



TRAUMA & ORTHOPAEDICS

# ANKYLOSING SPONDYLITIS

HISTORY X MANAGEMENT

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## TOPIC - HISTORY TAKING



MEDIC



PATIENT



MARKER

**PLEASE REFER TO YOUR SCRIPTS**

## **PROMPT**

Mr. James, a 45-year-old software engineer, presents to the emergency department with worsening lower back pain and a new onset of breathlessness over the past week

COUNSELLING X PHARMACY



# LET'S DISCUSS

# **INTRODUCTION AND RAPPORT BUILDING**

- Confirm patient's identity and consent
- Assess the onset, duration, and progression of symptoms
- Explore the patient's understanding of their condition

## OBTAINS A THOROUGH HISTORY OF THE PATIENT'S PRESENTING SYMPTOMS

- Chief complaint: chronic back pain and stiffness, worse in the morning or after periods of rest.
- Duration of symptoms: AS typically presents with more than three months of pain.
- Symptoms of inflammatory arthritis: pain, swelling in peripheral joints.
- Eye symptoms: redness, pain, sensitivity to light (uveitis).
- Bowel symptoms: diarrhea, abdominal pain (associations with inflammatory bowel disease).
- Cardiac symptoms: chest pain, breathlessness (rare complications include aortitis, aortic regurgitation, conduction abnormalities).

## OBTAINS A THOROUGH HISTORY OF THE PATIENT'S PRESENTING SYMPTOMS

"Good morning, I'm Dr. \_\_\_\_\_, thank you for coming in today. I understand that you've been experiencing some discomfort and pain in your back. Is that correct?"

"Can you tell me a little more about your back pain? Does the pain worsen after you've been resting or in the morning? Have you noticed any changes in your eyes, bowel movements, or general wellbeing such as unexplained weight loss or fatigue?"

"Let's delve a little deeper into your symptoms. Could you describe the pain you're feeling in your back? Is it more towards the lower part? Have you noticed if exercise seems to make the pain better or worse? And what about your joints - are they swollen or painful?"



## FURTHER EXPLORATION...

- Evaluate the nature, location, and duration of the back pain.
  - Establish the pattern of pain: does it improve with exercise and worsen with rest?
  - Presence of enthesitis (pain at insertion of tendons and ligaments).
  - Evaluate for dactylitis, an inflammation of an entire finger or toe.
- 
- Timeline of back pain and stiffness.
  - Effect of symptoms on daily activities.
  - Response to any previous treatments.

## OBTAINS A THOROUGH HISTORY OF THE PATIENT'S PRESENTING SYMPTOMS

- "I'd like to get a better understanding of when you first noticed these symptoms and how they have progressed. Have you sought any treatments previously for this issue? If you don't mind, I'd also like to go over some information that the ambulance may have recorded when you arrived."

## RED FLAGS/COMPLICATIONS

- **Red Flags**

- Rapid onset or progression of symptoms.
- Severe back pain not relieved by rest or analgesics.
- New symptoms such as weight loss, fever, or neurological symptoms (numbness, weakness).

- **Common Complications:**

- Restrictive lung disease due to chest wall involvement.
- Osteoporosis and risk of vertebral fractures.
- Spinal stenosis and cauda equina syndrome.
- Cardiovascular complications: aortic regurgitation, conduction defects.

- **Risk factors**

- Family history: AS has a strong genetic predisposition.
- Personal history of chronic back pain.

## OTHER KEY PHRASES

- "I noticed that you mentioned feeling breathless and experiencing severe back pain. These symptoms are concerning and need immediate attention. Were there any other symptoms like weight loss or fever that you have experienced recently?"
- "With your condition, it's possible for it to affect other parts of your body as well. It can lead to issues such as difficulty in breathing due to restricted lung movement or even heart problems. We will keep an eye on these as we move forward with your care."

## PAST MEDICAL HISTORY

- Previous diagnosis of inflammatory back pain, uveitis, psoriasis, or inflammatory bowel disease.
- Previous fractures or surgeries.

### DRUG HISTORY

- Current medications: non-steroidal anti-inflammatory drugs (NSAIDs), disease-modifying antirheumatic drugs (DMARDs), or biologics.
- History of medication intolerance or allergies.
- Compliance to prescribed medications.

### FAMILY HISTORY

- Family history of AS or related conditions (psoriasis, inflammatory bowel disease, reactive arthritis).

### SOCIAL HISTORY:

- Impact of symptoms on work and social activities.
- Smoking history: Smoking can exacerbate the symptoms of AS and reduce the efficacy of treatments.

## PAST MEDICAL HISTORY

- "Have you ever been diagnosed with psoriasis or inflammatory bowel disease? Have you had any surgeries in the past, particularly related to your back or joints?"
- "It seems that ankylosing spondylitis often runs in families. Do you have any family members who have been diagnosed with this condition or have chronic back pain?"
- Are you currently taking any medications, perhaps for your back pain or any other health conditions? Do you have any allergies to medications?"
- "In understanding more about your lifestyle, it could give us more insight into your condition. Could you tell me a bit more about your daily activities? Do you smoke, or have you smoked in the past? What about alcohol or recreational drug use?"

# IDEAS, CONCERNS AND EXPECTATIONS

- ICE
  - "I'd like to take a moment to understand your perspective on your illness. It's important for me to know your ideas, concerns, and expectations regarding your condition and this consultation. Please feel free to express any fears, worries, or questions you may have. We're here to address them together."

# EXAMINATION

- **Examination Findings:**

- Vital signs: usually normal.
- Musculoskeletal examination: decreased spinal mobility, tender entheses, peripheral arthritis.
- Chest expansion: may be reduced due to costovertebral and costosternal joint involvement.
- Other systems: look for evidence of uveitis, psoriasis, IBD.
- Neurological examination, including an assessment of cranial nerves, if there are any symptoms suggesting neurological involvement.



## EXAMINATION

- "I'd like to do a physical examination now. This will involve checking your vitals, examining your back, chest, and other joints, and assessing your neurological function. Is that okay with you?"

EXAMINATION

## DIFFERENTIAL DIAGNOSIS

- Mechanical back pain: generally does not present with morning stiffness and does not improve with exercise.
- Other types of inflammatory back pain such as psoriatic arthritis or reactive arthritis.
- Lumbar disc disease: usually presents with radicular symptoms.
- Malignancy or infection: these usually present with 'red flag' symptoms such as weight loss, fever, severe pain, or neurological symptoms.

HISTORY

## DIFFERENTIAL DIAGNOSIS

- "While I suspect your symptoms may be related to ankylosing spondylitis, it's important to consider other conditions that may cause similar symptoms. These could include mechanical back pain, lumbar disc disease, or even some types of malignancy or infection."

HISTORY

## **INVESTIGATION**

- Bloods: Elevated CRP and ESR. HLA-B27 positive in most, but not all, patients.
- Imaging: Sacroiliitis on X-ray or MRI is a key finding in AS.
- Other: MRI of spine if neurological involvement is suspected.

# INVESTIGATION

"Following our discussion and the physical examination, I think it would be useful to get a few tests done. This will likely include blood tests, imaging of your back and perhaps your chest as well."

## MANAGEMENT PLAN

- First line: Education, exercise, physiotherapy, and NSAIDs.
  - Second line: Sulfasalazine if peripheral arthritis, TNF inhibitor if predominantly axial symptoms.
  - Third line: Other biologic therapies (IL-17 inhibitors).
- 
- **COMMUNITY MANAGEMENT**
    - Regular exercise and good posture.
    - Smoking cessation.
    - Regular follow-up with rheumatology.
    - Education about potential complications and when to seek help.

