

Case Report

A typical presentation of ankylosing spondylitis with acute anterior uveitis and cutaneous rash: a case report

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ABSTRACT

Ankylosing spondylitis (AS) is a chronic inflammatory spondyloarthropathy predominantly affecting the axial skeleton. Extra-articular manifestations such as acute anterior uveitis may precede prominent musculoskeletal symptoms, making early diagnosis challenging. We report an atypical presentation of AS initially dominated by cutaneous and ocular manifestations. A case of a 24-year-old male presenting with cutaneous rash, acute ocular symptoms, and subsequent musculoskeletal manifestations was evaluated through clinical assessment, immunological investigations, and magnetic resonance imaging (MRI). The patient initially presented with generalized rash, eye redness, pain, photophobia, and blurred vision and was diagnosed with anterior uveitis. Seven days later, he developed left foot pain and swelling, low backache, and neck pain. Detailed history revealed intermittent inflammatory back pain for four months and a maternal family history of ankylosing spondylitis. Rheumatoid factor, anti-CCP antibodies, and ANA were negative, while HLA-B27 was positive. MRI demonstrated sacroiliitis, along with subtle marrow edema and minimal joint effusions in the left foot. Based on the clinical, laboratory, family history, and imaging findings, ankylosing spondylitis with extra-articular manifestations was diagnosed. Treatment with naproxen, sulfasalazine, exercise, physiotherapy, and subsequently tofacitinib resulted in improvement of back pain and foot swelling, with complete resolution of the rash and anterior uveitis. Acute anterior uveitis and cutaneous manifestations may precede characteristic axial symptoms in ankylosing spondylitis. Recognition of this association and appropriate use of HLA-B27 testing and MRI can facilitate early diagnosis and treatment.

Keywords: Ankylosing spondylitis, Anterior uveitis, HLA-B27, Sacroiliitis, Inflammatory back pain, Extra-articular manifestations

INTRODUCTION

Ankylosing spondylitis (AS) is a chronic inflammatory rheumatic disease belonging to the spectrum of spondyloarthropathies, predominantly affecting the axial skeleton, particularly the sacroiliac joints and spine. The disease may also involve peripheral joints, entheses, and other musculoskeletal structures.¹

The clinical presentation of AS is variable. Inflammatory low back pain and progressive spinal stiffness are characteristic manifestations, while peripheral arthritis, enthesitis, and dactylitis may occur in some patients. Extra-articular manifestations are also important components of the disease spectrum and include acute anterior uveitis, inflammatory bowel disease, and psoriasis.^{2,3}

Acute anterior uveitis is one of the most frequent extra-articular manifestations associated with spondyloarthritis and may occasionally precede the development or recognition of prominent axial symptoms.⁴ The presence of inflammatory back pain, a positive family history, HLA-B27 positivity, peripheral manifestations, and imaging evidence of sacroiliitis can provide important diagnostic clues, particularly in younger patients with an atypical presentation.⁵

Early recognition of axial spondyloarthritis is important because diagnostic delay remains common, and timely identification of inflammatory disease may facilitate appropriate treatment and prevent progressive functional impairment.⁶ Magnetic resonance imaging (MRI) of the sacroiliac joints has an important role in patients with suspected early disease, particularly when conventional radiographic findings are absent or equivocal.⁷

The present case describes an atypical presentation of AS in a young male who initially presented predominantly with cutaneous rash and acute anterior uveitis, with more characteristic inflammatory musculoskeletal symptoms becoming evident subsequently.

CASE REPORT

A 24 year old male presented with a history of rash over the body, generalized body pains, redness of the eyes, eye pain, photophobia, and blurred vision for 3 days.

Blood investigations, including complete blood picture and screening for malaria, dengue, leptospirosis, and scrub typhus, were performed and were negative. He was initially treated with antihistamines and analgesics and was referred to an ophthalmologist for further evaluation of his ocular symptoms. Following ophthalmological assessment, he was diagnosed with anterior uveitis and received appropriate treatment.

