

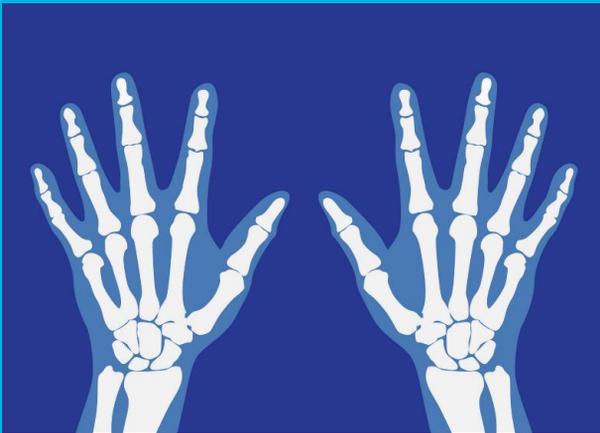
# Rheumatology

Clinical Scenarios  
For MSK Therapists



RHEUMATOLOGY.PHYSIO

**ONLINE.**



Including:  
Spondyloarthritis  
Rheumatoid Arthritis  
Osteoporosis  
Systemic Lupus Erythematosus  
And MORE...

**Author: Jack March – Rheumatology.Physio**



# Preface

Throughout my career as a Physiotherapist I have seen a lot of patients. A significant number of these have been either in a Rheumatology department or as what we would now call a First Contact Practitioner.

I have always been one to write case studies and as a result I have a large number stored. I wrote up cases that I found interesting, unusual or sometimes even “typical” in varying degrees of detail.

In recent years I have been fortunate enough to have gained a little reputation as someone to ask regarding topics and cases in Rheumatology, and I see various themes repeat themselves.

As a result, I decided to adapt some of my case studies into this book. I hope that it helps to add some context to the information I write in my blogs and teach on my courses.

These case studies are based on real patients that I have adapted to fit the style of the book and to make useful learning tools.

You will likely notice that there are a lot of grey areas. You may even suspect other diagnoses to be a likely cause of the symptoms presenting, and this good. Embrace those thought patterns. I am most certainly not always right.

I hope you find this book useful in practice, and makes you think about certain patients who at first glance might not be obvious to you.

Enjoy! Jack.



# About the Author



## Jack March

Rheumatology.Physio

Jack is a Physiotherapist, qualified in 2008 from Plymouth University and after rotational posts settled into Rheumatology which I have made my specialty since 2011. I have given seminars, lectures at conferences and full day courses on Rheumatology subjects mostly covering the topics of Recognition, Investigation and Management. These have been aimed at Allied Health Professionals (Physios, OTs, Nurses...) but have also been attended by Medical Colleagues from GP practices who have also provided positive feedback.

My current roles alongside the provision of CPD include:

Rheumatology Clinical Lead for Chews Health.

Operations Director of The Physio Matters Podcast and Chews Media.



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# Introduction

**Hello!** Thank You for deciding to spend some time with this book. It is designed to help you think about the complexity and clinical reasoning process surrounding Rheumatological conditions.

This book is aimed at clinicians who are seeing patients prior to any medical screening e.g. First Contact Practitioners (FCPs) or those in Private Practice. We must make sure we are detailed in our assessments, consider all possible causes for the attending person's symptoms, and make sure that we know what to do with that information.

This book hopes to fill a gap in the reasoning process for clinicians - Rheumatology, a complex, difficult and sometimes intimidating set of conditions. Unfortunately, delay to diagnosis in this cohort can have dire consequences, and as such we cannot afford to be complacent.

Poor outcomes across the board occur in Rheumatology when diagnoses are missed and patients have to wait to see a specialist.

As Therapists we can no longer hide behind prior medical screening or claims of ignorance as we move closer and closer to the start of patient's journeys. We must take responsibility and ensure that we are the best clinicians we can be for the patients attending our clinics.

This also applies to Therapists who are seeing patients following Medical screening. Don't assume it has been thorough. Do your own comprehensive assessments and make your own clinical judgments. The aim of this book is to help you with just that.

For many reasons, one being brevity, I have "stayed in my lane" with this book. As you work through the case studies you will notice the absence of red flag screening, neurological symptoms and other areas of questioning. This keeps the length of the cases palatable, and stopped the book from taking me years to write.

I am trusting you to know other screening requirements of back pain, multiple joint pain and systemically unwell people. I hope you will repay me with some leeway when it comes to omitting information about radicular pain, bladder and bowel function and so forth.

The assessment sections of this book really are what you make them. You could jump ahead to learn what I think the answer is, but I personally think that you will be missing a trick. I truly believe immersing yourself in these simulated scenarios will help you in the real world.

# Introduction

Before there is the chance for me to make this introduction longer than the book itself, I have one final thought.

You will see that I have hinted at what we should do in certain scenarios. As we are suspecting “medical” issues in these patients we are inevitably referring them out of Therapy. Consider what other value you can add during their appointment.

Let’s not rest on our smugness of successfully identifying a relatively rare condition and bounce them straight on to the appropriate location. Let’s instead think, “how can I improve their outcome?”. Really simple interventions and advice can make a big difference. I know time and resources are limited, but spending just a little of it on reassurance, education and guidance could make the world of difference in the long term.

This book does not have all the answers. I make some assumptive leaps of prior knowledge. Feel free to use a search engine or get in contact with me for clarification. Use my other CPD materials (most of which are free because I am terrible at business) to help you along the way as well.

To help me, please do get in touch with feedback and if you think it’s great, tell your colleagues about it!

I will stop now and let you get on to the reason you started looking at this book.

I hope I will get to meet you some time via social media or at an in-person event of some kind.

Now pop your thinking hat on and away you go!

1

# Spondyloarthritis

Spondyloarthritis (SpA) is an umbrella term covering autoimmune conditions affecting the Axial skeleton (the spine and sacroiliac joints) and/or the peripheral entheses (achilles, plantar fascia, lateral epicondyle insertions). Conditions falling under this umbrella include Axial Spondyloarthritis and Psoriatic Arthritis. There are familial connections with the conditions and there is a strong association with 85-95% HLA-B27 positivity.

# Spondyloarthritis

## Scenario 1

### Referral

John is a 25 year old male complaining of thoracic back pain lasting for 3 months. No previous past medical history or attendance to MSK Therapists. No regularly prescribed medications.

### Further Subjective Information

Insidious onset thoracic back pain 3 months ago with bilateral buttock pain most days. No previous back pain, no previous injuries or musculoskeletal complaints. No change in habits, occupation or circumstances prior to onset. Has not been unwell or required antibiotics.

### 24 hour pattern

Feels extremely stiff when he wakes in the morning with significant back pain. This lasts for approximately 1 hour. The pain and stiffness will return after sitting at his work desk for longer than 1 hour and requires walking around to resolve. He has no issues during the day if he is not at work because he can keep moving.

He is able to fall asleep but wakes around 2am every morning with pain and stiffness. After getting out of bed and doing some stretches he is able to go back to sleep.

### Aggravating/Easing

Sitting for extended periods at his desk, driving or watching TV aggravates his back pain. Nothing aggravates the buttock pains which are present when he wakes in the morning and resolve over the period of an hour. Ibuprofen eases his symptoms and he takes this regularly through the day. Going to the gym does not aggravate symptoms and he is possibly worse on days he doesn't go.

### Past Medical History

He has no known health issues. He has not attended his GP in the last 5 years. He does not take any prescribed medications. He denies any sexually transmitted infections and use of steroids. He feels well in himself but slightly fatigued due to interrupted sleep. He denies feeling anxious or depressed.

He has no personal or family history of psoriasis, iritis/uveitis, crohns/colitis or inflammatory arthropathies

### Social Factors

He works at a desk writing software. He enjoys going to the gym and has a well rounded program. He doesn't smoke, drinks occasional alcohol and has a BMI of 24. He believes his pain is likely down to his posture at work.

