Displacement of the pisiform: a radiographic sign for synovitis of the wrist joint

Matthew Morris · Peter M. Murray · Mark Kransdorf

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Answer

Acute traumatic wrist synovitis causing volar displacement of the pisiform.

The patient presented to the emergency department and was diagnosed with a dislocation of the pisiform, and her wrist was splinted. Upon examination in the hand clinic, ulnar-sided wrist pain and warmth were noted. MRI examination demonstrated an enhancing proliferation of tissue and fluid on T2, which emanated from the radiocarpal joint, displacing the pisiform volarly. The flexor carpi ulnaris tendon insertion was deemed intact.

Isolated dislocations of the pisiform are rare. Traumatic synovitis of the wrist joint results from inflammatory proliferation of the synovium resulting in symptoms of pain, swelling, and restricted motion [1]. The most common noninfectious cause of traumatic wrist synovitis is overuse or trauma [2]. The 1 week delay between injury and onset of symptoms in this case is more characteristic of traumatic wrist synovitis. Traumatic wrist synovitis can also be seen in patients with underlying conditions such as rheumatoid arthritis, osteoarthritis, crystalline deposition disease (CPPD), or infection [2]. No evidence of rheumatoid arthritis or CPPD was seen on radiographs. The patient was placed in a right wrist splint and given a 6 day Medrol Dosepak. Follow

up examination at 2 weeks showed complete resolution of wrist swelling, tenderness, and warmth.

The pisiform triquetral joint is a synovial joint that communicates with the radiocarpal joint [3]. In this case the traumatic synovitis proliferation from the wrist joint expanded into the pisiform triquetral joint causing the displacement of the pisiform. This was demonstrated on MR by the acute angle subtended by the FCU tendon. The MRI findings as well as the clinical features of ulnar-sided wrist pain, wrist swelling, and the prompt resolution of symptoms lead to the diagnosis of acute traumatic wrist synovitis. We now consider displacement of the pisiform on conventional wrist radiographs a potential sign of acute wrist synovitis.

References

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M. Morris · P. M. Murray (✉) · M. Kransdorf
Department of Orthopedics, Mayo Clinic,
4500 San Pablo Road South,
Jacksonville, FL 32224, USA
e-mail: murray.peter@mayo.edu