Seven days later, the patient presented again with pain and swelling of the left foot, low backache, and neck pain radiating to the right hand. On detailed questioning, he reported that he had experienced intermittent back pain for approximately 4 months. The pain was predominantly present at night and following periods of rest and improved with movement and physical activity.

A detailed family history revealed that one of his maternal uncles was a known case of ankylosing spondylitis.

The relevant immunological investigations were performed. Rheumatoid factor was negative, anti-cyclic citrullinated peptide (anti-CCP) antibodies were negative, and the antinuclear antibody (ANA) profile was negative. Human leukocyte antigen-B27 (HLA-B27) testing was positive.

Radiological evaluation was subsequently performed. Magnetic resonance imaging (MRI) of the cervical spine demonstrated diffuse disc bulging at C2-C3 and C3-C4. MRI of the left foot showed subtle marrow edema involving the bases of the first and second metatarsal bones at the tarsometatarsal joints, with associated minimal joint effusions. MRI of the lumbosacral spine and sacroiliac joints demonstrated sacroiliitis.

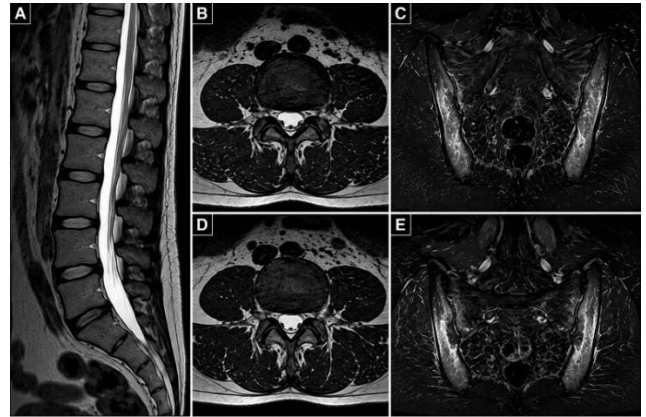


Figure 1: (A) Sagittal T2-weighted MRI of the lumbosacral spine; (B, D) axial T2-weighted MRI images of the lumbar spine; and (C, E) coronal STIR MRI images demonstrating inflammatory changes involving the sacroiliac joints, consistent with sacroiliitis.

Considering the patient's young age, history suggestive of inflammatory back pain, peripheral foot involvement, positive family history, HLA-B27 positivity, and MRI evidence of sacroiliitis, a diagnosis of ankylosing spondylitis with extra-articular manifestations was established.

Treatment

Initial treatment consisted of the non-steroidal anti-inflammatory drug (NSAID) naproxen 500 mg twice daily for 4 weeks, along with the conventional synthetic disease-modifying antirheumatic drug (csDMARD) sulfasalazine 500 mg twice daily. Patient education, regular exercise, and physical therapy were also advised as part of the initial management.

The patient was subsequently referred to a rheumatologist for further evaluation and continuation of disease-directed treatment.

Clinical course

At 2-month follow-up, the patient reported significant reduction in the swelling of the left foot. During rheumatological follow-up, he was started on the Janus kinase (JAK) inhibitor tofacitinib 5 mg.

He was subsequently maintained on NSAIDs, sulfasalazine 500 mg, and tofacitinib 5 mg. Following treatment, his back pain improved and the swelling of the left foot decreased. The body rash and anterior uveitis also resolved completely.

DISCUSSION

Ankylosing spondylitis is a chronic inflammatory disease in which the clinical presentation can vary considerably between patients. Although inflammatory low back pain is one of the characteristic manifestations, it may not always be the presenting complaint, particularly during the early stages of the disease. Features such as pain that is worse at night or following periods of rest and improvement with physical activity are suggestive of an inflammatory rather than mechanical pattern of back pain.⁵

In the present case, the patient had experienced intermittent low back pain for approximately 4 months, predominantly at night and after periods of rest, with improvement following movement and physical activity. However, these symptoms were not the initial reason for presentation. Instead, the patient initially presented with cutaneous rash and ocular symptoms, including redness, pain, photophobia, and blurred vision, and was subsequently diagnosed with anterior uveitis.