### Clinical Reasoning Activity

*From the case presentation note down the indicators that John could have AxSpA*

# Spondyloarthritis

## Scenario 1

### John is presenting as a classical new onset Axial Spondyloarthritis

- Insidious onset back pain and buttock pain for 3 months
- Pain and stiffness in the morning for >60 mins
- Worse with rest, better with activity
- Waking in the second half of the night, getting out of bed to ease symptoms
- Eased by NSAIDs

### Next Steps

Explain to John that the clinical picture is one suspicious of an inflammatory cause of his symptoms, which needs referring to a Rheumatologist for further investigations. The aim of this appointment is to confirm or rule out a specific diagnosis and start appropriate treatment if necessary.

Reassure John that the prognosis for these conditions is good when diagnosed and managed early. He already lives a healthy lifestyle and he should continue this as much as possible to improve his chances of a good outcome. Consider specific therapy management if there are reported functional deficits.

### Investigations

If appropriate and available refer for:

- Spondyloarthritis protocol MRI of whole spine and Sacroiliac Joints
- Blood tests: HLA-B27, ESR, CRP

### Onwards Referral

Refer to Rheumatology via the appropriate local pathway for further investigation of symptoms suspicious of Axial Spondyloarthritis.

### Learning Points.

Symptom pattern alongside aggravating and easing factors are key to recognition in John's case

Reassurance and general health advice at this early stage are important accompaniments to the prompt referral

AxSpA should be considered in the differential diagnosis for younger persons (<45) back pain that's lasted >3 months

# Spondyloarthritis

## Scenario 2

### Referral

Jane is a 35 year old female complaining of insidious onset bilateral heel pain for the last 6 weeks. She takes no regular medication. She has a past medical history of Psoriasis which is managed by moisturisers. She attended a Physiotherapist last year for repetitive strain in her hand.

### Further Subjective Information

Insidious onset bilateral heel pain 6 weeks ago. She awoke one morning and was unable to weight bear through her heels. This improved after a few minutes and she ignored it. This has gradually worsened over the last 6 weeks and now she struggles to walk for the first 2 hours in the morning. No change in habits, occupation or circumstances prior to onset. Has not been unwell or required antibiotics.

She has had psoriasis for 10 years and manages this with moisturiser. Last year she developed pain and swelling in the IPJs of her index and middle finger in the right hand, this was diagnosed as a repetitive strain issue. Improved with physiotherapy and ergonomics over a few months and then resolved after 6 months. She had Lateral Epicondylopathy 5 years ago which lasted 2 years and was quite debilitating.

### 24 hour pattern

Severe pain in the mornings when she gets out of bed which takes 2 hours to improve. This will return to a lesser degree during the day after sitting or after walking for longer periods. Her sleep is unaffected.

### Aggravating/Easing

Her heel pain is worse after sitting / driving for any period of time. This will resolve over a period of time relative to how long she was sat, from a few minutes to a few hours.

### Past Medical History

She has no known health issues other than the Psoriasis. She attended her GP for the hand symptoms last year and prior to this the tennis elbow. She does not take any prescribed medications. She denies any sexually transmitted infections and use of steroids. She feels well in herself and denies feeling anxious or depressed but feels fatigued constantly.

She has no personal or family history of iritis/uveitis or crohns/colitis. Her father has Psoriatic Arthritis. She has no nail bed changes.

# Spondyloarthritis

## Scenario 2

### Social Factors

She works at a desk as an estate agent and often drives to view houses. She enjoys walking her dog 3-4 miles a day, this is not normally an issue. She smokes 10/day and has a BMI of 32.

She has been concerned about Psoriatic Arthritis since she developed the hand symptoms but was reassured as they went away.

### Clinical Reasoning Activity

*From the case presentation note down the indicators that Jane could have SpA*

**Jane is presenting with a possible Peripheral Spondyloarthritis; likely Psoriatic Arthritis.**

- Insidious onset bilateral tendinopathy (plantar fasciitis)
- Symptoms in the morning for >60 mins
- Previous Lateral Epicondylopathy and previous IPJ swelling and pain
- Diagnosed Psoriasis
- Father has Psoriatic Arthritis
- High BMI and Smoker

### Next Steps

Explain to Jane that the clinical picture is one suspicious of an inflammatory cause of her symptoms which needs referring to a Rheumatologist for further investigations. The aim of this appointment is to confirm or rule out a specific diagnosis and start appropriate treatment if necessary.

Discuss with Jane her general health as her high BMI and smoking status will contribute to a raised level of systemic inflammation. This may increase the likelihood of developing Psoriatic Arthritis or the separate clinical conditions. If diagnosed with Psoriatic Arthritis, these factors will also make a poorer outcome more likely. Consider starting specific therapy management for the bilateral heel pain to plan for the possibility Psoriatic Arthritis is ruled out.

A trial of anti-inflammatories may be worthwhile to assess impact on symptoms.

### Investigations

If appropriate and available refer for:

- Ultrasound imaging to look for Insertional Enthesitis
- Blood tests: HLA-B27, ESR, CRP, Rheumatoid Factor

# Spondyloarthritis

## Scenario 2

### Onwards Referral

Refer to Rheumatology via the appropriate local pathway for further investigation of symptoms suspicious of Peripheral Spondyloarthritis (pSpA).

### Learning Points.

pSpA should be considered in the presence of Psoriasis and Tendinopathy even if one or both are historical

Family History of inflammatory conditions adds a strong clinical suspicion and reduces threshold for referral

General health advice at this early stage is important accompaniments to the prompt referral for short and long term outcomes regardless of the final diagnosis

In this scenario it is possible that Jane has multiple distinct clinical conditions, it is not possible to rule out pSpA and as such warrants referral for specialist investigation

# Spondyloarthritis

## Scenario 3

### Referral

Adam is a 45 year old male complaining of low back pain lasting for 3 years. He has Ulcerative Colitis and takes Azathioprine to manage this.

### Further Subjective Information

3 years ago Adam was lifting crates at work. The next day he had a stiff back which worsened over a few days and became quite painful. He was off work for a month at the time. It improved enough that he was able to return. He has had varying degrees of low back pain since and seen a physiotherapist, an osteopath and a chiropractor which have settled the symptoms in the short term. Although annoying, his back pain doesn't bother him on a day to day basis.

Recently however he has had a flare up of symptoms, and has been off work again for the last 2 weeks. He is unsure if there is a trigger for these flare ups.

He recalls a number of previous aches and pains including achilles tendinopathy 2 years ago, bilateral epicondylopathy last year, and some lateral hip pain 5 years ago which lasted a year before settling with a steroid injection.

Alongside various Xrays of his pelvis and lumbar spine he had an MRI of his lumbar spine 6 months ago which showed a small left sided disc bulge and a report of a degenerative disc.

He has never had any radicular pain or neurological-sounding symptoms.

His back pain is activity dependent - the busier he is at work the worse it gets. If he is resting or on holiday it is much better. He started parkrun to improve his fitness last year. His back will ache during and after but no worse than any other day.

He sometimes struggles to get to sleep at night because he feels his back is uncomfortable. He doesn't wake during the night. He thinks his back is stiff for a few minutes in the morning but certainly not for a protracted period of time.

### Aggravating/Easing

Lifting at work aggravates his back pain. If he has a large number of heavy things to lift his back pain will deteriorate during the day. He takes occasional paracetamol to help. Usually if he aggravates his back at work, he is ok the next day to work again. The only change to this is a flare up of more severe pain which happens like clockwork every 6 months.

# Spondyloarthritis

## Scenario 3

### Past Medical History

He has Ulcerative Colitis and has been under the Gastroenterology team for 20 years. This is stable and managed well with Azothiaprine. He feels well in himself except frustrated with his back. He denies feeling anxious or depressed.

He has no personal or family history of psoriasis, iritis/uveitis or inflammatory arthropathies

### Social Factors

He works as a delivery driver and this can vary in intensity, less intense days are better. He does parkrun once a week. He eats a healthy diet, does not smoke and has a BMI of 26.