## MANAGEMENT PLAN

- "The treatment for your condition generally involves a combination of medication, physical therapy, and lifestyle changes. Depending on your response, we might need to consider stronger medications."
- "One of the crucial elements of managing your condition will be regular exercise, maintaining good posture, and leading a healthy lifestyle, including quitting smoking if you're currently a smoker. Before you are discharged, we will ensure you have all the necessary information and support."

## **ADVICE TO GUARDIANS/RELATIVES**

- Importance of supporting the patient in maintaining regular exercise and good posture.
- Need for regular follow-up and monitoring for complications.



## ADVICE TO GUARDIANS/RELATIVES

- "For the loved ones in your life, it's important they understand the nature of ankylosing spondylitis and how they can support you. This might include reminding you to exercise and maintain good posture and to attend all necessary follow-ups."

# COMPLICATIONS OF TREATMENT

## MOA of Therapies

- NSAIDs: inhibit COX enzymes, reducing prostaglandins that mediate inflammation and pain.
- DMARDs: reduce immune system activity, preventing joint damage.
- Biologics: target specific components of the immune system (TNF-alpha or IL-17) to reduce inflammation.

## Basic Overview of Surgical Therapies:

- Joint replacement surgery for severely affected joints.
- Osteotomy or spinal fusion surgery in some cases.

## Complications of Medication and Surgical Therapy: Adverse reactions to medications.

- NSAIDs: gastrointestinal bleed, renal impairment.
- DMARDs and biologics: risk of infection.
- Surgery: usual risks of surgery and anaesthesia.

## COMPLICATIONS OF TREATMENT

"The medications used in the treatment of ankylosing spondylitis work by reducing inflammation and managing your body's immune response. This helps to control the symptoms and prevent further damage."

"In rare cases where joint damage is severe, surgical options may be considered, such as joint replacement surgery or even surgery to straighten the spine."

"Like all medications, those used to treat ankylosing spondylitis can have side effects. It's important you let us know if you notice anything unusual once you start the treatment."

## FOLLOW UP

- Regular rheumatology follow-ups.
- Monitoring of disease activity and response to treatment using the Bath Ankylosing Spondylitis Disease Activity Index (BASDAI).

## FOLLOW UP

- "Regular follow-ups with your rheumatologist will be essential for us to monitor your response to the treatment and adjust as necessary."

## SEVERITY SYSTEMS

- BASDAI: A commonly used tool to assess disease activity in AS.
- Ankylosing Spondylitis Quality of Life (ASQOL) scale: A tool to assess the impact of AS on a patient's quality of life.

## NEVER MISS

- Early recognition and management of AS is crucial to prevent long-term disability.
- Management is multidisciplinary, involving medication, physiotherapy, and possibly surgery.
- Regular monitoring for complications is essential.
- Patient education regarding the importance of exercise and good posture is key.
- AS is a chronic disease that impacts quality of life and functional status.

## TOP 1% QUESTIONS

1. Discuss the role of HLA-B27 in the pathogenesis of AS.
2. Why does smoking reduce the efficacy of TNF inhibitors in AS?
3. Discuss the pros and cons of biologic therapy in AS.
4. What are the non-pharmacological management strategies in AS?
5. Discuss the extra-articular manifestations of AS.



## SOFT SKILLS

- Demonstrating empathy and effective communication throughout the consultation.
- "Thank you for sharing all this information with me, it's been really helpful in understanding your situation. Do you have any questions or concerns about anything we've discussed today?"
- Closing the consultation: "Thank you for your time today. I know this can be a lot to take in, but it's important to remember that we're here to support you every step of the way. If you have any further questions or concerns, please don't hesitate to ask."

## KEY LEARNING POINTS

- TO BE DONE TOGETHER

DATA

# MANAGEMENT

- What went well?
- What went poorly?
- What will you do next time?





# LET'S DISCUSS

# WHY DON'T YOU TRY?

- Test your history taking skills?
- Try examination/investigation/dx formulation?
- Try a Mock exam?



# QUESTIONS?



MDT





DERMATOLOGY

# CRYSTAL ARTHROPATHY

HISTORY X MANAGEMENT

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## TOPIC - HISTORY TAKING



MEDIC



PATIENT



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## **PROMPT**

A 58-year-old male, Mr. Anderson, presents with severe pain and swelling in his right big toe.

COUNSELLING X PHARMACY



# LET'S DISCUSS

# INTRODUCTION AND RAPPORT BUILDING

- Introduces Self and Purpose: Introduction of the medical professional, confirms patient identity, explains the purpose of the conversation, and ensures patient comfort. [1 point]
- Obtains Consent: Asks for consent to proceed with the questions and possibly a physical examination later on. [1 point]
- Chief complaint and duration.

# INTRODUCTION AND RAPPORT BUILDING

"Hello [patient's name], thank you for taking the time to meet with me today. I'd like to discuss your symptoms and health in detail to best understand how we can help. If you have any questions or concerns at any point, please feel free to stop me."

## OBTAINS A THOROUGH HISTORY OF THE PATIENT'S PRESENTING SYMPTOMS

- Ask about the initial appearance, pain, location, duration, and changes over time.

### **Exploration of Symptoms of Presenting Complaint (3 points)**

- Joint pain (which joints, bilateral or unilateral, sudden or gradual onset).
- Swelling, warmth, redness.
- Duration of morning stiffness.
- Previous episodes.
- Symptoms improvement with rest or movement.

### COLLATERAL

- Observations by close family members/friends.

## OBTAINS A THOROUGH HISTORY OF THE PATIENT'S PRESENTING SYMPTOMS

- "Can you tell me about the sore or wound you've noticed? When did it first appear, and have you noticed any changes in its appearance or pain level?"
- "How long have you been experiencing this?"



## **FURTHER EXPLORATION...**

- Triggering events (trauma, surgery, dehydration, etc.).
- Associated symptoms (fever, malaise).

## FURTHER EXPLORATION

- "I'd like to gather a bit more information about your symptoms. Which specific joints are affected? Is it on both sides?"
- "Did this pain come on suddenly or has it been building up over time?"
- "Have you noticed any swelling, warmth, or redness around the joints?"
- "Do you experience stiffness in the morning? If so, for how long does it usually last?"
- "Have you had episodes like this before?"
- "Do the symptoms get better with rest or movement?"

### COLLATERAL

- "Has anyone close to you, maybe family or friends, noticed anything different about you or your movements?"

## RED FLAGS/COMPLICATIONS

- **Red Flags**

- Severe unrelenting pain.
- Systemic symptoms like weight loss, night sweats.
- Rapid joint deterioration.

- **Common Complications:**

- Chronic arthritis.
- Joint deformity.
- Tophi.

- **Risk factors**

- High purine diet.
- Alcohol consumption.
- Use of certain medications (thiazides, aspirin).

## RED FLAGS...

- "Have you ever felt such severe pain that it doesn't go away no matter what you do?"
- "Any unexpected weight loss, night sweats, or rapid deterioration of your joints?"

## COMPLICATIONS

- "Have you ever been told you have chronic arthritis?"
- "Any deformities in your joints or hard nodules around them, often called 'tophi'?"

## RISK FACTORS

- "Can you tell me about your diet? Specifically, do you consume a lot of red meat, seafood, or alcohol?"
- "Do you take any medications regularly, like thiazides or aspirin?"

## HISTORY

## PAST MEDICAL HISTORY

- Previous joint surgeries.
- History of kidney stones.
- Use of diuretics.

### DRUG HISTORY

- Current medications.
- Allergies: specific allergies and reaction type.

### FAMILY HISTORY & SOCIAL

- Relatives with gout or other types of arthritis.
- Premature heart disease.
- **Social History:**
  - Occupation, mobility.
  - Diet, alcohol intake.
  - Support system.

