Sacroiliitis – it’s not all B 27

Summary We describe an HLA-B27 positive patient in whom post-traumatic pyogenic sacroiliitis led to complete unilateral sacroiliac joint ankylosis in the absence of any signs indicative of HLA-B27 associated spondyloarthropathy.

Sacroiliitis is the pathologic hallmark – and usually one of the earliest pathologic manifestations – of ankylosing spondylitis (AS). Bilateral sacroiliitis is typical for ankylosing spondylitis. The frequency of asymmetric sacroiliitis may be higher in other inflammatory disorders, e.g., reactive arthritis, Reiter’s syndrome, spondylitis associated with psoriasis, or inflammatory bowel disease. Most but not all of these disorders show an increased prevalence among individuals who have inherited the HLA-B27 gene.

In the context of this case, we discuss the differential diagnosis of unilateral sacroiliitis.

Key words Pyogenic sacroiliitis – unilateral posttraumatic sacroiliac joint ankylosis – HLA-B27 – conventional radiograph – computed tomography

Schlüsselwörter Pyogene Sakroiliitis – unilateral postrumatische Ankylose des Sakroiliakalgelenkes – HLA-B27 – konventionelle Röntgendiagnostik – Computertomographie

Case Report

A 20 year-old woman was referred to our Rheumatology outpatient clinic because of unilateral buttock pain. She was well until 9 years earlier when she had an accident while horse-back riding, followed four weeks later by fever, limping gait, buttock pain and pain in the right hip joint. She was admitted to another hospital. The ESR was 100 mm in the first hour and the white blood count was normal. The conventional pelvic radiograph showed no signs of hip dysplasia. The sacroiliac joints were normal. Four days later arthritis of the right sacroiliac joint was diagnosed by native computed tomography (CT) of the sacroiliac joint (Fig. 2). Because of the typical clinical signs (fever, limping gait, buttock pain), high ESR and radiological changes on the sacroiliac joint a diagnosis of pyogenic sacroiliitis was made. A treatment was begun with penicillin V and diclofenac
for 2 weeks. Four weeks later, the patient had a relapse. She was admitted to a second hospital where the arthritis of the sacroiliac joint was confirmed. Treatment consisted of bedrest and diclofenac for 12 days. Mild pain in the right sacroiliac joint persisted for about 6 months after release from that hospital. During the following years, she felt pain in the right sacroiliac joint only after strenuous physical activity. Her medical history was otherwise unremarkable. Specifically, there was no history of dysuria or bowel disease. She used no medication except for occasional NSAIDS for pain relief. No family member suffered from rheumatic disease.

Upon presentation at our clinic her physical examination was normal except for limping caused by a scoliotic pelvis. The lower back and the region of the right SI joint were tender. Pain was elicited by directly stressing the sacroiliac joint through pelvis compression manoeuvre. There were no signs of peripheral arthritis, uveitis, or psoriasis. Routine blood chemistry, including C reactive protein, and hematological parameters were normal. The ESR was 9 mm in the first hour. No antinuclear antibodies or rheumatoid factors were detected in the patient’s serum. Serological tests for Yersinia, Chlamydia, Shigella, Salmonella, Campylobacter, Mycoplasma, or B. burgdorferi infection were all negative. The patient was HLA-B27 positive.

Diagnosis: Unilateral sacroiliac joint ankylosis following posttraumatic pyogenic sacroilitis.

Discussion

We describe an HLA-B27 positive patient with unilateral sacroiliitis. When the patient was seen at our hospital 9 years after the initial sacroiliitis, the right SI joint was not visible on a plain radiograph. Her history, including the acute onset of the febrile disease during childhood and the localization of pain was consistent with the interpretation of the SI joint-ankylosis as consequence of childhood pyogenic sacroilitis.

Pyogenic sacroilitis is a rare condition, which is frequently overlooked during initial diagnostics. It has been reported to account for 1.5% of all suppurative arthritis in children. About 10% of the patients have evidence of prior trauma (5). Other risk factors include identifiable foci of infection elsewhere in the body, or intravenous drug use. However, in about half of the patients no risk factor can be identified (9). The disease does not seem to be HLA-B27-associated (8).

As in our patient, buttock pain and a limp or radicular sciatic pains are the two most common complaints in children with pyogenic sacroilitis (3). The SI joint pain is often associated with some pain in the back, hips, thighs, calf or even the abdomen, which may complicate the diagnosis (9). There are two major categories of clinical presentation: 1) An acute febrile illness of sudden onset as seen in our patient with signs of infection, severe pain and sometimes refusal to move a painful leg at all. 2) A minority of about 25% of the patients present with a more insidious onset with low-grade or absent fever, less pain which do certain move-