### Clinical Reasoning Activity

*From the case presentation note down the indicators that Adam could have AxSpA:*

### Adam is presenting as a possible Axial Spondyloarthritis (likely Enteropathic)

- Chronic back pain with insidious acute flare-ups
- Ulcerative Colitis under Gastroenterology
- 4 previous tendon complaints

### Next Steps

Explain to Adam that his symptoms may be explained and linked by an inflammatory pathology. Although none of his symptoms are truly inflammatory in nature (i.e. his back pain is not a classical picture), the linking condition is the Ulcerative Colitis. A high proportion of people with this condition go on to develop an associated inflammatory arthropathy.

He has had previous therapeutic input which, while potentially settling the acute flare ups, has never managed the persistent back pain. Although he has had previous imaging of his back, he has not had correct sequencing to determine if radiological signs are present.

A referral to Rheumatology for specialist investigations to rule out Axial Spondyloarthritis as the cause of his back pain and previous tendon issues is appropriate. Beginning some therapeutic management alongside the referral to Rheumatology to settle the flare up is also reasonable as this has been effective for him in the past.

# Spondyloarthritis

## Scenario 3

### Investigations

If appropriate and available refer for:

- Spondyloarthritis protocol MRI of whole spine and Sacroiliac Joints
- Blood tests: HLA-B27, ESR, CRP

### Onwards Referral

Refer to Rheumatology via the appropriate local pathway for further investigation of symptoms suspicious of Axial Spondyloarthritis.

### Learning Points.

Rheumatology referral is appropriate in this case despite the back pain not being inflammatory in nature. It is chronic and the associated Ulcerative Colitis is sufficient to meet a threshold for referral.

Threshold for referral in these types of cases is low. This is appropriate, as the incidence of SpA in Ulcerative Colitis patients is significant, as is the current delay to specialist referral and diagnosis.

Offering therapy management for functional deficits and pain management is also appropriate during this flare up to get Adam back to work. If he was outside of a flare up then I would offer him the choice to undertake another episode of therapy if he thought it would be helpful.

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# Rheumatoid Arthritis

Rheumatoid Arthritis is an inflammatory polyarthropathy characterised by acute synovitis, most commonly in the MCPJs and MTPJs, although any synovial joint can be affected. The persistent synovitis leads to an excess of inflammatory infiltrate in the joint which left untreated causes irreversible erosions. In the long term other body systems can become affected and there is an increased risk of clinically important conditions such as Cardiovascular Disease and Osteoporosis.

# Rheumatoid Arthritis

## Scenario 1

### Referral

Mary is a 20 year old female complaining of bilateral hand pain and swelling over the Metacarpal Phalangeal Joints (MTPJs) for the last 2 weeks. She takes no prescribed medications.

### Further Subjective Information

Insidious onset bilateral hand swelling and pain of the MCPJs for the last 2 weeks. She is struggling with all functional tasks as she has decreased range of motion in both hands, the joints are very stiff to move and it is painful to grip anything. There is a constant swelling and the joints can also be warm and red at times. She has also noticed she is very tired all the time since the symptoms began. She is having to take paracetamol and ibuprofen to take the edge off the pain. She has been off work since the onset of the symptoms.

### 24 hour pattern

Her hand joints are stiff all day without resolution. The pain is worst in the mornings and eases very slightly around lunchtime. She struggles to get to sleep at night because of the pain and then is awoken regularly as well. Bathing her hands in warm water and doing some gentle movements can free up her hands a little in the morning.

### Aggravating/Easing

Any form of activity with her hands aggravates the pain. The stiffness is worse following any period of rest and then frees up with activity, although that is also painful. Activity seems to aggravate the swelling, redness and warmth of the MTPJs.

### Past Medical History

She has no known health issues and does not take any prescribed medications. She denies any sexually transmitted infections and use of steroids. She feels well in herself but feels very fatigued which she puts down to a lack of sleep. She feels a little anxious about her symptoms as they are so restrictive. She denies feeling depressed.

She has no personal or family history of psoriasis, iritis/uveitis, crohns/colitis or inflammatory arthropathies. She has not had any previous joint or soft tissue problems or injuries. She has a positive MCPJ squeeze test bilaterally and a positive MTPJ squeeze test on the right foot.

### Social Factors

She works as a designer which requires some computer work and some artwork. She has been off work for the duration of the symptoms. She normally attends the gym regularly to keep fit. She doesn't smoke, doesn't drink alcohol and has a BMI of 22.

# Rheumatoid Arthritis

## Scenario 1

### Clinical Reasoning Activity

*From the case presentation note down the indicators that Mary could have Rheumatoid Arthritis:*

#### Mary is presenting as a classical new onset Rheumatoid Arthritis (RA)

- Insidious acute onset bilateral MCPJs swelling, stiffness, redness, heat and pain
- Pain and joint stiffness all day
- Waking in the night with pain and joint stiffness
- Stiffness reduces with activity
- Female
- MCPJ and MTPJ squeeze tests positive

#### Next Steps

Explain to Mary that her symptoms are suggestive of Rheumatoid Arthritis, which warrants a referral to Rheumatology for specialist investigation and instigation of appropriate medical management.

Reassure Mary that prognosis is good for Rheumatoid Arthritis when diagnosed and managed early, and that as many as 50% of people are in clinical remission at 1 year following diagnosis. Her good general health make this a more likely outcome. Consider specific therapy management by a hand specialist for her reported functional deficits.

#### Investigations

If appropriate and available refer for:

- Ultrasound scanning of the MCPJs and MTPJs looking for synovitis
- Blood tests: Anti-CCP, ESR, CRP, Rheumatoid Factor

#### Onwards Referral

Refer to Rheumatology via an Early Inflammatory Arthritis Pathway if available locally.

# Rheumatoid Arthritis

## Scenario 1

### Learning Points.

Insidious onset bilateral symptoms in the peripheral joints are suspicious of inflammatory arthritis in a younger person

In Mary's case symptoms are clearly inflammatory in nature (swelling, redness, heat, protracted joint stiffness)

Onwards referral to Rheumatology by a quick access pathway is the priority action

Reassurance and general health advice at this early stage are important accompaniments to the prompt referral

# Rheumatoid Arthritis

## Scenario 2

### Referral

Andrew is a 60 year old male complaining of right knee pain and swelling lasting 3 months. He has no other medical conditions and takes no prescribed medications.

### Further Subjective Information

Andrew reports his right knee swelled up after being on holiday. He had done a lot of walking and his knee had been sore towards the end of the day. When he got back it remained sore and swelled quite significantly. It was occasionally warm to the touch but not red. He finds it stiff at times but this eases with movement.

He is struggling functionally with the stairs, especially in the morning. If he has been sat in the car for a protracted period he finds walking difficult until the stiffness eases. Andrew thinks he has arthritis now because he had a number of football knee injuries when he was younger including a couple of meniscal surgeries.

He has no other joint pains, has not been unwell or required to visit his GP or MSK therapist over the last 5 years. He is finding ibuprofen helpful.

### 24 hour pattern

His knee is stiff and painful in the mornings for approximately 30 minutes.

These symptoms will return if he spends a significant period of time sitting or driving. He manages walking without too much trouble, except after periods of rest.

He does occasionally wake at night with his knee aching, usually in the early hours of the morning. This is reduced if he takes ibuprofen before bed.

### Aggravating/Easing

Periods of keeping the knee still aggravate the knee stiffness and pain when he goes to move again. Stairs are difficult in the morning, but otherwise the knee is tolerable. Ibuprofen helps ease the symptoms.

### Past Medical History

He is generally fit and well and does not take any prescribed medications. He denies any sexually transmitted infections and use of steroids. He feels well in himself, not fatigued, and denies anxiety or depression.

He has no personal or family history of psoriasis, iritis/uveitis, crohns/colitis. His Grandmother and his Sister have Rheumatoid Arthritis.