## PAST MEDICAL HISTORY

- "Have you ever had any surgeries on your joints?"
- "Do you have a history of kidney stones?"
- "Are you currently taking any diuretics or water pills?"
- "Regarding your childhood, did you face any health issues, especially related to joints or development?"

DH

- "What other medications are you currently on?"
- "Do you have any known allergies? If yes, what kind of reactions have you had in the past?"

FH & SH

- "Does anyone in your family have gout or any other joint problems?"
- "Has anyone in your family had early heart problems?"
- "Can you tell me about your work and if it involves a lot of movement or strain on the joints?"
- "How would you describe your regular diet and alcohol intake?"
- "Who supports you at home or in your community?"

HISTORY

# IDEAS, CONCERNS AND EXPECTATIONS

- ICE
  - "I'd like to take a moment to understand your perspective on your illness. It's important for me to know your ideas, concerns, and expectations regarding your condition and this consultation. Please feel free to express any fears, worries, or questions you may have. We're here to address them together."

# EXAMINATION

- **Examination Findings: - CHAPERONE**

- Vital Signs: BP, HR, RR, Temp, Weight.
- General Examination: Acute distress, overall well-being.
- Local Joint Examination:
  - Redness, warmth, swelling.
  - Range of movement.
  - Presence of tophi.
  - Joint deformities.
- Neurological/Cranial Nerves: Any evidence of neuropathy.
- Peripheral Examination: Joint involvements.
- Psychiatric Findings & MMSE: Cognitive function, mood.
- Risk Assessment: Suicidal ideations (chronic pain), vulnerabilities.



# EXAMINATION

- "With your permission, I'd like to conduct a physical examination to better understand your condition. This will involve checking your vital signs, inspecting the affected joints, and a few other general assessments."
- (During the exam) "I'm now checking for any redness, warmth, or swelling. Please let me know if you feel any discomfort."
- "Could you move your joint in this manner for me?" (Demonstrate range of motion)
- "I'll now listen to your heart and lungs, and then feel your abdomen. Everything is looking to ensure your overall health is good."
- "I'll also be assessing your cognitive function briefly. Can you tell me today's date?"
- "Given the chronic pain you've mentioned, it's important for me to ask: have you had any thoughts of harm to yourself?"

## DIFFERENTIAL DIAGNOSIS

- Rheumatoid arthritis: symmetric joint involvement, rheumatoid factor presence.
- Osteoarthritis: older age, joint space narrowing.
- Septic arthritis: more acute presentation, positive synovial fluid culture.

HISTORY

## DIFFERENTIAL DIAGNOSIS

- "There are a few conditions that can present similarly. We want to rule out rheumatoid arthritis, osteoarthritis, and septic arthritis. The tests I've mentioned will help in this."

HISTORY

# INVESTIGATION

- Bloods:
  - Uric acid:  $>6$  mg/dL.
  - CBC, CRP, ESR.
  - Renal function.
- Synovial Fluid Analysis: Presence of urate or calcium pyrophosphate crystals.
- Imaging: X-rays showing “punched-out” erosions.

## INVESTIGATION

- "Based on our conversation and the examination, I would recommend a few tests. We'll start with blood tests to check uric acid levels, inflammation markers, and kidney function."
- "An analysis of the fluid in the affected joint might be beneficial to understand the nature of the crystals causing the inflammation."
- "An X-ray of the affected joints can give us valuable information about the stage and severity."

## MANAGEMENT PLAN

- Immediate: NSAIDs or colchicine.
- First-line: Lifestyle changes, Allopurinol.
- Second-line: Febuxostat, Uricosurics.
- Third-line: Biological agents (e.g., Pegloticase).

### **LIFESTYLE CHANGES:**

- Limit high-purine foods.
- Limit alcohol.
- Stay hydrated.

### **COMMUNITY MANAGEMENT:**

- Regular checkups with a GP.
- Dietician referral.

## MANAGEMENT PLAN

- "Based on your symptoms, the initial management could involve pain-relief medications. Once we get the results, we can discuss long-term plans."
- "It's essential to make some lifestyle changes like limiting certain foods and staying well-hydrated."
- "Regular check-ups with a primary care doctor will be necessary."

## KEY PRINCIPLES BEFORE DISCHARGE AND SAFETY NETTING (5 POINTS)

- Educate about triggers.
- Medication review.
- Dietary changes and importance.
- **SAFETYNETTING (1 Point):**
  - Seek immediate care if a severe allergic reaction to meds, worsening symptoms, or signs of infection.



## KEY PRINCIPLES BEFORE DISCHARGE AND SAFETY NETTING (3 POINTS)

- "Before you leave today, let's review the triggers for your symptoms, the importance of medications, and the dietary changes you might need to make."
- "If you notice severe allergic reactions to medications, worsening symptoms, or signs of infection, please seek immediate care."

## ADVICE TO GUARDIANS/RELATIVES

- Nature of the condition.
- Importance of medication compliance.
- Importance of lifestyle changes.

- **Advice to Guardians, Useful Resources (2 points):**

- Monitor diet.
- Encourage medication adherence.
- Arthritis Foundation pamphlets.
- Local support groups.

## ADVICE TO GUARDIANS/RELATIVES

- "Based on our discussion and examination, it seems you might have a condition where excess uric acid builds up and forms crystals in the joints, leading to inflammation and pain. We're conducting tests to confirm."
- "It's crucial to stick to the medications and make some lifestyle changes to manage this condition effectively."
- "Understanding and managing your diet will play a big role in managing this condition."
- **Advice to Guardians:**
  - "For those helping in care, monitor the patient's diet and encourage medication adherence."
- **Useful Resources:**
  - "The Arthritis Foundation has excellent resources, and joining a local support group can be beneficial."

## COMPLICATIONS OF TREATMENT

- **MEDICATION & SURGICAL COMPLICATIONS:**

- NSAIDs: Gastric ulcers.
- Allopurinol: Rash, kidney dysfunction.

- **MECHANISM OF MEDICATION THERAPIES:**

- Allopurinol: Xanthine oxidase inhibitor → ↓ uric acid production.

- **OVERVIEW OF SURGICAL THERAPIES:**

- Joint replacement or debridement in chronic, severe cases.

## COMPLICATIONS OF TREATMENT

- **Medication & Surgical Complications:**

- "Some medications, like NSAIDs, might cause stomach issues, while Allopurinol can occasionally lead to a skin rash or affect the kidneys. If you notice any side effects, please inform us."
- "In chronic and severe cases, surgery might be an option, but we'll discuss that if and when necessary."

- **Mechanism of Medication Therapies:**

- "Allopurinol works by reducing uric acid production in the body."

- **Overview of Surgical Therapies:**

- "In very severe cases, we might consider surgeries like joint replacement or debridement, but that's a decision made after extensive discussion and evaluation."

## **FOLLOW UP**

- Rheumatology: 2-3 months post-diagnosis.
- Regular GP checks.

## SEVERITY SYSTEM

- Mild: Occasional flare-ups, controlled with meds.
- Moderate: Frequent flare-ups, some joint deformity.
- Severe: Chronic pain, extensive joint damage.

## FOLLOW UP

- "Once we have the test results, we'll meet again to discuss the findings and next steps. Please book a follow-up appointment for next week."
- "Thank you for being thorough with your information. I appreciate your patience. Do you have any questions for me?"



## NEVER MISS

1. Accurate differentiation from other arthritides.
2. Regular monitoring of uric acid levels.
3. Educate on the importance of dietary modifications.
4. Emphasize potential drug side effects.
5. Importance of adherence to therapy.

