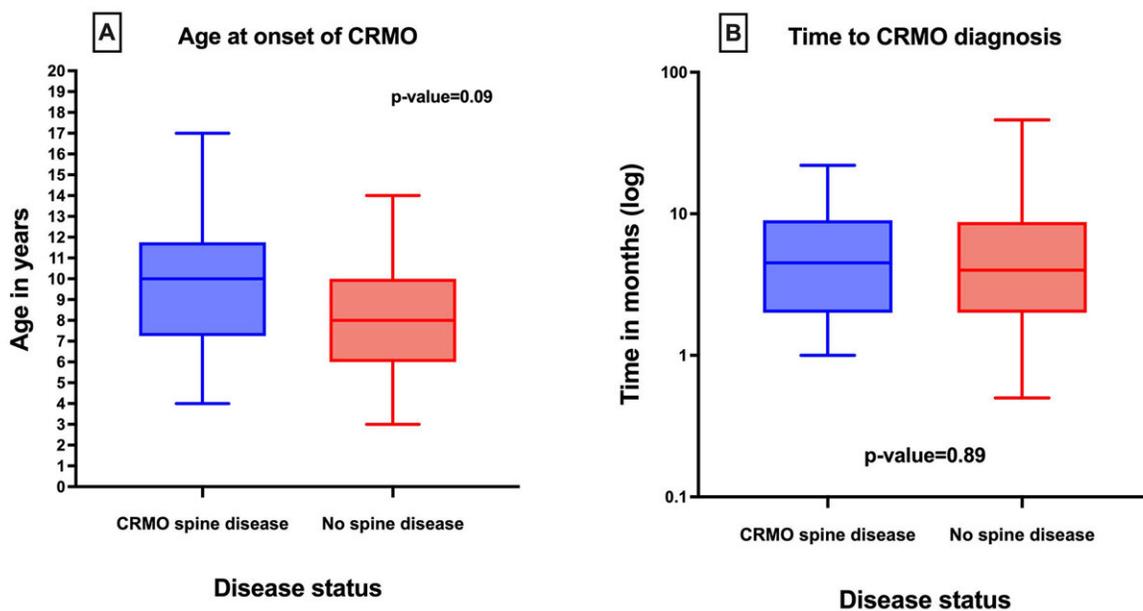


# Study finds spine disease is more common in chronic recurrent multifocal osteomyelitis than previously thought

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**Figure (1):** Comparison of **A** : age at onset of chronic recurrent multifocal osteomyelitis (CRMO), **B**: time from onset of CRMO to diagnosis in patients with spine disease(cases) and without spine disease (controls).

Credit: Maybe Silent: Spine Disease in Chronic Recurrent Multifocal Osteomyelitis, Clinical Features, Risk Factors, and Red Flags (2022) <https://acrabstracts.org/abstract/maybe-silent-spine-disease-in-chronic-recurrent-multifocal-osteomyelitis-clinical-features-risk-factors-and-red-flags/>

New research presented this week at ACR Convergence 2022, the

American College of Rheumatology's annual meeting, shows that spine disease, once considered a rarity in chronic recurrent multifocal osteomyelitis, affects as many as 10–35% of patients and is asymptomatic in one-third.

Chronic recurrent multifocal osteomyelitis (CRMO) is an autoinflammatory bone disease, mainly affecting young girls, though it can affect boys too. Long-term clinic outcomes for most children with CRMO are generally good. However, the widespread use of whole-body MRI has led to increasing reports of [spine](#) disease in CRMO patients, with varying degrees of severity and vertebral fractures.

Although the reported incidence of spine disease is 10 to 35%, little is known about risk factors for the condition. The researchers undertook this study to characterize the clinical features of spine disease and identify at-risk CRMO patients, who need more-frequent screening and prompt therapeutic intervention to prevent fractures and deformities.

Using retrospective chart review, the researchers identified 36 cases of spine disease in CRMO patients based on MRI findings and matched them with 36 controls (CRMO patients without spine disease). Most patients with spine disease were Caucasian and 57% were boys. The majority (92%) had thoracic vertebral involvement, 20% had advanced compression fractures (vertebra plana) and 42% had associated autoimmune disease.

Nearly half had no [back pain](#) at CRMO onset, while 69% complained of back pain just before they were diagnosed with spine disease. More than one third (31%) were asymptomatic, with spine disease found incidentally during a whole-body MRI. Night pain and sleep disturbances were significantly higher compared to controls. More than a third of patients were on nonsteroidal anti-inflammatory drugs (NSAIDs) when they developed spine disease, but a majority reported pain and poor

disease control despite medication.

"Because we only have a few previous studies, the findings weren't expected but made a lot of sense in retrospect," says Shima Yasin, MD, MSc, Assistant Professor of Pediatrics and Rheumatology at University of Iowa Carver College of Medicine and the study's lead author.

"[Still], the finding of a higher proportion of males with spine disease in CRMO is new and surprising. It might point to the fact that males are more likely to develop severe disease with complications in CRMO compared to females and may suggest a need for more frequent screening and treatment protocols for males with CRMO. This would be another area of research to help better understand the disease."

She adds that complaints of back pain, nighttime pain, and sleep disturbances are [risk factors](#) and should prompt immediate screening for spine disease in CRMO patients. Despite opposition from some insurers, Dr. Yasin says all CRMO patients should get whole-body MRIs every six months and more often if there are changes.

"We don't have serum or urine biomarkers proven to evaluate disease activity. MRIs are very sensitive in detecting active lesions and guiding treatment. For patients who have asymptomatic lesions, the only way to prevent worsening and progression is by using MRIs to detect lesions early and initiate treatment," Dr. Yasin says.

"At our center we created a protocol called CRMO Whole-Body MRI STIR [short tau inversion recovery] that is faster and very informative in CRMO cases. This protocol saves time and may possibly be less expensive. Based on this study and others, we encourage all providers to obtain whole-body MRIs on confirmed CRMO cases for close monitoring and therapeutic decision making."

Dr. Yasin adds that this study is just a starting point. Because CRMO is so rare, it's hard for a single center to treat enough patients to answer research questions.

"We are hoping to enroll more CRMO patients in our study to better understand the [disease](#) and how to effectively treat it to improve outcomes. Patient participation is key; collaboration from our colleagues would be extremely helpful," Dr. Yasin says.

**More information:** [Conference abstract](#)

Conference: [www.rheumatology.org/Annual-Meeting](http://www.rheumatology.org/Annual-Meeting)

Provided by American College of Rheumatology

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