Acute anterior uveitis is an important extra-articular manifestation of spondyloarthritis and may occur before the recognition of significant axial disease.⁴ The presence of anterior uveitis in a young patient should therefore prompt consideration of an underlying spondyloarthropathy, particularly when musculoskeletal symptoms or a family history of related disease are present.

The subsequent development of left foot pain and swelling provided an additional clue toward an inflammatory musculoskeletal disorder. Peripheral arthritis and other peripheral manifestations may occur in patients with ankylosing spondylitis, and their presence may assist in identifying the underlying disease when axial symptoms are not yet prominent.⁶

In this patient, the diagnosis was supported by the combination of inflammatory back pain, positive family history, HLA-B27 positivity, and MRI evidence of sacroiliitis. HLA-B27 is strongly associated with ankylosing spondylitis, although its presence alone is not diagnostic. A combination of clinical features, laboratory findings, family history, and imaging findings is therefore important when evaluating a patient with suspected axial spondyloarthritis.⁵

MRI played an important role in establishing the diagnosis in the present case. MRI can demonstrate inflammatory changes involving the sacroiliac joints before advanced structural changes become evident on

conventional radiographs and is particularly useful in patients with a short duration of symptoms in whom clinical suspicion remains high.⁷

The MRI of the lumbosacral spine and sacroiliac joints in our patient demonstrated sacroiliitis. The MRI of the left foot additionally demonstrated subtle marrow edema at the bases of the first and second metatarsal bones at the tarsometatarsal joints with minimal joint effusions. These findings, in conjunction with the clinical presentation, HLA-B27 positivity, and family history, supported the diagnosis.

The negative rheumatoid factor, anti-CCP antibodies, and ANA profile further helped to exclude other commonly considered rheumatological conditions in the clinical evaluation. However, these negative results alone do not establish the diagnosis of ankylosing spondylitis, and the final diagnosis in this case was based on the overall clinical and radiological picture.

Management of ankylosing spondylitis includes non-pharmacological measures such as patient education, regular exercise, and physiotherapy, together with pharmacological treatment directed toward controlling pain, inflammation, and disease activity. NSAIDs are generally considered an initial pharmacological treatment option for symptomatic axial disease.⁸

Conventional synthetic DMARDs such as sulfasalazine have a more limited role in predominantly axial disease but may be considered when peripheral arthritis is present.⁹ In the present case, sulfasalazine was used along with naproxen, followed by rheumatological management and initiation of tofacitinib.

Targeted synthetic DMARDs, including JAK inhibitors, have emerged as therapeutic options for patients with active axial spondyloarthritis who have an inadequate response to conventional treatment. Current recommendations also emphasize individualized treatment according to disease activity, axial and peripheral manifestations, and extra-musculoskeletal manifestations.¹⁰

The complete resolution of the patient's body rash and anterior uveitis, together with improvement in back pain and reduction in foot swelling during follow-up, highlights the importance of recognizing the systemic nature of ankylosing spondylitis and addressing both axial and extra-articular manifestations.

The present case is particularly noteworthy because the initial presentation was dominated by cutaneous and ocular manifestations rather than severe axial symptoms. This resulted in the characteristic features of inflammatory back pain becoming apparent only during subsequent evaluation. A high index of suspicion is therefore necessary when a young patient presents with

acute anterior uveitis accompanied by musculoskeletal symptoms or a relevant family history.

CONCLUSION

Ankylosing spondylitis is a chronic inflammatory disease that may remain unrecognized when its initial manifestations are atypical. Delays in diagnosis are common, particularly when extra-articular manifestations precede prominent axial symptoms. This case highlights an atypical presentation of ankylosing spondylitis in which cutaneous rash and acute anterior uveitis preceded the development of more prominent inflammatory back pain and peripheral joint symptoms. The diagnosis was established through a combination of clinical assessment, positive HLA-B27 status, MRI-confirmed sacroiliitis, MRI evidence of peripheral involvement, and a positive family history of ankylosing spondylitis. Early recognition of the association between acute anterior uveitis and inflammatory musculoskeletal symptoms can facilitate appropriate evaluation for underlying spondyloarthritis. Timely diagnosis and initiation of appropriate therapy may improve symptoms and functional outcomes.

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