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An Unusual Case of Wrist Pain: Idiopathic Avascular Necrosis of the Scaphoid, Preiser's Disease

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Abstract : We present a case of a 42-year-old, right-handed Caucasian male who presented to a medical orthopedics clinic with left wrist pain. The patient indicated that the pain started two months prior to the visit. He could only remember helping a friend move furniture prior to the onset of pain. Examination of the left wrist showed limited extension compared to the right. There was clicking with flexion and extension of the wrist on the dorsal aspect. Mild tenderness was noticed over the distal radioulnar joint. There was ulnar and radial deviation on provocation. Initial 4-view x-rays of the left wrist showed mild radiocarpal and scapho-trapezium-trapezoid (ST-T) osteoarthritis, with subchondral cysts seen in the lunate and scaphoid, with no obvious fractures. The patient was initially put in a wrist brace and diclofenac topical gel was prescribed for pain control, as a patient could not take non-steroidal anti-inflammatory drugs (NSAIDs) due to gastritis. Despite diclofenac topical gel use and bracing, symptoms remained, and a steroid injection with 1 mL of lidocaine with 10 mg of triamcinolone acetonide was performed under fluoroscopy. He obtained some relief but after 3 months, the injection had to be repeated. On 2-month follow up after the initial evaluation, symptoms persisted. Magnetic resonance imaging (MRI) was obtained which showed an abnormal T1 hypodense signal involving the proximal pole of the scaphoid and articular collapse proximally of the scaphoid, with marked irregularity of the overlying cartilage, suggesting a remote injury, findings consistent with avascular necrosis of the proximal pole of the scaphoid. A month after that, the patient had the left proximal pole of the scaphoid debrided and an intercompartmental supraretinacular artery vascularized. Pedicle bone graft reconstruction of the proximal pole of the left scaphoid was done. A non-vascularized autograft from the left radius was also applied. He was put in a thumb spica cast with the interphalangeal joint free for 6 weeks. On 6-week follow-up after surgery, the patient was healing well and could make a composite fist with his left hand. The diagnosis of Preiser's disease is primarily based on radiological findings. Due to the fact that necrosis happens over a period of time, most AVNs are diagnosed at the late stages of the disease. There appear to be no specific guidelines on the management AVN of the scaphoid. In the past, immobilization and arthroscopic debridement had been used. Radial osteotomy has also been tried. Vascularized bone grafts have also been used to treat Preiser's disease. In our patient, we used three of these treatment modalities, starting with conservative management with topical NSAIDS and immobilization, then debridement with vascularized bone grafts.

Keywords : wrist pain, avascular necrosis of the scaphoid, Preiser's disease, vascularized bone grafts
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