






Acute Monoarthritis

Acute monoarthritis has numerous causes, but most commonly is related to crystals (gout and pseudogout), trauma and infection. Early diagnosis is critical in order to identify and treat septic arthritis, which can lead to rapid joint destruction. Joint aspiration is the gold-standard method of diagnosis. Registrars need to develop a structured approach to assessing acute monoarthritis. See also [GPSA teaching plan on Gout](#).

TEACHING AND LEARNING AREAS 	<ul style="list-style-type: none"> • Epidemiology of acute monoarthritis • Investigation of monoarthritis (bloods, imaging, synovial fluid analysis) • Joint aspiration techniques • Interpretation of synovial fluid analysis • Pathway for referral 						
PRE- SESSION ACTIVITIES 	<ul style="list-style-type: none"> • Read the 2016 AAFP article - Acute Monoarthritis: Diagnosis in adults 						
TEACHING TIPS AND TRAPS 	<ul style="list-style-type: none"> • Monoarthritis may be the first symptom of an inflammatory polyarthritis • Consider gonococcal infection in younger patients with monoarthritis • Fever is an unreliable sign - it may be absent in patients with septic arthritis, and present in gout • Fleeting monoarthritis suggests gonococcal arthritis or rheumatic fever • Osteoarthritis flares can mimic acute gout • Arthrocentesis is required in all patients with undiagnosed monoarthritis • Don't rely on inflammatory markers to differentiate gout from a septic joint • Crystals can be present in a septic joint • Suspect haemarthrosis in anticoagulated patients with acute monoarthritis 						
RESOURCES 	<table border="1"> <tr> <td data-bbox="336 1650 435 1742">Read</td><td data-bbox="435 1650 1497 1742"> <ul style="list-style-type: none"> • 2009 CMAJ article - Acute monoarthritis: What is the cause of my patient's painful swollen joint? </td></tr> <tr> <td data-bbox="336 1742 435 1816">Listen</td><td data-bbox="435 1742 1497 1816"> <ul style="list-style-type: none"> • Emergency Medicine Cases Podcast on Acute Monoarthritis </td></tr> <tr> <td data-bbox="336 1816 435 1890">Watch</td><td data-bbox="435 1816 1497 1890"> <ul style="list-style-type: none"> • NEJM Arthrocentesis of the knee video </td></tr> </table>	Read	<ul style="list-style-type: none"> • 2009 CMAJ article - Acute monoarthritis: What is the cause of my patient's painful swollen joint? 	Listen	<ul style="list-style-type: none"> • Emergency Medicine Cases Podcast on Acute Monoarthritis 	Watch	<ul style="list-style-type: none"> • NEJM Arthrocentesis of the knee video
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FOLLOW UP/ EXTENSION ACTIVITIES 	<ul style="list-style-type: none"> • Registrar to undertake the clinical reasoning challenge and discuss with supervisor 						

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Clinical Reasoning Challenge

Harry Froome is a 48-year-old self-employed businessman and a long term patient of the practice. He presents to you late one afternoon with a 24-hour history of pain and swelling in his left knee. He has a PMHx of depression and allergic rhinitis, and takes sertraline 50 mg/day and nasal corticosteroids.

QUESTION 1. In assessing Harry, what are the MOST IMPORTANT features on history? List up to SEVEN

- 1 _____
- 2 _____
- 3 _____
- 4 _____
- 5 _____
- 6 _____
- 7 _____

QUESTION 2. What is the MOST IMPORTANT initial investigation of this man? List ONE

- 1 _____

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ANSWERS

QUESTION 1

What are the MOST IMPORTANT features on history?

- History of trauma/injury
- Other symptoms e.g. rash, fever, diarrhoea, dysuria
- Alcohol and other drugs
- Diet
- Previous joint disease/surgery
- Travel history
- FHx arthritis

QUESTION 2

What is the MOST IMPORTANT initial investigation of this man?

- Arthrocentesis and synovial fluid analysis