## TOP 1% QUESTIONS

1. Describe the difference in crystals seen in gout and pseudogout under a polarized microscope.
2. Which specific drugs, apart from diuretics, can induce gout?
3. Describe the pathophysiological mechanism that links high purine foods with gout.
4. How does chronic kidney disease predispose one to gout?
5. Why is aspirin at low doses a risk for gout?

## SOFT SKILLS

- Demonstrating empathy and effective communication throughout the consultation.
- "Thank you for sharing all this information with me, it's been really helpful in understanding your situation. Do you have any questions or concerns about anything we've discussed today?"
- Closing the consultation: "Thank you for your time today. I know this can be a lot to take in, but it's important to remember that we're here to support you every step of the way. If you have any further questions or concerns, please don't hesitate to ask."

## KEY LEARNING POINTS

- TO BE DONE TOGETHER

DATA

# MANAGEMENT

- What went well?
- What went poorly?
- What will you do next time?





# LET'S DISCUSS

# WHY DON'T YOU TRY?

- Test your history taking skills?
- Try examination/investigation/dx formulation?
- Try a Mock exam?



# QUESTIONS?





MDT



TRAUMA AND ORTHOPAEDICS

# COMPARTMENT SYNDROME

HISTORY X MANAGEMENT

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## TOPIC - HISTORY TAKING



MEDIC



PATIENT



MARKER

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## **PROMPT**

A 47-year-old male presented to the emergency department with excruciating pain, swelling, and pallor in his right lower leg after a motorcycle accident. The pain appeared to be unrelieved with OTC analgesics.

COUNSELLING X PHARMACY



# LET'S DISCUSS

# **INTRODUCTION AND RAPPORT BUILDING**

- Confirm patient's identity and consent
- Assess the onset, duration, and progression of symptoms
- Explore the patient's understanding of their condition

# INTRODUCTION AND RAPPORT BUILDING

- Hello, I'm Dr. [Your Name]. Thank you for coming in today.
- May I ask, what are your main concerns?



## **OBTAINS A THOROUGH HISTORY OF THE PATIENT'S PRESENTING SYMPTOMS**

- Pain, especially a deep and constant pain unrelieved by pain medications (1 point)
- Paresthesia or unusual sensations in the affected limb (1 point)
- Pallor and coolness in the affected limb (1 point)
- Paralysis or severe weakness of the affected limb (1 point)
- Pulselessness or decreased pulse in the affected limb (1 point)

## OBTAINS A THOROUGH HISTORY OF THE PATIENT'S PRESENTING SYMPTOMS

- "Good morning, I'm Dr. [Name], and I'll be looking after you today. Could I take a moment to discuss your current condition with you? Please let me know if you're comfortable with that."
- "I've noticed that you're experiencing [symptom, e.g., pain]. Could you describe it to me? Is it a constant, deep pain? Have over-the-counter pain medications helped at all?"

## **FURTHER EXPLORATION...**

- Onset, duration, and progression of symptoms (1 point)
- Any relevant trauma, immobilization, or surgical procedures leading to the syndrome (1 point)
- Previous treatments or interventions attempted (1 point)

### **COLLATERAL**

- Collateral history from family or healthcare providers if relevant (1 point)

## FURTHER EXPLORATION

- "Can you describe when this all started, how it's progressed, and anything you've done to try to treat it?"

### COLLATERAL

- "Has anyone in your family or healthcare team provided any information that might be helpful to know?"

## RED FLAGS/COMPLICATIONS

- **Red Flags**

- Severe, unrelenting pain (1 point)
- Rapid progression of neurological deficits in the affected limb (1 point)

- **Common Complications:**

- Permanent muscle and nerve damage (1 point)
- Rhabdomyolysis and subsequent renal failure (1 point)

- **Risk factors**

- Identification of likely risk factors such as immobilization, casts, or prolonged pressure (1 point)

## RED FLAGS...

- "Your pain seems quite severe, and you mentioned some neurological symptoms. It's important to treat this promptly. Have you noticed any rapid changes in how you feel?"

### COMPLICATIONS

- "There are some potential complications like permanent damage to muscles and nerves, and even kidney problems, that we need to watch out for. We'll be taking all necessary precautions."

### RISK FACTORS

- "Sometimes, things like immobilization, wearing casts, or prolonged pressure on a limb can cause issues. Have you experienced anything like that recently?"

## HISTORY

## PAST MEDICAL HISTORY

- Past medical history including chronic illnesses, recent injuries, or accidents (1 point)

### DRUG HISTORY

- Current medications including anti-coagulants or NSAIDs (1 point)
- Allergies and reactions to medications, especially relevant to analgesics (1 point)

### FAMILY HISTORY

- Any familial history of clotting disorders or other relevant conditions (1 point)

### SOCIAL HISTORY:

- Occupation, hobbies, or activities that might relate to the condition (1 point)
- Smoking, alcohol, or drug use that might influence treatment (1 point)

## PAST MEDICAL HISTORY

- "Could you please tell me about any ongoing health conditions, or recent injuries or accidents that you've had? Understanding your medical history helps me provide you with the best care."

DH

- "Could you tell me about any medications you're currently taking, including over-the-counter ones? And do you have any allergies, especially to pain medications?"

FH

- "Do you have any family history of clotting disorders or similar health conditions that I should be aware of?"

SH

- "I'd like to know a bit about your daily life, such as your occupation, hobbies, and whether you smoke or consume alcohol. This will help me understand your overall health."

HISTORY



# IDEAS, CONCERNS AND EXPECTATIONS

- ICE
  - "I'd like to take a moment to understand your perspective on your illness. It's important for me to know your ideas, concerns, and expectations regarding your condition and this consultation. Please feel free to express any fears, worries, or questions you may have. We're here to address them together."

# EXAMINATION

- **Examination Findings:**

- **Vital Signs:** Including weight, blood pressure, heart rate, temperature (1 point)
- **Airway:** Ensure the airway is clear and assess for any distress (1 point)
- **Breathing:** Respiratory rate and signs of respiratory distress (1 point)
- **Cardiovascular Findings:** Peripheral pulses and capillary refill in the affected limb (1 point)
- **Respiratory Findings:** Auscultation of lungs for any related findings (1 point)
- **Neurological Findings:** Sensory and motor function of affected limb, cranial nerves (1 point)
- **Specific Examinations Relevant to the Specialty:** Compartment pressure measurement (1 point)
- **Risk Assessment:** Risk of further harm or complications (1 point)
- **Physical Examination of Affected Limb:** Inspection, palpation, and measurement of compartment pressure (2 points)

## EXAMINATION

- "I'm going to check your vital signs now, including your blood pressure and heart rate. This will help me understand your overall condition."
- "Let's make sure your airway is clear, and I'm going to listen to your breathing. This may involve a few deep breaths on your part."
- "I'll be checking the circulation in the affected limb and assessing for any related signs."
- "Now I'm going to examine the affected limb. You might feel some pressure or discomfort. Let me know if it becomes too much."

## **DIFFERENTIAL DIAGNOSIS**

- Explain why other conditions like deep vein thrombosis, fracture, or peripheral vascular disease are less likely based on findings (2 points)

HISTORY

## DIFFERENTIAL DIAGNOSIS

- "Based on your symptoms and tests, we've ruled out conditions like deep vein thrombosis and fractures. It appears that the most likely diagnosis is [diagnosis]."

HISTORY

## **INVESTIGATION**

- Laboratory Values: CK levels, renal function tests, complete blood count (2 points)
- Imaging: X-ray or MRI to rule out other fractures or injuries (1 point)
- Clinically Relevant Tests: Invasive compartment pressure measurement (1 point)

# INVESTIGATION

- "We've conducted some tests, including blood work and imaging. These will help us get a clear picture of what's going on."