### Social Factors

He is a retired police officer and enjoys gardening, reading and movies. He smokes 15/day, drinks alcohol most days and has a BMI of 32.

# Rheumatoid Arthritis

## Scenario 2

### Clinical Reasoning Activity

*From the case presentation note down the indicators that Andrew could have Rheumatoid Arthritis:*

#### Andrew is presenting as a possible new onset Rheumatoid Arthritis (RA)

- Insidious onset (no overt injury) right knee pain with swelling and stiffness
- Pain and swelling in the morning lasting 30 minutes
- Waking in the night with pain and joint stiffness
- Worse with rest
- Improvement with NSAIDs
- Strong family history

#### Next Steps

Explain to Andrew that his symptoms indicate the possibility of RA, which warrants a referral to Rheumatology for specialist investigation and instigation of appropriate medical management.

Discuss with Andrew that his symptoms could be due to Osteoarthritis but due to his strong family history of RA it is necessary to rule this out as a cause. Regardless of the end result a reduction in his BMI, smoking and alcohol intake will significantly improve the likelihood of a positive outcome for him. Consider concurrent referrals to appropriate services to facilitate this.

Depending on Andrew's preference, commencing a graded exercise program for his knee will be beneficial regardless of diagnosis.

#### Investigations

If appropriate and available refer for:

- MRI most likely to be useful in this case to assess joint and synovium
- Blood tests: Anti-CCP, ESR, CRP, Rheumatoid Factor

#### Onwards Referral

Refer to Rheumatology via an Early Inflammatory Arthritis Pathway if available locally.

# Rheumatoid Arthritis

## Scenario 2

### Learning Points.

Andrew's symptoms are arguably consistent with Osteoarthritis but the strong family history in the presence of even mild inflammation justifies Rheumatology referral

His lifestyle factors may have a significant impact on his systemic inflammation, contributing to the inflammatory picture that he presents with.

Interventions instigated at this stage e.g. weight loss, smoking cessation, graded exercise program, have a good chance of being effective regardless of the outcome

Peak onset for RA is 40-60 so he is within this range

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# Osteoporosis

Osteoporosis is a combination of reduced bone mass and reduced bone quality which understandably results in an increase in the fragility of the bone structure. These changes lead to the bone being at a higher susceptibility to fracture, classically presenting as low trauma (areas such as the wrist or neck of femur), or pathological and sometimes asymptomatic in the spine.

# Osteoporosis

## Scenario 1

### Referral

June is an 85 year old female who fractured her wrist after a fall. She is otherwise fit and well.

### Further Subjective Information

6 weeks ago, June slipped in her kitchen landing on her outstretched right arm. She fractured her wrist and was casted. She did not require a Open Reduction and Internal Fixation. Since coming out of the cast her wrist is stiff and lacks strength. She is relatively pain free.

She reports her balance as reasonable, and although is a little concerned she may fall again has been going out, doing her shopping and socialising

### Past Medical History

June is fit and well other than her recent fracture. She does not take any prescribed medications and has never required steroids. She is a little concerned about her balance following her fall but denies true anxiety or depression. She sustained a tibia and fibula fracture 2 years ago after falling down some steps. She reports she recovered well from this.

She does not have any absorption issues, problems with her gut or bowel and reports eating a varied diet.

She has no family history of Osteoporosis and does not think either of her parents sustained any fractures.

### Social Factors

June is a retired teacher. She enjoys socialising with friends and doesn't formally exercise. She doesn't smoke or drink alcohol and has a BMI of 19.

### Clinical Reasoning Activity

*From the case presentation note down the indicators that June could have Osteoporosis:*

# Osteoporosis

## Scenario 1

### June warrants investigation for Osteoporosis.

- 2 fractures in the last 2 years
- BMI on the low end of normal range
- Female aged 85

### Next Steps

Explain to June that because of her recent fractures, it would be prudent to investigate her bone density further, Osteoporosis is extremely common in older people and can be well managed with a combination of bone protection and load based exercise.

Provide June with a graded exercise program that includes load bearing and balance components. Manage her functional deficits in the wrist appropriately.

### Investigations

Complete a bone density risk assessment (a FRAX score is well validated)

If appropriate and available refer for:

- DEXA scanning

### Onwards Referral

Refer to GP if DEXA scan shows Osteoporosis or Osteopenia OR if the FRAX score is high enough to warrant commencing bone protection.

### Learning Points.

Osteoporosis is likely underdiagnosed in the population

Increasing age and being female significantly increase risk

Assessment of fracture risk is simple and quick

Exercise can improve bone density and reduce falls risk and should be very strongly encouraged

# Osteoporosis

## Scenario 2

### Referral

Mark is a 50 year old male with long standing Rheumatoid Arthritis (RA). He takes biologic medications and has a limited walking distance.

### Further Subjective Information

Mark has relatively poor function, his walking distance is limited and he fatigues easily. He was diagnosed with RA aged 20 and has taken a great many medications over this time frame including multiple courses of high dose steroids to manage his arthritis symptoms.

He has multiple joint pains and joint deformities.

### Past Medical History

Mark fatigues easily, takes ramipril for high blood pressure, biologics and Methotrexate for his RA and codeine for pain. He has had multiple courses of high dose steroids, the most recent of which was last year where he had 40mg for 4 weeks and then the dose was titrated.

He does not have any absorption issues, problems with his gut or bowel and reports eating a varied diet.

He has no family history of Osteoporosis, He does not think either of his parents sustained any fractures.

### Social Factors

Mark has not worked since he was diagnosed with RA. He doesn't go out much and has quite a low activity level. He smokes 15/day, drinks 2 glasses of wine/day and has a BMI of 26.

### Clinical Reasoning Activity

*From the case presentation note down the indicators that Mark could have Osteoporosis:*

# Osteoporosis

## Scenario 2

### Mark warrants investigation for Osteoporosis.

- Long term inflammatory arthropathies increase the risk of Osteoporosis
- High dose steroids are a strong risk factor for Osteoporosis
- He has a low activity level and poor general health including smoking and alcohol

### Next Steps

Explain to Mark that he has a number of risk factors for low bone density and it would be prudent to investigate this further. Osteoporosis can be well managed with a combination of bone protection and load based exercise and is easier to maintain bone density if assessed earlier.

Discuss with Mark a graded exercise program that includes load bearing and balance components tailored to his individual circumstances.

Discuss his general health behaviours. Smoking and alcohol are detrimental to bone density but also to outcomes in RA. Consider onward referrals to assist with this.

Try to determine the circumstances that are leading to such low activity levels. Anxiety, depression and/or loneliness may be factors keeping Mark from increasing his activity. Social prescribing may be of benefit in his case.

### Investigations

Complete a bone density risk assessment (a FRAX score is well validated)

If appropriate and available refer for:

- DEXA scanning

### Onwards Referral

Refer to GP if DEXA scan shows Osteoporosis or Osteopenia OR if the FRAX score is high enough to warrant commencing bone protection.

### Learning Points.

Inflammatory Arthropathies increase the risk of low bone density via a number of different routes

General health, including mental health can increase risk and also contribute to low activity levels

A FRAX should be carried out yearly in all patients with inflammatory arthropathy

Recognising people at risk of low bone density *before* they sustain a fracture is of very high importance

4

# Gout

Gout is a type of inflammatory arthritis. It is characterised by acute attacks of pain, redness, swelling and heat of the joint. Onset of symptoms is usually during the night and will peak after 12-24 hours. The pain is severe and many attend A+E with the symptoms. Gout has overtaken Rheumatoid Arthritis as the Rheumatological condition with the most hospital admissions per year.

Aspiration of the joint often reveals urate crystals which are what set off the synovitis. The formation of these crystals can be either due to an excess of Urea in the body (90%), or a reduced ability to produce Urate (which metabolises Urea).

# Gout

## Scenario 1

### Referral

Arnold is a 65 year old male complaining of episodic right big toe pain and swelling. He takes ramipril for high blood pressure.

