

Evidence Discussion (SP 10)

Sacro-Iliac (SI) Joint Pain, Inflammatory Spondylitis/Sacroiliitis and Fibromyalgia

For individuals with proven sacro-iliac joint disorders visible on routine plain x-rays, there is no evidence that advanced diagnostic imaging substantiates changes to individual management decisions.

X-rays are first line imaging for suspected inflammatory sacroiliitis but have a low sensitivity for detecting abnormalities in early disease, and x-ray findings may not be visible until several years after onset of symptoms. SI Joint MRI is appropriate when X-ray is equivocal or nondiagnostic. There is increase the diagnostic accuracy of MRI in sacroiliitis with use of contrast. Contrast use benefits must be weighed against potential disadvantages of need for IV access, potential risk for nephrogenic systemic fibrosis or contrast reaction, and increased cost. If a patient is unable to undergo MRI, a noncontrast CT may be helpful as it has improved sensitivity over conventional radiography for detection of subtle erosions, although it lacks sensitivity for inflammatory changes of inflammatory sacroiliitis.

In juvenile idiopathic arthritis, x-ray findings such as bone erosions tend to occur late in the disease, and early signs of inflammation such as synovitis are undetectable on x-rays. MRI is useful to detect synovitis and bone marrow edema to direct treatment with disease-modifying medications to prevent long-term disability. MRI can also detect extraarticular inflammatory lesions such as tenosynovitis and enthesitis, which are not seen on x-ray. However, MRI exams are lengthy, require IV contrast for increased sensitivity, and may require sedation in younger pediatric patients.

With suspected inflammatory spondylitis, x-rays are useful to assess for structural changes of syndesmophytes, erosions, vertebral body squaring, and ankylosis. When x-rays are nondiagnostic, MRI (with or with contrast) can demonstrate active inflammatory changes. The value of monitoring treatment response using serial MRIs remains controversial and investigational in adults.

Plain x-rays are not required prior to advanced imaging in individuals with documented ankylosing spondylitis or DISH (diffuse idiopathic skeletal hyperostosis) and spine pain following trauma, due to high risk of spinal fractures even with low-energy trauma and the low specificity for fracture detection on x-ray in these individuals.

Advanced diagnostic imaging is not supported by scientific evidence for the evaluation and treatment of fibromyalgia.

References:

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