## **MANAGEMENT PLAN**

- First Line: Fasciotomy, pain management, hydration (1 point)
- Second Line: Physical therapy, monitoring for rhabdomyolysis (1 point)
- Third Line: Possible amputation if severe and irreversible damage (1 point)

### COMMUNITY MANAGEMENT

- GP follow-up, physiotherapy, occupational therapy (1 point)



## MANAGEMENT PLAN

- "Our primary treatment plan includes surgical intervention called fasciotomy, and we'll also focus on pain management and hydration. Later, physical therapy and close monitoring may be needed."

## **KEY PRINCIPLES BEFORE DISCHARGE AND SAFETY NETTING (5 POINTS)**

- Clear safety netting instructions for recognizing complications (1 point)

## KEY PRINCIPLES BEFORE DISCHARGE AND SAFETY NETTING (3 POINTS)

- "Before you leave, I want to explain the condition and our plan in detail. Here are some resources, and please don't hesitate to reach out if you notice any complications."

## ADVICE TO GUARDIANS/RELATIVES

- **Explanation of the Condition to Patients and Their Relatives (1 points):**
  - Explanation of condition and treatment plan to patients and relatives (1 point)
- **Advice to Guardians (2 points):**
  - Advice to guardians, provision of useful resources and contacts (1 point)

## ADVICE TO GUARDIANS/RELATIVES

- "I'll explain everything to you and your family and provide some resources to help you understand your condition better."

## COMPLICATIONS OF TREATMENT

### MOA

- Explain how pain medications, antibiotics, or other prescribed medications work (1 point)
- Explain fasciotomy or potential amputation if needed (1 point)

### COMPLICATIONS

- Explain risks associated with fasciotomy and potential medication side effects (1 point)

## COMPLICATIONS OF TREATMENT

### **Mx of Therapies**

- "The pain medications we're giving you work by [mechanism]. They should help alleviate your symptoms."
- "The surgical procedure, known as fasciotomy, is necessary to relieve pressure in the affected area. I'll walk you through what to expect."

### **Cx of Therapies**

- "There are some risks associated with surgery and medications. I'll explain them, and we'll take every precaution to minimize them."

## **FOLLOW UP**

- Specific follow-up plan with specialists, GP, physical therapy, according to UK guidelines (1 point)



## FOLLOW UP

- "I'll arrange follow-up appointments with specialists and physical therapy, in line with UK guidelines. We'll be monitoring your progress closely."

## NEVER MISS

1. Early recognition of Compartment Syndrome and prompt surgical consultation (1 point)
2. Adequate pain management (1 point)
3. Monitoring and prevention of rhabdomyolysis (1 point)
4. Proper patient and family education about condition and treatment (1 point)
5. Clear safety netting and follow-up plan (1 point)

## TOP 1% QUESTIONS

1. How does Compartment Syndrome differ in children compared to adults? (1 point)
2. How might a coagulation disorder affect the management of Compartment Syndrome? (1 point)
3. What are the considerations for bilateral Compartment Syndrome versus unilateral? (1 point)
4. What is the role of hyperbaric oxygen therapy in Compartment Syndrome, if any? (1 point)
5. Explain the detailed pathophysiology of Compartment Syndrome, including the progression from ischemia to necrosis. (1 point)

## SOFT SKILLS

- Demonstrating empathy and effective communication throughout the consultation.
- "Thank you for sharing all this information with me, it's been really helpful in understanding your situation. Do you have any questions or concerns about anything we've discussed today?"
- Closing the consultation: "Thank you for your time today. I know this can be a lot to take in, but it's important to remember that we're here to support you every step of the way. If you have any further questions or concerns, please don't hesitate to ask."

## KEY LEARNING POINTS

- TO BE DONE TOGETHER

DATA

# MANAGEMENT

- What went well?
- What went poorly?
- What will you do next time?





# LET'S DISCUSS

# WHY DON'T YOU TRY?

- Test your history taking skills?
- Try examination/investigation/dx formulation?
- Try a Mock exam?





# QUESTIONS?



MDT



TRAUMA & ORTHOPAEDICS

# **BURSITIS**

HISTORY X MANAGEMENT

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## TOPIC - HISTORY TAKING



MEDIC



PATIENT



MARKER

**PLEASE REFER TO YOUR SCRIPTS**

## **PROMPT**

57-year-old male presents with severe pain and swelling in the right elbow, increasing over the last two weeks.

COUNSELLING X PHARMACY



# LET'S DISCUSS

# **INTRODUCTION AND RAPPORT BUILDING**

- Confirm patient's identity and consent
- Assess the onset, duration, and progression of symptoms
- Explore the patient's understanding of their condition



## OBTAINS A THOROUGH HISTORY OF THE PATIENT'S PRESENTING SYMPTOMS

- Chief complaint: Localized pain and swelling at a specific joint; could be shoulder (subacromial bursitis), elbow (olecranon bursitis), knee (prepatellar bursitis), or hip (trochanteric bursitis).
  - Duration and timing of pain, activities causing or relieving pain.
  - Any history of injury or repetitive use related to the affected area.
  - Other associated symptoms: e.g., difficulty in moving the joint, redness, heat
- 
- Evaluate the progression and severity of pain and swelling.
  - Previous episodes of similar complaints.
  - Response to any home remedies or treatments tried

## OBTAINS A THOROUGH HISTORY OF THE PATIENT'S PRESENTING SYMPTOMS

"Mr. John, I understand you are experiencing some joint pain and swelling. Can you describe where exactly it is? How long have you had these symptoms? Are there certain activities or movements that make the pain worse or better?"

"Can you describe how these symptoms have evolved over time? Have you experienced any similar episodes before? Have you tried any treatments or remedies at home? If so, did they provide any relief?"

## FURTHER EXPLORATION...

- Investigate the nature, onset, and pattern of pain.
- Ask about any mechanical symptoms like locking, clicking, or giving way.
- Assess the impact of pain on daily activities and sleep.

## OBTAINS A THOROUGH HISTORY OF THE PATIENT'S PRESENTING SYMPTOMS

"You mentioned the joint pain, can you describe it a bit more for me? When did it first start? Does the pain come and go or is it continuous? How severe would you say it is? Have you noticed anything that seems to trigger it? How does the pain affect your daily activities and your sleep?"

## RED FLAGS/COMPLICATIONS

- **Red Flags**

- Sudden severe pain, systemic symptoms like fever, night sweats (could suggest infection – septic bursitis).
- Rapid increase in joint swelling.
- Any signs of neurovascular compromise.

- **Common Complications:**

- Chronic pain or chronic bursitis.
- Development of an infected bursa (septic bursitis).
- Reduced range of movement or function of the joint.

- **Risk factors**

- Occupation, hobbies, or sports that involve repetitive movements or prolonged pressure on the joint.
- Previous trauma or surgery to the joint.

## OTHER KEY PHRASES

- "Have you noticed any other symptoms such as severe pain all of a sudden or signs of infection like fever or night sweats? Has there been a rapid increase in the swelling of your joints? Have you noticed any changes in your sensation or movement in the affected limb?"
- "I'd like to discuss potential complications related to your condition. These may include chronic pain, an infected bursa, or reduced mobility. Have you noticed any such changes?"
- "Can you tell me more about your job and your daily activities? Does your job involve repetitive movements or apply prolonged pressure on your joints? Have you had any injury to the affected joint in the past?"

## PAST MEDICAL HISTORY

- Any known systemic diseases like diabetes or rheumatoid arthritis.
- Prior episodes of bursitis or other joint problems.