### Further Subjective Information

Arnold reports having approximately 5 episodes of severe right big toe pain over the last year. Once it was so severe he thought he had suffered a fracture so attended A+E. They performed an Xray and there was no fracture.

He does not currently report any pain as the most recent episode settled while he was waiting for this appointment. He describes the episodes as being of insidious onset, with pain, redness, swelling and heat at the 1<sup>st</sup> Metatarsal Phalangeal Joint (MTPJ). He can struggle to walk and the pain will throb and keep him awake at night. The episodes of pain last for approximately 4-6 days and then start to improve.

Arnold is concerned due to the number of episodes of pain he has had, and that they keep occurring even though he doesn't think he is triggering them in any way.

### 24 hour pattern

During an episode of pain, the big toe is constantly painful until it resolves.

It is not better or worse at night, in the morning or during the day.

### Aggravating/Easing

He doesn't think anything causes an episode to occur. When he has the symptoms, weightbearing, having the sheets touching his toe and moving the joint will aggravate his pain.

### Past Medical History

He has high blood pressure and takes ramipril. He does not take any other prescribed medications. He denies any sexually transmitted infections and use of steroids. He feels well in himself and denies feeling anxious or depressed.

He has no personal or family history of psoriasis, iritis/uveitis, crohns/colitis, or inflammatory arthritis.

### Social Factors

He works at a supermarket on checkout and walks a mile to and from work. He smokes 20/day and has done for 40 years. He drinks 2-4 bottles of wine a night at the weekend and has a BMI of 36.

### Clinical Reasoning Activity

*From the case presentation note down the indicators that Arnold could have Gout:*

# Gout

## Scenario 1

Arnold is presenting with symptoms typical of gout.

- Most commonly affected joint is the 1<sup>st</sup> MTPJ
- Severe, episodic pain with swelling, redness and heat.
- Gout is more likely in men and the risk is increased with vascular issues, smoking, alcohol intake and high BMI
- Characterised by severe pain, people with gout often describe it as the worst pain they have experienced.

### Next Steps

Explain to Arnold that his symptoms are typical of episodic gout flare ups. His general health and alcohol intake will make him much more susceptible to suffering further flare ups.

Discuss general health improvement strategies with Arnold. Reducing BMI, alcohol intake and smoking, and increasing his exercise levels are important for both his high blood pressure and gout. Cardiovascular disease risk assessment would also be appropriate.

Initial management of the gout should be under the GP.

### Investigations

If appropriate and available refer for:

- Blood tests: Uric Acid, ESR, CRP

### Onwards Referral

Refer to GP for management

### Learning Points.

Poor general health and Male sex are strong risk factors for developing gout

The 1st MTPJ is the most common location for gout symptoms

Alcohol intake and smoking increase the risk of developing gout

Episodic flare ups are common

Severe pain and inflammation are characteristic symptoms

# Gout

## Scenario 2

### Referral

Chris is a 40 year old male complaining of ankle pain and swelling for 4 days following a particularly intense crossfit session. He is insulin dependent due to Type 1 Diabetes.

### Further subjective information

5 days ago Chris took part in a very difficult crossfit session which involved many more box jumps than he is used to. He attends crossfit 5 times per week and has not had any previous issues with this. He does not recall a specific injury and managed the workout well. The pain started in the middle of the night. He awoke with ankle pain around 3am and the pain deteriorated from there. He considered attending A+E in the morning due to the pain. It had become swollen, hot and red and he was struggling to weightbear. He thought he might have a fracture. The pain started to improve a little so he decided to wait it out.

The ankle remains diffusely swollen, warm and painful. He has stiffness most of the time in the ankle. The pain remains relatively constant irrelevant of the amount of activity he does. There is some relief with ibuprofen.

### 24 hour pattern

The pain and stiffness is worst in the morning and improves after approximately 1 hour.

The stiffness will reoccur if he rests. He struggles to sleep at night as the ankle aches.

### Aggravating/Easing

Rest will aggravate the symptoms when he then starts to walk and the ankle can feel very stiff. Activity does not aggravate the symptoms other than for 30 minutes after rest.

### Past Medical History

He has Type 1 Diabetes and takes insulin. He reports that the diabetes is well controlled and he has regular reviews. He does not take any other prescribed medications. He denies any sexually transmitted infections and use of steroids. He feels well in himself but slightly fatigued due to interrupted sleep. He denies feeling anxious or depressed.

He has no personal or family history of psoriasis, iritis/uveitis, crohns/colitis. His father and uncle had gout.

### Social Factors

He works at a desk as a mechanical engineer. He attends crossfit regularly and describes himself as very fit. He doesn't smoke or drink alcohol and has a BMI of 24. He remains concerned about a stress fracture.

# Gout

## Scenario 2

### Clinical Reasoning Activity

*From the case presentation note down the indicators that Chris could have Gout:*

Chris is presenting with symptoms suspicious of gout.

- Pain onset during the night, escalating and peaking after a few hours
- Pain and stiffness in the morning for 1 hour
- Worse with rest
- Strong Family history of gout and Type 1 Diabetes
- Eased by NSAIDs

### Next Steps

Explain to Chris that his symptoms are consistent with an onset of gout. His diabetes and family history make him more susceptible to gout.

His symptoms are not consistent with a stress fracture and he did not sustain a clear injury during the session. Reassure Chris he already lives a healthy lifestyle and he should continue this as much as possible to improve his chances of a good outcome. Initial management of gout should be under the GP.

### Investigations

If appropriate and available refer for:

- Blood tests: Uric Acid, ESR, CRP

### Onwards Referral

Refer to GP for initial management of Gout flare

### Learning Points.

Symptom onset in this case is important as the timing and initial escalation give the clue to the diagnosis

Gout is the most prevalent inflammatory arthritis and men are more susceptible

Chronic conditions such as diabetes increase the risk of developing gout

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# Systemic Lupus Erythematosus

Systemic Lupus Erythematosus is a highly variable, multi-systemic, auto-immune condition. It can affect a variety of organs with different severity and timelines. It is most common in Women and has an increased prevalence in Afro-Caribbeans. Musculoskeletal symptoms are vague and diffuse and significant fatigue often accompanies these muscle and joint aches. Characteristic rashes are important clinical entities. SLE is often mistaken for other conditions such as Fibromyalgia.

# Systemic Lupus Erythematosus

## Scenario

### Referral

Mary is a 30 year old female with diffuse aching all around her body, she doesn't take any regular medications.

### Further Subjective Information

Mary has had diffuse aching all around her body for approximately 6 weeks. The intensity and location of the aching is variable and seems related to how tired she is. She has always been a poor sleeper but in the last 6 weeks she has had significantly worse fatigue. She generally feels unwell and run down but denies any specific symptoms like nausea, dizziness or pyrexia.

She was previously fit and well. She has always slept poorly but this has not previously impacted on her function. Now she struggles to concentrate and feels very lethargic.

The aching around her body does not particularly affect her function but is significant enough to affect her mood. She is fed up of not feeling well and not having an answer to what is happening.

### 24 hour pattern

Mary is tired all the time. The general aching is more noticeable when she is not distracted and this making it difficult to fall asleep at night. She has always woken through the night and does not think this is worse.

When she does wake, the aching is there to a similar level as before she fell asleep.

There is no clear pattern through the day. The aching is better when she is distracted.

### Past Medical History

Mary does not report any other medical issues with regards to her heart, thyroid, neurological issues, asthma or diabetes. She has not been unwell over the last year, denies any sexually transmitted infections and has never taken steroids. She denies any anxiety but is feeling down lately because of the symptoms.

Mary reports she has had 3 miscarriages over the last 7 years. She and her husband are continuing to try and have a baby. She has also had a rash across her face at times over the last 6 weeks which has not been itchy or sore. It is not visually present in clinic today.

### Social Factors

Mary moved to the UK from Jamaica 3 years ago with her husband. She does not work, but spends her time cooking, cleaning and meeting with her friends. Her husband works in the banking sector and they travel back to Jamaica approximately every 3 months for his work or to visit family.

