

Early treatment of psoriatic arthritis improves prognosis

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Dr Maeve McLaughlin
MBBS MA MRCP
Rheumatology Clinical Research Fellow,
Clinical Supervisor

Dr Andrew Östör
MBBS MA FRACP FRCP FRCP (Ed)
Rheumatology Consultant, Associate Lecturer, School of Clinical Medicine, Cambridge University,
Director of the Cambridge Rheumatology
Research Unit

University of Cambridge Rheumatology Research Unit, Addenbrooke's Hospital,
Cambridge University Hospitals
NHS Foundation Trust, Cambridge, UK



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AUTHORS

Dr Maeve McLaughlin
MBBS MA MRCP
Rheumatology Clinical
Research Fellow,
Clinical Supervisor

Dr Andrew Östör
MBBS MA FRACP FRCP
FRCP (Ed)
Rheumatology
Consultant, Associate
Lecturer, School of
Clinical Medicine,
Cambridge University,
Director of the Cambridge
Rheumatology
Research Unit

University of Cambridge
Rheumatology Research
Unit, Addenbrooke's
Hospital, Cambridge
University Hospitals
NHS Foundation Trust,
Cambridge, UK

FIGURE 1

Hand X-ray showing erosive changes and joint destruction of distal and proximal interphalangeal joints (PIPs), particularly the index and middle finger PIPJs.

There is dislocation of the left ring finger metacarpophalangeal joint and subluxation of several joints, most notably the distal phalanx of the thumb



PSORIATIC ARTHRITIS (PsA) IS A CHRONIC, AUTOIMMUNE DISEASE, AFFECTING UP TO 1% OF

the adult population and up to 40% of patients with psoriasis.

The aetiology is unknown, although genetic, environmental and immunological factors almost certainly contribute to the development of the condition.

The manifestations of PsA are varied in nature and severity and as a result, there is no universally accepted definition or diagnostic criteria for the disease. This confusion no doubt has contributed to its underdiagnosis

particularly in patients with psoriasis. The CASPAR classification of PsA is now the most widely used, see box 1, p22.¹

PsA has a peak age of onset between 35 and 55 years with an equal gender distribution. Around 20% of patients develop PsA before psoriasis, often many years before skin or nail changes.

Of note, skin psoriasis affects around 2–3% of the general population and has a bimodal mean age of onset with the first peak between 15 and 20 years of age and the second between 55 and 60 years.

How does psoriatic arthritis present in primary care?

How should patients be investigated?

What are the treatment approaches?

PRESENTATION

Diagnosis of PsA relies on a detailed history, particularly as many of the manifestations may be mild or transient, and therefore not reported by the patient.

There may be a previous, current, or family history of psoriasis. As with any arthropathy, it is important to establish a clear history.

Features suggestive of an inflammatory aetiology include early morning stiffness, gelling phenomenon (stiffness after inactivity), pain which is relieved by exercise, and systemic features such as mild fever and fatigue. »

Box 1

CASPAR classification criteria for psoriatic arthritis

Inflammatory articular disease (joint, spine or enthesal) with 3 or more points from the list below.
NB Current psoriasis scores 2 points, all other features score 1 point

Skin psoriasis; current, personal or family history:

- **Cutaneous psoriasis** *Skin or scalp disease judged by a rheumatologist*
- **History of psoriasis** *From patient, dermatologist, rheumatologist or GP*
- **Family history of psoriasis** *In first- or second-degree relative*

Psoriatic nail dystrophy *Onycholysis, pitting or hyperkeratosis*

Negative rheumatoid factor *By any method except latex*

Current dactylitis *Swelling of entire digit*

History of dactylitis *Recorded by a rheumatologist*

Radiological evidence of juxta-articular new bone *On hand or foot X-rays, excluding osteophytes*

Joints

Inflammatory joint pain (worse with rest, improved with activity) is characteristic. It may be asymmetrical. Large or small joints, often the distal interphalangeal joints (DIPJs) in the hands, may be affected. Inflammatory spinal pain may also be present.

