnosis?

What is your chosen treatment for JIA?

Apart from rheumatology who else should see this patient with JIA?

QUIZ QUESTIONS:

Question 1.

Which of these conditions and age of onset do not match

A - Apophysitis	10-14 F 12-16 M
B - Osteochondrosis	12-18
C - SUFE	10-16
D - Osteochondritis dissecans	>10
E - Septic arthritis	Any age

Question 2.

Which of these anatomical areas do you not commonly see apophysitis

- | | |
|-------------------------------------|------------------------------------|
| A - Capitellum | D - Medial condyle of elbow |
| B - Inferior pole of Patella | E - Calcaneal tuberosity |
| C - Tibial tuberosity | |

Question 3.

Which of these statements about osteochondritis dissecans is not true

- A - Osteochondritis is a focal disruption of articular cartilage and subchondral bone
- B - Most commonly seen on the medial femoral condyle
- C - The aetiology is largely unknown
- D - Recovery can take 6-12 months
- E - A closed physis is a good prognostic factor

Question 4.

Which of these is not a radiological finding of osteochondrosis

- A - Sclerosis
- B - Fragmentation
- C - Flattening of epiphysis
- D - Lytic lesion
- E - Irregular epiphyseal growth

Question 5.

Which one of these is in the group of inflammatory disorders comprising JIA

- A - Early onset ANA-positive
- B - RF-positive
- C - Psoriatic
- D - Systemic
- E - Enthesitis related

Take home

- 1 A Focused history and exam are essential for all patients with atraumatic MSK pain.
- 2 Do not be fooled by an innocuous traumatic event. Patient's tend to only think injuries can cause limb pain and will try hard to associate their pain with an event.
- 3 Important differentials to consider are infection, malignancy and systemic disease.
- 4 Apophysitis and Osteochondrosis are self-limiting processes but require prompt diagnosis and treatment to prevent morbidity.
- 5 Baseline x-ray is useful in all patients to investigate potential diagnosis and to assess the stage of disease.
- 6 Osteochondritis dissecans can be subtle and require long and careful rehabilitation.
- 7 JIA should be considered in patients with joint symptoms for over 6 weeks and no other cause. Normal bloods and radiographs do not rule out JIA. A Prompt referral to rheumatology for treatment consideration is advised.

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JIA

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