Mary does not smoke or drink alcohol. Her BMI is 26.

# Systemic Lupus Erythematosus

## Scenario

### Clinical Reasoning Activity

*From the case presentation note down the indicators that Mary could have Systemic Lupus Erythematosus (SLE):*

#### Mary warrants investigation for SLE.

- Diffuse aching and fatigue
- Females carry a far higher risk of developing SLE
- Afro-Caribbeans carry a higher risk of developing SLE
- Multiple miscarriages may indicate anti-phospholipid syndrome which is sometimes associated with SLE
- Peak age of onset is in the reproductive years (15-44)

#### Next Steps

Explain to Mary that her symptoms warrant further investigation under Rheumatology for SLE. This is the best place to determine the diagnosis and rule out any other causes. Discuss with her that although SLE is relatively rare, female sex and Afro-Caribbean ethnicity significantly increase her likelihood of developing the condition.

Discuss pacing strategies that may help her during the day to manage her fatigue symptoms. Encourage her to maintain her activity levels as much as possible as this will be beneficial in the longer term and mitigate any loss of fitness levels.

She already leads quite a healthy lifestyle so encourage her to continue this as much as possible.

#### Investigations

Blood tests: (personally I would leave this to the Rheumatology department)

ANA

#### Onwards Referral

Refer to Rheumatology for further investigations and commencement of appropriate treatment as necessary.

# Systemic Lupus Erythematosus

## Scenario

### Learning Points.

SLE masquerades as any number of musculoskeletal condition so it is easy to misdiagnose as fibromyalgia or other similar clinical entities

Understanding multisystem effects is key to recognition. Look for renal disorders, blood disorders, rashes, serositis, and arthritis

Significantly more common in women (approx. 10:1 ratio) and higher risk in people of Afro-Caribbean descent

A vital point is that rashes and skin conditions in text books are often shown on Caucasian skin. These changes in people who are not of Caucasian descent may look different to these images and are often more subtle. Be mindful of this when assessing for skin changes and conditions.

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# Sjogren's Syndrome

Sjogren's Syndrome is an inflammatory connective tissue disorder affecting the secretory glands, such as in the mouth and the eyes. Musculoskeletal symptoms are often vague and diffuse with associated fatigue. Significantly more common in women and peak onset of 50-60. Sjogren's Syndrome can be the primary condition or it be secondary to another clinically important inflammatory condition such as RA or SLE

# Sjogren's Syndrome

## Scenario

### Referral

Anna is a 40 year old female with diffuse muscle aching in her legs. She doesn't take any prescribed medication.

### Further Subjective Information

Anna has had diffuse muscle aching in her legs for approximately 6 months. There was no triggering onset and no change in habits prior. More recently over the last 4-6 weeks she has felt very tired all of the time. She reports sleeping well but never feels refreshed.

The muscle aching does not appear to be related to anything she does, and remains at a similar intensity whether she is busy or resting. It does not impact on her function but she is feeling down about its relentless nature. The fatigue is more of an issue as she finds it difficult to concentrate at work and doesn't feel like she wants to engage in her hobbies.

She has not had any previous injuries. Over the last 6 months she has had very occasional hand and foot pains which have been a similar type of aching, but resolve after 6 hours or by the next day.

### 24 hour pattern

She thinks the aching may be slightly worse in the mornings but not significantly. She does not struggle to sleep and is not woken at all by the symptoms.

She remains tired when she wakes up regardless of the number of hours she has slept for.

### Past Medical History

Anna does not report any other medical issues with regards to her heart, thyroid, neurological issues, asthma or diabetes. She has not been unwell over the last year, denies any sexually transmitted infections and has never taken steroids. She denies any anxiety or depression.

Anna reports very dry eyes. She uses false tears regularly through the day and also has a very dry mouth. She denies any change in vaginal dryness. She carries a bottle of water everywhere with her and drinks from it regularly during the appointment.

Her mother has Rheumatoid Arthritis. There is no other family history of inflammatory conditions.

### Social Factors

Anna is an accountant and works at a desk. She usually enjoys playing regular tennis but has not been doing this recently due to the worsening fatigue.

Anna does not smoke or drink alcohol. Her BMI is 24.

# Sjogren's Syndrome

## Scenario

### Clinical Reasoning Activity

*From the case presentation note down the indicators that Anna could have Sjogren's Syndrome:*

#### Anna warrants investigation for Sjogren's Syndrome.

- Muscle aching (myalgia) and fatigue with possible hand and foot joint aching (arthralgia)
- Females carry a far higher risk of developing Sjogren's Syndrome
- Dry eyes and dry mouth are characteristic of Sjogren's Syndrome
- A family history of inflammatory arthropathy
- Peak age of onset is 40-60

#### Next Steps

Explain to Anna that her symptoms warrant further specialist investigation. The dry eyes, dry mouth, fatigue and aching may all be related to the one condition.

Her Mother having RA slightly increases her risk of developing an inflammatory condition.

Discuss pacing strategies that may help her to manage her fatigue symptoms during the day. Encourage her to maintain her activity levels as much as possible as this will be beneficial in the longer term and mitigate any loss of fitness levels.

#### Investigations

If you are confident performing a Schirmer's test then this can provide an objective measure of eye dryness in clinic.

#### Onwards Referral

Refer to Rheumatology for further investigations and commencement of appropriate treatment as necessary.

### Learning Points.

Musculoskeletal symptoms of Sjogren's syndrome are often vague and diffuse

It is key to ask about fatigue levels and possible causes

Ensuring in-depth questioning about eye, mouth and vaginal secretions are a vital component of recognising a potential case

Sjogren's syndrome is far more common in women than men (approx. 9:1 ratio)

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# Polymyalgia Rheumatica

Polymyalgia Rheumatica is an inflammatory condition, characterised by shoulder and/or pelvic girdle pain and stiffness. The mainstay of treatment is pharmacological, usually involving steroids. Onset is very unlikely prior to the age of 50, peak onset is 65 with women being affected at 3x more than men. There shouldn't be any muscle weakness at presentation and likely proximal muscle tenderness to palpation.

# Polymyalgia Rheumatica

## Scenario

### Referral

Sally is a 65 year old female with bilateral shoulder pain. She doesn't take any prescribed medications.

### Further Subjective Information

Sally has had bilateral shoulder pain for approximately 3 months. She thinks this started after she helped her daughter move house. She denies true loss of range of motion but both shoulders feel very stiff when she tries to move her arms over her head or behind her back.

She has not previously had any musculoskeletal problems. She is finding the pain and stiffness limits her from her favourite hobby gardening, and reports less motivation because of the discomfort. She denies any other current joint pains or problems.

### 24 hour pattern

Sally finds the symptoms are worse first thing in the morning for approximately 1 hour which really affects her dressing as her shoulders are very stiff and painful. They ease up to a degree after this time but remain uncomfortable and stiff through the day.

The pain feels quite diffuse across the whole of the shoulders and between her scapulae.

She is not woken at night with the symptoms and feels her sleep in general is unaffected.

### Past Medical History

Sally does not report any other medical issues with regards to her heart, thyroid, neurological issues, asthma or diabetes. She has not been unwell over the last year, denies any sexually transmitted infections and has never taken steroids. She denies any anxiety but has suffered from depression for a number of years. She currently does not take any medications for this but has done in the past.

Sally denies any other joint pains, history of inflammatory conditions and has no family history of inflammatory conditions.

### Social Factors

Sally is a retired vet. She gardens for a few hours every day and is finding it frustrating that she can't maintain this level of activity.

Mary does not smoke or drink alcohol. Her BMI is 30.