### DRUG HISTORY

- Any current medications, including over-the-counter treatments.
- Drug allergies and the nature of the allergic reaction.

### FAMILY HISTORY

- Any hereditary diseases that might predispose to joint problems or autoimmune diseases.

### SOCIAL HISTORY:

- Occupation (jobs that involve repetitive kneeling or elbow use can predispose to bursitis).
- Smoking and alcohol history (could affect healing and recovery).
- Regular activities, hobbies, or sports.

## PAST MEDICAL HISTORY

- "Have you been diagnosed with any other medical conditions in the past? Specifically, do you have a history of any joint-related conditions or autoimmune diseases?"
- "Have you undergone any surgeries in the past, particularly any operations or procedures on your joints?"
- "Are you currently taking any medications, whether prescribed by a doctor or over-the-counter treatments? Do you have any known allergies to medications? If so, can you describe what happens when you take them?"
- "Do you have any family history of joint problems or autoimmune diseases?"
- "I would like to know more about your lifestyle. Do you smoke or drink alcohol? Could you also tell me more about your job and the activities you enjoy?"



# IDEAS, CONCERNS AND EXPECTATIONS

- ICE
  - "I'd like to take a moment to understand your perspective on your illness. It's important for me to know your ideas, concerns, and expectations regarding your condition and this consultation. Please feel free to express any fears, worries, or questions you may have. We're here to address them together."

# EXAMINATION

- **Examination Findings:**

- Vital signs: Temperature (may be elevated if septic bursitis).
- Joint examination: Localised swelling, warmth, tenderness, possible redness.
- Range of motion of the joint may be limited due to pain.
- Gait, if lower limb is involved.

## EXAMINATION

- "Now, I would like to examine you. I'm going to check your temperature and then examine your joints carefully. This will involve looking at your joint, feeling it, and moving it within your comfort. I'll also check your gait, if that's okay with you."

## EXAMINATION

## **DIFFERENTIAL DIAGNOSIS**

- Tendinitis or tendon rupture.
- Infection or abscess.
- Arthritis or joint injury.
- Gout or pseudogout.

HISTORY

## DIFFERENTIAL DIAGNOSIS

- "There are a few conditions that can cause similar symptoms to yours. These include tendinitis, infection, arthritis, and certain types of crystal diseases. We'll be able to rule these in or out based on your examination findings and the results of your investigations."

HISTORY

# INVESTIGATION

- Blood tests: Inflammatory markers like CRP, ESR might be elevated, especially in septic bursitis.
- Ultrasound can show bursal inflammation, swelling.
- If septic bursitis is suspected, aspirated fluid should be sent for microscopy, culture, and sensitivity.

# INVESTIGATION

"Based on your symptoms, I would like to order a few investigations. These may include blood tests to check for inflammation and an ultrasound to look at your joints."

## MANAGEMENT PLAN

- First line: Rest, Ice, Compression, Elevation (RICE), analgesics like NSAIDs.
- Second line: Physical therapy, corticosteroid injections.
- Third line: Bursectomy (surgical removal of the bursa) in refractory cases.
- **COMMUNITY MANAGEMENT**
  - Advise on protective measures to prevent recurrence (e.g., knee pads for kneeling jobs).
  - Importance of adherence to physical therapy.
  - When to seek medical help: e.g., worsening pain, redness, systemic symptoms.



## MANAGEMENT PLAN

- "The initial step in managing your condition is often conservative, including rest, ice, compression, and elevation (RICE), along with pain relief medications. If these measures do not provide sufficient relief, we may consider physical therapy or injections of corticosteroids. Surgery is usually a last resort if other treatments are unsuccessful."
- "We can manage your condition effectively within the community setting. I would recommend protective measures such as using knee pads if your job involves repetitive kneeling. It's also crucial to stick to your physical therapy routine. I'd like you to seek medical help if you notice an increase in redness, pain, or if you develop a fever."

## **ADVICE TO GUARDIANS/RELATIVES**

- Importance of adherence to treatment, physical therapy.
- Recognizing signs of complications and when to seek medical help.

## ADVICE TO GUARDIANS/RELATIVES

- "For the people who will be helping you manage this condition at home, it's important they understand your treatment plan and how to spot signs of complications. They will also need to support you in attending physical therapy and following the protective measures we've discussed."

# COMPLICATIONS OF TREATMENT

## MOA of Therapies

- NSAIDs: inhibit prostaglandin synthesis to reduce inflammation and pain.
- Corticosteroids: potent anti-inflammatory action.

## Basic Overview of Surgical Therapies:

- Bursectomy: the inflamed bursa is surgically removed.

## Complications of Medication and Surgical Therapy: Adverse reactions to medications.

- NSAID use: Gastric irritation, renal impairment.
- Corticosteroid injection: risk of infection, skin discoloration, tendon rupture.
- Surgery: usual surgical risks (infection, bleeding, anesthetic risk).

## COMPLICATIONS OF TREATMENT

"The medications we use for your condition work in different ways. Pain relief medications work by reducing the inflammation in your bursa, while corticosteroids are more potent and directly reduce inflammation."

"Surgical treatment, which we consider only in resistant cases, involves removing the inflamed bursa, a procedure known as bursectomy."

"Like all treatments, medications and surgeries can have side effects and potential complications. For example, pain relief medications can cause stomach irritation and can affect the kidneys. Injections may lead to skin discolouration, and there's a small risk of infection. Surgery, although we consider it as a last resort, carries risks of infection, bleeding, and risks associated with anaesthesia."

## **FOLLOW UP**

- Review in clinic after 2–3 weeks.
- Further follow-ups depending on response to treatment.

## FOLLOW UP

- "I would like to see you again in the clinic after 2-3 weeks to assess your progress. Depending on your response to treatment, we may adjust the plan accordingly."

## SEVERITY SYSTEMS

- There isn't a standardized severity system for bursitis. However, assessing pain severity, joint function, and impact on daily activities can provide a subjective measure of severity.



## NEVER MISS

- Bursitis is often due to overuse or stress on the joint – addressing these is key to treatment and prevention of recurrence.
- Septic bursitis is a serious complication that requires prompt treatment.
- Chronic bursitis can lead to a limitation of joint movement and function.
- Early and accurate diagnosis can prevent unnecessary investigations and treatments.
- Patient education about the condition, treatment, and preventive measures is crucial.

## TOP 1% QUESTIONS

1. "What is the role of imaging in the diagnosis of bursitis?"
2. "How can one differentiate septic bursitis from non-septic bursitis?"
3. "What are the considerations in the choice of treatment for bursitis?"
4. "How does the treatment of septic bursitis differ from non-septic bursitis?"
5. "What are the preventative measures for bursitis?"



## SOFT SKILLS

- Demonstrating empathy and effective communication throughout the consultation.
- "Thank you for sharing all this information with me, it's been really helpful in understanding your situation. Do you have any questions or concerns about anything we've discussed today?"
- Closing the consultation: "Thank you for your time today. I know this can be a lot to take in, but it's important to remember that we're here to support you every step of the way. If you have any further questions or concerns, please don't hesitate to ask."

## KEY LEARNING POINTS

- TO BE DONE TOGETHER

DATA

# MANAGEMENT

- What went well?
- What went poorly?
- What will you do next time?





# LET'S DISCUSS

# WHY DON'T YOU TRY?

- Test your history taking skills?
- Try examination/investigation/dx formulation?
- Try a Mock exam?