Dactylitis

Dactylitis i.e. fusiform swelling of an entire digit (finger or toe) may be present.

Enthesitis

Enthesitis pain and tenderness at the insertion of any tendon onto the bone, is characteristic. Patients may report recurrent heel, elbow, or groin pain from plantar fasciitis, 'tennis elbow' (lateral epicondylitis) or adductor tendons respectively. Screening for enthesitis should include palpation of three sites:

- Lateral epicondyle of the humerus
- Medial condyle of the femur
- Achilles tendon insertion

'Around 20% of patients develop psoriatic arthritis before psoriasis, often many years before skin or nail changes'

Skin

The skin may be erythematous and flaky, with well defined patches of skin with silvery white scales. It may or may not be itchy. Any part of the skin

(including intraoral areas) can be affected. Typical sites are the ears, umbilicus, posterior hairline, extensor surfaces of elbows/knees, and the natal cleft.

Nails

Look for changes affecting the nail bed: oil drop or salmon patch, hyperkeratosis, onycholysis, splinter haemorrhages.

Changes affecting the nail matrix such as pitting, Beau lines of the proximal nail matrix, leukonychia of the midmatrix, nail plate crumbling, spotted lunula may also be present.

INVESTIGATIONS

Laboratory

There are no diagnostic blood tests for PsA. Erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) are non-specific and may be normal or only moderately raised. The presence of rheumatoid factor (RF) or anti-CCP antibodies does not preclude a diagnosis of PsA, but should prompt careful scrutiny of the diagnosis.

Imaging

X-rays of the hands and feet should be performed at baseline for all those with suspected inflammatory arthritis. They are usually normal in early disease. The radiographic changes found in PsA are often confused with degenerative change and should be reviewed by a musculoskeletal radiologist where the index of suspicion is high.

Key radiographic features include joint erosions, joint space narrowing, bony proliferation, osteolysis (including pencil-in-cup deformity), ankylosis, and new bone formation at entheses, both central and peripheral, see figure 1, p21.

Soft tissue abnormalities such as enthesitis and dactylitis as well as synovitis may be visualised on ultrasound.

Periarticular soft tissue, ligaments, tendon sheath and bony abnormalities as well as synovitis may be demonstrated on MRI in patients with even subclinical disease.²

DIFFERENTIAL DIAGNOSIS

The differential diagnosis depends on the particular pattern of joint involvement.

- In patients with symmetrical synovitis of the small joints of the hands, the main differential diagnosis is rheumatoid arthritis
- In those with predominantly DIPJ involvement, appearances are similar to Heberden's nodes of osteoarthritis
- In patients with inflammatory back pain, the differential diagnosis includes other seronegative spondyloarthropathies (SpA), e.g. ankylosing spondylitis, reactive arthritis, enteropathic-associated SpA. Any of these conditions can also present with peripheral joint arthropathy, enthesitis or dactylitis
- Care must be taken to avoid misdiagnosing patients as having fibromyalgia, as the tenderness associated with enthesitis or periosteal lesions may be falsely attributed to tender fibromyalgic trigger points

Features of back pain that suggest an inflammatory cause, rather than a mechanical problem, include the presence of early morning stiffness and pain that is relieved by exercise and exacerbated by rest.

MANAGEMENT

Any patient with suspected inflammatory arthritis and a six-week history of painful, swollen joints should be referred for specialist assessment.