### Clinical Reasoning Activity

*From the case presentation note down the indicators that Sally could have Polymyalgia Rheumatica (PMR)*

# Polymyalgia Rheumatica

## Scenario

### Sally warrants investigation for PMR.

- Bilateral shoulder pain and stiffness
- Symptoms worse in the mornings
- Diffuse symptoms around the whole shoulder girdle
- 65 year old female with a high BMI is the classic demographic for PMR onset
- Depression is linked to PMR in many cases

### Next Steps

Explain to Sally that her symptoms may be related to PMR and further investigation is warranted to enable appropriate treatment and rule out any other cause for the symptoms. Discuss that her demographics and symptom presentation make it suspicious that this is the cause for her symptoms.

A graded exercise program can be helpful to maintain function in the shoulders and increase current function. Unfortunately it tends not to affect the pain levels or feelings of stiffness. Discuss her general health as her high BMI will be contributing to raised systemic inflammation and reducing this will improve the likelihood of a positive outcome regardless of the diagnosis.

### Investigations

Blood tests:

- ESR (>40), CRP

Currently no valid imaging unless to rule out other implicated conditions.

### Onwards Referral

Refer according to local pathways, this is either to the GP or to a Rheumatology consultant.

### Learning Points.

Bilateral shoulder pain and stiffness is a key symptomatic feature of PMR (90% of cases)

ESR of >40 is almost always present in PMR and a negative result all but rules out the condition

Pelvic girdle symptoms may also be implicated and in 10% of cases will be the only symptom presentation

65 years old is the peak onset, women have a higher incidence (approx. 3:1) and high BMI will increase risk of developing the condition

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# Reactive Arthritis

Reactive arthritis is a varied condition triggered by an extra-articular infection usually of gastrointestinal (GI) or Genitourinary (GU) origin. Reactive arthritis is often clinically indistinguishable from other arthropathies such as AxSpA or RA. Recognition of the triggering event is key. Occurring in younger Caucasian people aged 20-40, men are much more likely to have the GU origin than women. GI origin has an equal prevalence. Symptom onset is usually within 2-6 weeks of infection.

# Reactive Arthritis

## Scenario 1

### Referral

Dean is a 20 year old Caucasian male with low back pain. He doesn't take any prescribed medications.

### Further Subjective Information

Dean reports 6 weeks of severe low back pain and stiffness. He has no prior history of back pain and can not think of a specific trigger to his symptoms. He has been off work for the whole 6 weeks since the symptoms started.

He denies being unwell over the last 6 months and is usually very fit and healthy. He was recently (8 weeks ago) on holiday in Magaluf and admits to having unprotected intercourse with several partners while he was there. He has not considering getting checked for an STI.

### 24 hour pattern

Dean's symptoms are severe in the mornings. The pain is much worse with significant stiffness for up to 4 hours. He finds he is much better during the day if he keeps moving. If he sits to watch television or even to eat a meal his back stiffens up again and he has to walk around to ease it off.

He wakes in the second half of the night with back pain and he has to get out of bed and walk around to ease it enough for him to lay down and go back to sleep.

### Past Medical History

Dean does not report any other medical issues with regards to his heart, thyroid, neurological issues, asthma or diabetes. He has not been unwell over the last year, denies any history of sexually transmitted infections and has never taken steroids. He does not suffer from anxiety or depression.

Dean denies any other joint pains, history of inflammatory conditions. His father has Ankylosing Spondylitis.

### Social Factors

Dean is a bricklayer. He is extremely active, going to the gym most days after work and playing rugby at the weekends.

Dean smokes very occasionally and drinks alcohol on holiday only. His BMI is 25.

### Clinical Reasoning Activity

*From the case presentation note down the indicators that Dean could have Reactive Arthritis:*

# Reactive Arthritis

## Scenario 1

### Dean warrants further investigation for Reactive Arthritis.

- Severe inflammatory pattern back pain and stiffness
- Risk of having caught an STI and then developing symptoms 2 weeks later
- Male sex and Father has Ankylosing Spondylitis (high likelihood of HLA-B27 positivity)
- Reactive arthritis is most common aged 20-40

### Next Steps

Explain to Dean that his symptoms are highly suggestive of inflammatory back pain and in his case potentially Reactive Arthritis due to the timeframe of onset. It is not possible at this stage to be conclusive as to the likelihood of it being AxSpA vs Reactive Arthritis due to a lack of information. Both cases require investigation under Rheumatology.

Discuss with Dean any strategies that may help manage his symptoms in the short term such as mobility exercises or low to moderate intensity exercise. He may benefit from the hydrotherapy setting to get this exercise in a relatively comfortable environment. This could help in the short term and also mitigate any fitness loss over the longer term.

Reassure Dean that if diagnosed and managed early, both of these conditions have a good chance of a favourable outcome and that the aim is to return him to previous function as quickly as possible.

### Investigations

Blood tests: (if available and appropriate)

- ESR, CRP, HLA-B27

Imaging: (if available and appropriate)

- MRI whole spine and SIJs (SpA Protocol)

### Onwards Referral

Refer to Rheumatology for further investigations and commencement of appropriate treatment as necessary.

Refer or direct Dean to the GUM clinic for assessment of whether he has indeed contracted an STI

Refer to hydrotherapy if necessary or provide Dean with advice on how to complete this independently

# Reactive Arthritis

## Scenario 1

### Learning Points.

Reactive Arthritis is often clinically indistinguishable from other inflammatory arthropathies

Chlamydia induced reactive arthritis is much more common in males (approx. 9:1)

Onset is approx. 2-6 weeks after initial infection

HLA-B27 is positive in approx. 75% of patients so a family history of related conditions is a strong clue.

20-40 is the most common age for an onset of reactive arthritis and it is much more common in Caucasians

# Reactive Arthritis

## Scenario 2

### Referral

Jennifer is a 30 year old female with severe right buttock, right hip and right heel pain for the last 3 months. She has seen an Osteopath with no improvement. She is asthmatic and has inhalers for this.

### Further Subjective Information

Jennifer had a sudden onset of severe right buttock, right hip and right heel pain 3 months ago. She was previously fit and well, with no prior musculoskeletal issues. She woke up in the night 3 months ago with the severe pain and it has never really improved from this point.

She saw her GP who referred to an osteopath with a possible low back problem that was referring into the right buttock and hip. She had 4 treatments but felt that she was deteriorating so stopped the sessions. Her GP provided her with Naproxen to see if this would help but after 2 doses she had a severe exacerbation of her asthma. She thinks the Naproxen did help the symptoms.

She struggles to sit for longer than a few minutes due to the hip and buttock pain. The heel pain is severe after resting and can take a few minutes to ease when walking. Her symptoms are minimal when walking but severe if she attempts to run. She reports visible swelling, heat and redness at the back of her heel.

### 24 hour pattern

Jennifer wakes most nights around 3am with significant buttock and hip pain. The symptoms are much worse first thing in the morning lasting approximately 30 minutes. She feels her right hip and right ankle are extremely stiff and ease with gentle movements.

### Past Medical History

Jennifer does not report any other medical issues with regards to her heart, thyroid, neurological issues or diabetes. She is asthmatic but does not require her inhalers very often. She denies any history of sexually transmitted infections and has never taken steroids. She does not suffer from anxiety or depression.

Jennifer was unwell with Gastroenteritis approximately 4 weeks before the onset of the symptoms.

Jennifer has no history or family history of inflammatory conditions.

### Social Factors

Jennifer is a teacher and enjoys running 2-3 times per week. She is very careful with her diet and is a strict vegetarian.

Jennifer does not smoke and drinks alcohol at the weekends. Her BMI is 23.

# Reactive Arthritis

## Scenario 2

### Clinical Reasoning Activity

*From the case presentation note down the indicators that Jennifer could have Reactive Arthritis:*

#### Jennifer warrants further investigation for Reactive Arthritis.

- Severe inflammatory pattern buttock, hip and right heel (insertional achilles enthesitis?)
- Gastroenteritis 4 weeks prior to onset of symptoms
- Reactive arthritis is most common aged 20-40
- Possible improvement with Naproxen

#### Next Steps

Explain to Jennifer that her symptoms are inflammatory in nature and in her case potentially Reactive Arthritis due to the timeframe of onset. This requires investigation under Rheumatology to confirm the diagnosis and generate a treatment plan.

