

Chronic reactive arthritis associated with prostatitis caused by *Neisseria meningitidis*

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DESCRIPTION

A 29-year-old man presented with a 10-year history of pain in his right ankle. The ankle was tender and swollen, and there was Achilles tendinitis. He had no complaints of buttock pain, abdominal pain, dysuria or a feeling of incomplete voiding. Skin examination was normal. Laboratory investigations revealed a leucocyte count of $6.0 \times 10^9/L$ and a serum C reactive protein level of 5.21 mg/dL. Liver and renal function tests were normal. Rheumatoid factor, anticyclic citrullinated peptide antibody and antinuclear antibody were negative. Urinalysis was positive for occult blood, but there was no leucocyturia. Locus B human leukocyte antigen (HLA) typing was positive for B27. Plain radiography of the right ankle joint showed narrowing of the subtalar joint space and heel spurs on the plantar aspect of the calcaneus (figure 1). Contrast-enhanced CT scans demonstrated enhanced lesions in the peripheral zone of the prostate (figure 2). Culture of urine taken after prostate massage revealed *Neisseria meningitidis*. The diagnosis was reactive arthritis associated with prostatitis caused by *N. meningitidis*. He was successfully treated with antibiotics and low-dose prednisolone followed by methotrexate.

Reactive arthritis is a form of HLA-B27-associated peripheral spondyloarthropathy that arises following infection, but the pathogens cannot be cultured from the affected joints.¹ In most cases, a



Figure 1 Plain radiograph of the right ankle joint showing narrowing of the subtalar joint space (arrowhead) and heel spurs on the plantar aspect of the calcaneus (arrow).



Figure 2 Contrast-enhanced CT scans showing enhancing lesions (arrow) in the peripheral zone of the prostate.

preceding enteric or genitourinary infection triggers the reactive arthritis. In our case, we could not confirm that the urinary infection preceded the onset of arthritis. However, the patient had several features of reactive arthritis, including positive HLA-B27 serology, asymmetric chronic arthritis in the lower extremities, enthesitis and persistent urinary tract infection. Therefore, it is reasonable to consider that the arthritis was associated with chronic asymptomatic prostatitis in this patient.

Organisms that induce reactive arthritis classically include *Chlamydia*, *Yersinia*, *Salmonella*, *Shigella*, *Campylobacter* and *Clostridium* spp.¹ Our case is unique in that the patient developed chronic reactive arthritis associated with prostatitis attributable to *N. meningitidis*, which has not been previously described as a causative organism. Interestingly, in one report, PCR and sequencing analysis identified *N. meningitidis* DNA in synovial fluid samples from 1 of 15 patients with reactive arthritis, although the pathogenic role was unclear.²

The prognosis of reactive arthritis is generally good. Nevertheless, this type of arthritis can run a chronic course and may cause permanent joint damage. Our case further emphasises the

Learning points

- ▶ Reactive arthritis is a form of HLA-B27-associated peripheral spondyloarthropathy that arises following infection.
- ▶ Organisms that trigger reactive arthritis include *Chlamydia*, *Yersinia*, *Salmonella*, *Shigella*, *Campylobacter*, *Clostridium* spp., and several other bacteria, including *Neisseria*.
- ▶ In a patient with suspected reactive arthritis, it is important to look for possible sites of infection, even if the infection is asymptomatic.



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importance of exploring possible sites of infection, even if the infection is asymptomatic, in a patient with asymmetric chronic arthritis of the lower extremities.

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