Table 1**The benefits and risks of NSAID treatment in psoriatic arthritis****Benefits**

- Symptom relief from pain and stiffness
- Eases spinal pain in ankylosing spondylitis (likely to help those with psoriatic arthritis)
- May be used as sole therapy in treating mild psoriatic arthritis

Risks

- May worsen skin psoriasis
- Increased, albeit small, risk of cardiovascular thrombotic disease with most NSAIDs (naproxen may be relatively safe)
- Risk of peptic ulcer disease and GI bleed
- Risk of renal side effects

The key objectives of treatment are to:

- Achieve disease remission, by suppressing inflammation as comprehensively as possible
- Prevent the development of erosions, joint damage, deformity and disability
- Identify and treat comorbidities and risk factors (e.g. cardiovascular risk factors such as obesity, diabetes mellitus, hypertension and hypercholesterolaemia should be addressed)
- Address psychological and social wellbeing with appropriate referrals made (e.g. to mental health or social services)
- Patients should be encouraged to adopt a healthy lifestyle incorporating regular exercise and should maintain a healthy weight (BMI 18.5–24.9). Cessation of smoking and moderation of alcohol consumption should be encouraged

Patients are best managed by a multidisciplinary team ideally involving a rheumatologist, dermatologist, physiotherapist, occupational therapist, specialist nurses and rheumatology practitioners along with the patient's GP.

Pharmacological treatment

NSAIDs have an important role but also have drawbacks, and do not prevent disease progression, see table 1, above.

Corticosteroids: Intraarticular injections may be given for monoarthritis, or when only a limited number of joints are involved.³ Oral steroids can be used occasionally for polyarticular symptom relief. Avoid long-term use because of the potential for significant toxicity.

DMARDs: DMARDs may be initiated under specialist care. All DMARDs require monitoring, often through shared care arrangements (see the British Society for Rheumatology guidelines).⁴

Sulfasalazine is effective as monotherapy in PsA,⁵ as oral therapy, initially 500 mg daily, increased by 500 mg at one week intervals to a maximum of 2–3 g daily in divided doses

Methotrexate can be used as an alternative first-line agent to sulfasalazine. It is given as a weekly dose either orally or by subcutaneous injection. It is usually co-prescribed with folic acid (e.g. 5 mg weekly PO), the dose of which can be increased to counteract mucosal or gastrointestinal side effects (e.g. oral ulceration, abdominal discomfort, diarrhoea).

Leflunomide may be used when there are contraindications or side effects from methotrexate or sulfasalazine. The therapeutic effect starts after 4–6 weeks and improvement may continue for a further 4–6 months.

‘Anti-TNF therapy can improve symptoms, functional status, quality of life and radiographic progression’

The long half-life of the active metabolite necessitates active wash-out therapy in the case of serious adverse events, before a change in treatment, or (in both genders) prior to conception.

Anti-TNF therapy: A number of agents have been produced that block the effect of tumour necrosis factor (TNF), an important cytokine in systemic inflammation.

There is evidence from randomised, controlled trials (RCTs) that anti-TNF therapy can bring about improvements in symptoms, functional status, quality of life and radiographic progression.⁶

A meta-analysis has found these drugs to be superior to conventional DMARDs for the treatment of PsA.⁷ In routine clinical practice, they have been found to be more effective than methotrexate.⁸ Safety of anti-TNF therapy seems acceptable on the basis of several large RCTs and cohort studies, with infection and elevation of liver transaminases the most worrisome findings.

‘Patients with psoriatic arthritis have a 60% higher risk of premature mortality than the general population’

Specialist care is required for initiation and monitoring. NICE guidance on the use of anti-TNF agents to treat PsA requires that the patient has active disease (three swollen and three tender joints) and has failed to improve after two or more conventional DMARDs.⁹

The 2012 British Society for Rheumatology and British Health Professionals in Rheumatology guidelines for the treatment of PsA with biologics is a useful document containing treatment algorithms and a review of the evidence surrounding anti-TNF use in PsA.¹⁰

There are currently four anti-TNF agents approved by NICE for the treatment of PsA:

- Etanercept – weekly SC injection
- Infliximab – IV infusion
- Adalimumab – fortnightly SC injection
- Golimumab – monthly SC injection

NICE is currently discussing whether to recommend ustekinumab for the treatment of PsA. If approved, this would increase our therapeutic options for this condition.