# QUESTIONS?





MDT



TRAUMA AND ORTHOPAEDICS

# OSTEOARTHRITIS

HISTORY X MANAGEMENT

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## TOPIC - HISTORY TAKING



MEDIC



PATIENT



MARKER

**PLEASE REFER TO YOUR SCRIPTS**

## **PROMPT**

Name: Mrs. Margaret Thompson

Age: 68

Gender: Female

Occupation: Retired teacher

Chief Complaint: Severe pain and stiffness in the right hip joint, limiting mobility



# LET'S DISCUSS

## **INTRODUCTION AND RAPPORT BUILDING**

- Introduces Self and Purpose: Introduction of the medical professional, confirms patient identity, explains the purpose of the conversation, and ensures patient comfort. [1 point]
- Obtains Consent: Asks for consent to proceed with the questions and possibly a physical examination later on. [1 point]
- Chief complaint and duration.

# INTRODUCTION AND RAPPORT BUILDING

"Hello [patient's name], thank you for taking the time to meet with me today. I'd like to discuss your symptoms and health in detail to best understand how we can help. If you have any questions or concerns at any point, please feel free to stop me."



## **OBTAINS A THOROUGH HISTORY OF THE PATIENT'S PRESENTING SYMPTOMS**

- Presenting Complaint:
  - Patient's own words, duration of symptoms.
- Exploration of Symptoms of Presenting Complaint:
  - Pain (location, type, intensity, radiation)
  - Stiffness (morning stiffness duration, any improvement with movement)
  - Functional impairment (daily activities affected)
  - Crepitus
  - Locking or instability
  - Presence of swelling

## **OBTAINS A THOROUGH HISTORY OF THE PATIENT'S PRESENTING SYMPTOMS**

- Pain: "Could you describe the pain you're feeling? Where is it located, and can you tell me what it feels like? On a scale from 0 to 10, with 0 being no pain and 10 being the worst imaginable pain, how would you rate it?"
- Stiffness: "I'd like to know more about any stiffness you're experiencing. Is it worse in the morning? If so, how long does it typically last? Does it get better as the day goes on?"
- Functional Impairment: "Have these symptoms affected your ability to perform your daily activities? Are there specific tasks or movements that have become more challenging for you?"
- Crepitus: "Have you noticed any cracking or popping sounds in the joint when you move it?"
- Locking or Instability: "Do you ever feel like the joint gets 'stuck,' or have you experienced any instability or giving way of the joint?"
- Swelling: "Have you observed any swelling around the affected joint?"

## **FURTHER EXPLORATION...**

- Previous episodes, previous treatments and responses.

### **COLLATERAL**

- Obtained where cognition is impaired or in severe disease.

## FURTHER EXPLORATION

- "Have you had similar episodes in the past? If so, what treatments did you try, and how did they affect your symptoms?"

### Collateral History:

- "If I may, I'd like to gather additional information from your daughter to better understand your situation. Could you please share your observations and concerns regarding your mother's condition?"

## RED FLAGS/COMPLICATIONS

- **Red Flags**

- Severe unrelenting night pain, sudden worsening of symptoms, joint warmth or erythema.

- **Common Complications:**

- Deformity, muscle wasting, limited range of motion.

- **Risk factors**

- : Age, obesity, joint injuries, repetitive use, family history, other joint diseases.

## RED FLAGS...

- "While we are discussing your symptoms, I want to be thorough. Have you experienced any severe, unrelenting night pain, sudden worsening of your symptoms, or noticed any warmth or redness around the joint?"

## COMPLICATIONS

- "Over time, joint conditions can lead to complications like deformity, muscle wasting, and limited range of motion. Have you noticed any changes in the appearance or function of the joint?"

## RISK FACTORS

- "Certain factors can contribute to joint conditions. These include age, obesity, previous joint injuries, repetitive use, a family history of joint diseases, and other related conditions. Can you provide any relevant information regarding these risk factors?"

## HISTORY

## PAST MEDICAL HISTORY

- Other joint diseases, trauma, or inflammatory conditions.

### DRUG HISTORY

- Current medications, pain relief measures, known allergies, nature of reactions.

### FAMILY HISTORY

- OA in family members.

### Social History:

- Occupation, impact on work, daily activities, living conditions, caregiver support.

## PAST MEDICAL HISTORY

- "In addition to your joint concerns, do you have any other joint diseases, a history of joint trauma, or any inflammatory conditions that we should be aware of?"

DH

- "Let's discuss your current medications and any measures you've taken for pain relief. Additionally, are you aware of any allergies you may have, and if so, could you describe the nature of your reactions?"

FAMILY AND SOCIAL HISTORY:

- "Is there a history of osteoarthritis or other joint conditions in your family?"
- "To gain a comprehensive understanding of your situation, I'd like to inquire about your occupation, how your symptoms impact your work and daily activities, your living conditions, and whether you have any support from caregivers or family members."



# IDEAS, CONCERNS AND EXPECTATIONS

- ICE
  - "I'd like to take a moment to understand your perspective on your illness. It's important for me to know your ideas, concerns, and expectations regarding your condition and this consultation. Please feel free to express any fears, worries, or questions you may have. We're here to address them together."

# EXAMINATION

- **Examination Findings: - CHAPERONE**
  - **Vital Signs:** Temperature, pulse, BP, respiratory rate, oxygen saturation, weight.
  - **Airway, Breathing: No distress, breath sounds.**
  - **Cardiovascular: Pulse, heart sounds.**
  - **Respiratory: Breath sounds, chest symmetry.**
  - **Abdominal: Bowel sounds, no tenderness.**
  - **Orthopaedic Examination:**
    - Inspect joint for deformity, swelling, muscle wasting.
    - Palpate for warmth, crepitus.
    - Range of motion (active & passive).
    - Assess joint stability.
    - Gait analysis.
  - **Neurological: Cranial nerves, reflexes, power, sensation.**
  - **Peripheral Examination: Vascular status of extremities.**
  - **Risk Assessment: Risk factors for disease progression or surgery complications.**

# EXAMINATION

- **"I'd like to conduct a few physical examinations to get a clearer picture. Is that alright?"**
  - "Before we proceed, I'll just take a moment to check some basic vital signs, such as your temperature, pulse, blood pressure, respiratory rate, oxygen saturation, and your current weight. This helps us have a complete picture of your health."
  - **Orthopedic Examination:**
    - "Moving on to your joint, I'll carefully inspect it for any deformity, swelling, or muscle wasting. Then, I'll gently touch it to check for warmth and crepitus, which are important signs to consider. I'll also assess your range of motion both actively and passively and evaluate the stability of your joint. Finally, I'll observe your gait to see how your mobility is affected."
  - **Neurological:**
    - "As part of our examination, I'll assess your neurological status. This includes checking your cranial nerves, reflexes, muscle strength, and sensation. It's all done to ensure we have a comprehensive view of your health."
  - **Peripheral Examination:**
    - "I'll also examine your extremities to assess the vascular status of your arms and legs. This helps us ensure proper blood circulation."
  - **Risk Assessment:**
    - "To provide the best care, I want to assess your risk factors. This includes understanding any factors that may affect the progression of your condition or any potential complications from treatment."

## EXAMINATION

## DIFFERENTIAL DIAGNOSIS

1. Rheumatoid Arthritis: Symmetrical joint involvement, positive RF or anti-CCP, more systemic symptoms.
2. Gout: Acute, red and warm joint, urate crystals on aspiration.
3. Pseudogout: Similar to gout but calcium pyrophosphate crystals.
4. Lupus or other inflammatory arthritides.

HISTORY

## DIFFERENTIAL DIAGNOSIS

- "While your symptoms align with osteoarthritis, we also consider other conditions that may present similarly, such as rheumatoid arthritis, gout, pseudogout, or other inflammatory arthritides. However, based on our evaluation, osteoarthritis seems to be the primary concern."