Discuss with Jennifer any strategies that may help manage her symptoms in the short term such as positioning in sitting and at night, gentle exercises or a graded program to maintain function.

#### Investigations

Blood tests: (if available and appropriate)

- ESR, CRP, HLA-B27 (I would likely leave this to Rheumatology in this case)

Imaging: (if available and appropriate)

- Difficult to be specific in this case, potentially use for ruling out other clinically important differential diagnoses (I would likely leave this to Rheumatology in this case)
- MRI of SIJs and right hip may be of use
- Ultrasound of the right heel to look for achilles insertion enthesitis

#### Onwards Referral

Refer to Rheumatology for further investigations and commencement of appropriate treatment as necessary.

# Reactive Arthritis

## Scenario 2

### Learning Points.

Reactive Arthritis is often clinically indistinguishable from other inflammatory arthropathies

GI-induced reactive arthritis prevalence is equal male to female

Other clinically important conditions (in this case asthma) may cloud the picture (couldn't take anti-inflammatories)

Age 20-40 is the most common age for an onset of reactive arthritis and it is much more common in Caucasians

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# Self Assessment

Don't worry, it's not a tax return...

Work your way through the questions. They are not overly challenging, but think about how various demographics and situations might change the outcome.

# Self Assessment

## A 40 year old lady attends your clinic with bilateral pain and swelling in her MCPJs

- What further Questions would you ask about her symptom presentation?
- What would constitute relevant past medical history?
- What objective test could you perform?
- You suspect RA; what blood tests would you request?

## A 20 year old male attends your clinic with a stiff spine and bilateral buttock pain

- What 24 hour pattern would increase your index of suspicion for AxSpA?
- What medications would you expect to help his symptoms?
- What imaging could you order?
- He reports he tested positive for chlamydia 8 weeks ago, would this change your differential diagnosis?

## Connective Tissue Disorders (e.g. SLE and Sjogren's Syndrome) are tricky to recognise

- Which sex are they more prevalent in?
- If your patient is 75 years old, does that make a Connective Tissue Disorder more or less likely?
- What are the classical none musculoskeletal signs of Sjogren's Syndrome?
- In SLE what skin symptoms would increase your index of suspicion?

## Osteoporosis is asymptomatic until a fracture is sustained

- Note 3 demographic features that would increase risk of developing Osteoporosis?
- What tool could you use to assess for fracture risk?
- Who should you refer a patient to if you deem them at risk of low bone density?
- What Therapy ideas could you employ to help the patient

## Inflammatory conditions are often affected by a patient's lifestyle

- Name 3 things that could *adversely* affect outcome
- Name 3 things that could *positively* affect outcome
- Should we encourage people with inflammatory conditions to exercise?
- Is geographical location important?

## Polymyalgia Rheumatica is a difficult condition to recognise due to its diffuse vague symptoms

- What ESR level would you expect?
- What percentage of patients present without shoulder girdle pain and stiffness?
- What is the peak age of onset?
- For what duration would you expect the symptoms to be worse for in the morning?

# Self Assessment

## A 40 year old lady attends your clinic with bilateral pain and swelling in her MCPJs

- 24 hour pattern, heat or redness, other joint problems especially MTPJs, duration, onset
- Other inflammatory conditions such as Psoriasis or Colitis
- MTPJ and/or MTPJ squeeze tests
- ESR, CRP, Rheumatoid Factor, Anti-CCP

## A 20 year old male attends your clinic with a stiff spine and bilateral buttock pain

- Symptoms worse in the early morning >30 mins, waking in the second half of the night with symptoms
- NSAIDs
- MRI whole spine and SIJs (SpA protocol)
- Yes it would make you suspicious of reactive arthritis although clinically similar to AxSpA

## Connective Tissue Disorders (e.g. SLE and Sjogren's Syndrome) are tricky to recognise

- Females
- Less likely, peak onset is during reproductive years
- Dry eyes, mouth and/or vagina, fatigue
- Rashes

## Osteoporosis is asymptomatic until a fracture is sustained

- Age, female sex, low BMI
- The FRAX
- Their GP
- Graded loading program, balance program

## Inflammatory conditions are often affected by a patient's lifestyle

- Smoking, high BMI, high alcohol intake, low exercise levels, poor diet
- None smoker, normal BMI, varied diet, regular exercise, low alcohol intake
- Yes, it helps to maintain function and can be anti-inflammatory
- In some conditions yes, e.g. gout has a varied geographical prevalence even within countries

## Polymyalgia Rheumatica is a difficult condition to recognise due to its diffuse vague symptoms

- >40
- 10%
- 65 (of note, it is extremely uncommon under the age of 50)
- Greater than 30 minutes

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# Referral Letters

Communication is vital and these patients are complex. It is important that we ensure the details of this are both digestible and useful to our colleagues.

I have created two letters in the style that I use. I hope that these are helpful.

Why not write referral letters for some of the scenarios in this book?

Name  
Address  
Email  
Phone

Doctor

The GP Surgery

Address

Address

**Regarding Mr John Smith; address; DOB**

Dear Doctor,

I had the pleasure of meeting Mr John Smith for an assessment on 22/03/2018. He complains of a 3 month history, insidious onset of thoracic back pain. There was no preceding injury or change in circumstances to account for this onset.

The 24 hour pattern of pain is of an inflammatory nature; worse spinal stiffness and pain in the morning for 60 mins, better with activity and worse with rest, he also wakes at 3am each day with pain and has to get out of bed to ease these symptoms. Ibuprofen significantly improves his symptoms so he takes this regularly through the day.

He has no other health issues, and no family history of inflammatory conditions such as psoriasis, iritis/uveitis, crohns/colitis or inflammatory arthropathy.

John works at a desk and is able to continue his hobby of going to the gym regularly.

John's symptoms are suggestive of an Axial Spondyloarthritis and we agreed the best approach is to refer to Rheumatology for further investigations. Can I ask you to please action this referral. I do not believe any further investigations at this time would affect the necessity of the referral and after assessment I believe the presence of another clinically important diagnosis that would explain his symptoms is unlikely.

I have encouraged John to continue his gym programs as he can tolerate, advised against smoking and alcohol. He is otherwise fit and healthy.

John retains my contact details in case the situation changes and I would be happy to review him if this is the case. Please do not hesitate to contact me for further information.

Thank you and kind regards

Referring Clinician

Name  
Address  
Email  
Phone

Doctor

The GP Surgery

Address

Address

**Regarding Ms June Doe; address; DOB**

Dear Doctor,

I had the pleasure of meeting Ms June Doe for an assessment on 22/03/2018. She suffered a fractured right wrist 6 weeks ago. She lacks some function following casting and we have instigated a rehabilitation program for her to address these deficits.

On further questioning, as June also suffered an ankle fracture 2 years ago, I decided it was prudent to complete a FRAX score to assess her risk of having low bone density. She scores highly with a major fracture risk of 32% and Hip fracture risk of 23% indicating to start treatment. I have referred June for a DEXA scan as well today.

June has no other health issues, and no family history of inflammatory conditions such as psoriasis, iritis/uveitis, crohns/colitis or inflammatory arthropathy, she also has no overt family history of Osteoporosis.

June felt like her balance was reasonable but is concerned regarding falling again. We decided to instigate a balance program and graded loading program to reduce her risk of falls and begin to load her system for the purposes of maintaining bone density.

Please take on June's care with regards to the osteoporosis risk and manage per your discretion.

I will review June periodically to monitor her progress with all the above instigated programs. Please do not hesitate to contact me for further information.

Thank you and kind regards

Referring Clinician



# More Interesting Things



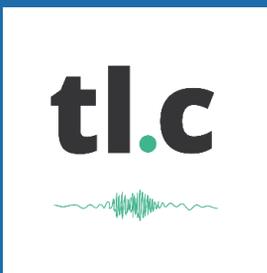
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# Thank You



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