Surgery

Surgery does not appear to offer beneficial effects for enthesopathies »

key points

SELECTED BY

Dr Peter Saul

GP, Wrexham and Associate GP Dean for North Wales

Psoriatic arthritis (PsA) is a chronic, autoimmune disease, affecting up to 1% of the adult population and up to 40% of those with psoriasis. There is no universally accepted definition or diagnostic criteria for the disease although the CASPAR classification of PsA is now the most widely used. PsA has a peak age of onset between 35 and 55 years with an equal gender distribution. Around 20% of patients develop PsA before psoriasis.

Enthesitis, pain and tenderness at the insertion of any tendon onto the bone, is characteristic and screening for enthesitis should include palpation of the lateral epicondyle of the humerus, the medial condyle of the femur and the achilles tendon insertion.

There are no diagnostic blood tests for PsA. The presence of rheumatoid factor or anti-CCP antibodies does not preclude a diagnosis of PsA, but should prompt careful scrutiny of the diagnosis. X-rays of the hands and feet should be performed at baseline for all those with suspected inflammatory arthritis. Features of back pain that suggest an inflammatory cause, rather than a mechanical problem, include the presence of early morning stiffness and pain that is relieved by exercise and exacerbated by rest.

Any patient with suspected inflammatory arthritis and a six-week history of painful, swollen joints should be referred for specialist assessment. NSAIDs have an important role but also have drawbacks. Intra-articular injections may be given for monoarthritis, or when only a limited number of joints are involved and oral steroids can be used occasionally for short-term polyarticular symptom relief. All DMARDs require monitoring and should be initiated under specialist care.

Surgery does not appear to offer beneficial effects for enthesopathies but it can be used to remove bony spurs and may also be required for end-stage damage to large joints. Aggressive treatment of early stage progressive PsA can substantially improve the long-term prognosis.

Patients with PsA have a higher self-rated disease severity than those with psoriasis only and a 60% higher risk of premature mortality than the general population, their life expectancy is estimated to be approximately three years shorter. Aggressive treatment of early stage progressive PsA can substantially improve the long-term prognosis.

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but it can be used to remove bony spurs. It may also be required for end-stage damage to large joints (e.g. hip, knee). Antibiotic cover should be considered because of the higher rate of superficial and deep infection reported in PsA.¹¹ Patients may also develop psoriasis in the surgical scar, the Koebner phenomenon.

‘Aggressive treatment of early stage progressive psoriatic arthritis can substantially improve the long-term prognosis’

MONITORING AND FOLLOW-UP

Blood monitoring including FBC, U&Es, and LFTs for patients on DMARDs and biologics (the frequency varies with agent and over time) should be carried out. Most patients with at least moderate PsA will have rheumatology follow-up.

Several tools exist to monitor disease activity and response to treatment:

- Psoriasis Area and Severity Index (PASI)
- Dermatology Life Quality Index (DLQI)
- Bath Ankylosing Spondylitis Disease Activity Index (BASDAI)
- PsA Response Criteria (PsARC)

PROGNOSIS

PsA can affect people's ability to work and carry out daily activities, which can have a substantial impact on quality of life. The effect of severe psoriasis on health-related quality of life is considered to be similar to that of other major medical conditions including diabetes, heart disease and cancer.

Patients with PsA have a higher self-rated disease severity than those with psoriasis only and a 60% higher risk of premature mortality than the general population,^{12,13,14} their life expectancy is estimated to be approximately three years shorter.¹⁵

Aggressive treatment of early stage progressive PsA can substantially improve the long-term prognosis.

CONCLUSION

PsA is an under-recognised form of inflammatory arthritis with a wide clinical spectrum. Features include peripheral and axial joint disease, dactylitis, enthesitis, skin and nail changes. All patients with suspected inflammatory arthritis should be referred for specialist review. Various treatments are now available with the overall aim of management being disease remission.

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Useful information

British Society for Rheumatology
www.rheumatology.org.uk

Arthritis Research UK
www.arthritisresearchuk.org

The European League Against Rheumatism (EULAR)
www.eular.org

Group for Research and Assessment of Psoriasis and Psoriatic Arthritis (GRAPPA)
www.grappanetwork.org