

# Chikungunya and bilateral sacroiliitis—is there a link?

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Chikungunya (CKG) is an arthritogenic mosquito-transmitted alphavirus that manifests itself as a febrile illness and often progresses to severe and incapacitating polyarthralgia (1). Several reports have demonstrated persistent polyarthritis akin to seronegative peripheral arthropathy (2). However, to our knowledge, imaging-confirmed axial disease has not been described in this context. We report the case of an Asian lady who developed axial spondyloarthropathy (SpA) after contracting CKG while visiting India during an outbreak. Informed consent was obtained from the patient.

A 51-year-old previously healthy woman developed CKG infection whilst traveling to India during a regional outbreak in an endemic area. It began with classic symptoms of acute fever and generalized myoarthralgia followed by residual pain primarily affecting the small joints and to a lesser extent, pain in the lumbar region and both hips. There was no family history of SpA. Initial investigations including inflammatory markers at the time were unremarkable. Dengue nonstructural protein 1 antigen and dengue IgM were negative. Thyroid function tests and bone profile were normal. Serum 25-OH vitamin D was within the reference range. X-rays of small joints at the time showed soft tissue swelling in the wrists and ankles. The X-ray of the lumbosacral spine showed minor degenerative change in L4/5 and L5/S1, whereas that of the sacroiliac joints was normal. The patient was commenced on regular non-steroidal anti-inflammatory drugs (NSAIDs). Following graded physical activity over six months, her symptoms improved, apart from mild episodic fatigue and lethargy.

A year later, she presented to our rheumatology department with a 2-month history of severe intermittent alternating pain in both hips and buttocks. She experienced low back pain in addition to widespread myalgia, malaise, and fatigue.

Investigations at the time of presentation showed a normal full blood count, serum biochemistry, C-reactive protein, liver functions, glucose, bone profile including vitamin D, thyroid function, negative antinuclear antibody, anti-cyclic citrullinated protein antibody, rheumatoid factor, and human leukocyte antigen B27. Her CKG IgG was strongly positive (>1:10,000 by an indirect fluorescent antibody test). Surprisingly, the bone scan showed increased uptake in the inferior aspect of the sacroiliac joints bilaterally with the right joint involved more than the left (Figure 1a). An magnetic resonance imaging (MRI) scan confirmed bilateral sacroiliitis with marked edema across the inferior aspects of the joints (Figure 1b). The patient was commenced on regular NSAIDs and physiotherapy with good symptomatic relief.



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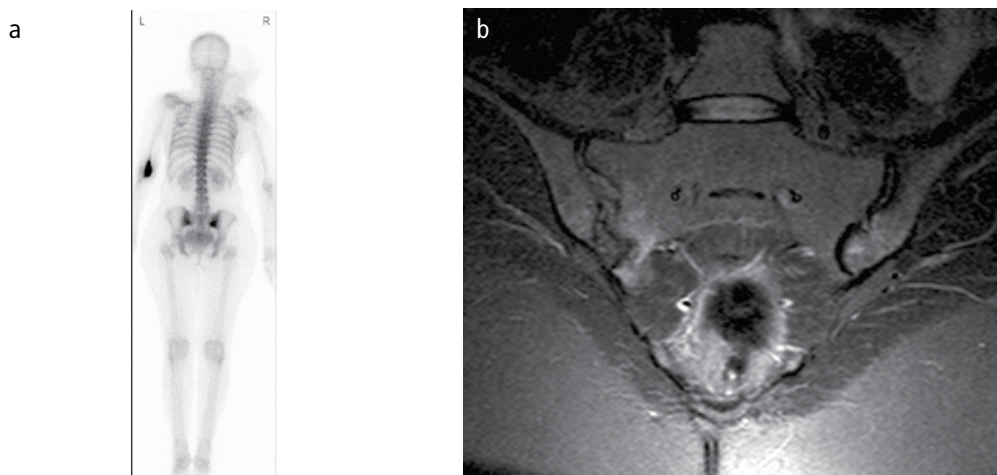
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**Figure 1. a, b.** Bone scan shows increased uptake in the inferior aspect of the sacroiliac joints bilaterally (a), fat suppressed short inversion time inversion-recovery (STIR) magnetic resonance imaging (MRI) scan image confirms bilateral sacroiliitis with marked edema across the inferior aspects of the joints (b)

There are numerous reports suggesting CKG arthritis can mimic rheumatoid arthritis (2). However, to our knowledge, this is the first report of CKG-associated axial SpA, though causal relationship cannot be established. This could be a case of de novo sacroiliitis or axial SpA rather than as a consequence of viral infection. While most cases of CKG arthropathy recover within several weeks, up to 12% retain residual joint symptoms for months to years (3). At present, not much is known about the underlying immunopathophysiological processes by which CKG virus causes arthritis. A recent article has suggested that chronic musculoskeletal tissue pathology is associated with persistent CKG infection and is controlled by adaptive immune responses (2).

Currently, there is no approved anti-viral treatment for CKG. Management is mainly support-

ive, and NSAIDs tend to be the mainstay treatment for arthritis (4). Hence, as outbreaks of this debilitating disease become global, a high level of suspicion is required for early diagnosis and management, particularly in centers with little exposure to this disease.

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