HISTORY

# INVESTIGATION

1. Bloods: – ESR, CRP (usually normal in OA unless there's another underlying process). 26. X-ray of the Joint: Joint space narrowing, osteophyte formation, subchondral sclerosis, cyst formation.
2. MRI: (if needed) Soft tissue changes, bone marrow lesions.
3. Others: Joint aspiration if suspecting other joint diseases.

# INVESTIGATION

- Bloods:
  - "Based on our discussion and examination, we may consider some blood tests to gather more information. These tests can help us rule out other conditions and provide additional insights."
- X-ray of the Joint:
  - "In certain cases, we may recommend an X-ray of the joint. This imaging study can show us the condition of the joint, including signs of narrowing, osteophytes, sclerosis, or cyst formation."
- MRI: (if needed)
  - "If necessary, we might suggest an MRI to get a more detailed view of the joint. This can help us better understand soft tissue changes and bone marrow lesions."
- Others:
  - "In some instances, we may need to perform a joint aspiration if we suspect the presence of other joint diseases. This procedure involves extracting fluid from the joint for further analysis."

# MANAGEMENT PLAN

- **Immediate Management:** Pain relief (paracetamol, topical NSAIDs), joint rest, ice.
- **First Line:** Weight loss, physical therapy, regular exercise.
- **Second Line:** Oral NSAIDs with a PPI, intra-articular corticosteroid injections.
- **Third Line:** Referral for joint replacement surgery if severely affecting quality of life.
- **Prevention:** Weight control, joint protection strategies.
- **Lifestyle Changes:** Low-impact exercises, weight loss, joint protection techniques.
- **Community Management:** Home adaptations, mobility aids, community physiotherapy.



# MANAGEMENT PLAN

- Management Plan:

- "Let's discuss how we can manage your condition. Our approach will be tailored to your specific needs. Initially, we'll focus on pain relief and improving your joint function."

- Immediate Management:

- "For immediate relief, we can start with measures like pain relief medications such as paracetamol and topical NSAIDs. Additionally, I recommend joint rest and using ice if you find it soothing."

- First Line:

- "First-line management typically involves lifestyle adjustments. Weight management, physical therapy, and regular exercise are crucial. These steps can make a significant difference in your overall well-being."

- Second Line:

- "If you continue to experience discomfort, we may consider oral NSAIDs along with a proton pump inhibitor (PPI) to protect your stomach lining. In some cases, intra-articular corticosteroid injections can provide relief."

- Third Line:

- "In cases where your quality of life is severely impacted, we may explore options like joint replacement surgery. However, this is a decision we would make together after careful consideration."

# MANAGEMENT PLAN

- Prevention:
  - "Preventing further deterioration is essential. Weight control, joint protection strategies, and maintaining an active lifestyle can help slow down the progression of the condition."
- Lifestyle Changes:
  - "Incorporating low-impact exercises, considering weight loss, and practicing joint protection techniques can make a positive impact on your day-to-day life."
- Community Management:
  - "At home, it may be helpful to make some adaptations to improve mobility. Additionally, community-based physiotherapy can provide ongoing support for your joint health."

## KEY PRINCIPLES BEFORE DISCHARGE AND SAFETY NETTING (5 POINTS)

- **Explanation to Patients/Relatives:** OA as a degenerative joint disease, progression, management options.
- **SAFETY NETTING: Return if:**
  - Safety Netting: Advise patients to return if severe pain, sudden worsening, side effects of medications

## KEY PRINCIPLES BEFORE DISCHARGE AND SAFETY NETTING (3 POINTS)

- **Key Principles/Criteria Before Discharge:**

- "I'd like to ensure you have a good understanding of osteoarthritis. It's a degenerative joint disease that can progress over time. We have discussed some management options today, and we'll continue to work together to find the best approach for you."

- **Safety Netting:**

- "Before we conclude, it's important to understand when to seek medical attention. If you experience severe pain, a sudden worsening of your symptoms, or any side effects from the prescribed medications, please don't hesitate to contact us."

## ADVICE TO GUARDIANS/RELATIVES

- **Advice to Guardians:** Joint protection techniques, importance of adherence to treatment.
- **Resources:** Arthritis Foundation, Orthopaedic associations.

## ADVICE TO GUARDIANS/RELATIVES

- **Advice to Guardians:**

- "For those who are taking care of loved ones dealing with this condition, it's important to be aware of joint protection techniques and to encourage adherence to the recommended treatment plan. Your support can make a significant difference in their journey."

- **Useful resources**

- "For additional information and resources, you can explore organizations like the Arthritis Foundation and orthopedic associations. They offer valuable insights and support."

## COMPLICATIONS OF TREATMENT

1. **Medication Complications:** NSAIDs (GI bleeding, cardiovascular risks), steroids (infection, post-injection flare).
2. **Mechanism of Action:**
  - a. **NSAIDs:** Inhibit COX enzymes, reducing prostaglandin synthesis, which reduces inflammation and pain
3. **Surgical Therapies:** Joint replacement (arthroplasty), osteotomy, joint fusion (arthrodesis).

## COMPLICATIONS OF TREATMENT

- **Complications of Medication and Surgical Therapy:**

- "It's essential to understand that medications like NSAIDs can have potential side effects, such as gastrointestinal bleeding and cardiovascular risks. Injections with steroids can sometimes lead to temporary flares of symptoms. We'll closely monitor your response."

- **Mechanism of Action of Medication Therapies:**

- "Let me briefly explain how the medications work. NSAIDs reduce inflammation and pain by inhibiting certain enzymes. They do this by reducing the production of prostaglandins. This helps alleviate discomfort."

- **Overview of Surgical Therapies:**

- "In the event that conservative measures do not provide sufficient relief, surgical options like joint replacement (arthroplasty), osteotomy, or joint fusion (arthrodesis) may be considered. These procedures can significantly improve joint function."



## **FOLLOW UP**

- Periodic reviews, pain management optimization, joint replacement referrals if required.

## **FOLLOW UP**

- "To ensure you receive the best care, we will schedule periodic follow-up appointments. During these visits, we will review your progress, optimize pain management, and discuss the potential need for joint replacement referrals if required."

## NEVER MISS

1. Thorough joint examination including range of motion and stability.
2. Always consider red flags to rule out malignancy or infection.
3. First-line management should focus on non-pharmacological measures.
4. Safety-net advice for worsening symptoms or side effects of medications.
5. Ensure patients understand the progressive nature of OA and importance of lifestyle changes.

## TOP 1% QUESTIONS

1. What are the cellular changes in cartilage in osteoarthritis at a microscopic level?
2. How do the radiological findings of OA differ between weight-bearing and non-weight-bearing joints?
3. What's the role of synovitis in OA?
4. How do biomechanics play a role in the progression of OA?
5. Differentiate between primary and secondary OA and provide examples for each.

## SOFT SKILLS

- "Before we conclude, I want to make sure that all your concerns and questions have been addressed. Is there anything else you'd like to discuss?"
- Demonstrating empathy and effective communication throughout the consultation.
- "Thank you for sharing all this information with me, it's been really helpful in understanding your situation. Do you have any questions or concerns about anything we've discussed today?"
- Closing the consultation: "Thank you for your time today. I know this can be a lot to take in, but it's important to remember that we're here to support you every step of the way. If you have any further questions or concerns, please don't hesitate to ask."

## KEY LEARNING POINTS

- TO BE DONE TOGETHER

DATA

# MANAGEMENT

- What went well?
- What went poorly?
- What will you do next time?





# LET'S DISCUSS



# WHY DON'T YOU TRY?

- Test your history taking skills?
- Try examination/investigation/dx formulation?
- Try a Mock exam?



# QUESTIONS?



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