

## A rare cause of chronic hip pain: intraarticular synovial chondromatosis

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A 23-year-old male patient presented to our clinic with pain and limited motion in the right hip. The pain started about 3 years previously and increased over time, spreading to the trochanteric region of the right hip and the right groin. The characteristic of the pain was mechanical. He did not feel pain while sleeping. Prolonged sitting or standing caused the hip to lock. Previously, he had received physical therapy and analgesic medications but there had been no significant improvement. There was no pain in any other joint, and there was no history of disease or trauma associated with the hip. Physical examination revealed an antalgic gait. Palpation of the iliopsoas muscle caused pain. The motion of the right hip joint was limited and painful in all directions, whereas lumbar and left hip joint motions were unrestricted and painless. There were no neurological deficits of the lower extremities. Radiography of the pelvis indicated a narrowing joint space, and there were erosions on acetabular side of the joint (Figure 1). Magnetic resonance imaging (MRI) of the right hip revealed findings consistent with synovial chondromatosis, which filled the joint space completely (Figure 2 a, b, c). Serological and biochemical markers and superficial ultrasound of the inguinal region were normal. Orthopedic surgical procedures including arthroscopic debridement were planned.

Synovial chondromatosis is defined as benign proliferation of hyaline cartilage at the joint, bursa, or tendon sheath. It is relatively rare and its etiology is unknown<sup>1</sup>. It most commonly occurs at the knee joint, but may also affect hip, shoulder, elbow, ankle, and wrist joints<sup>2,3</sup>. It is observed more often in males of 30–50 years of age, and usually involves single rather than multiple joints<sup>3</sup>. However, symptoms are nonspecific, often delaying



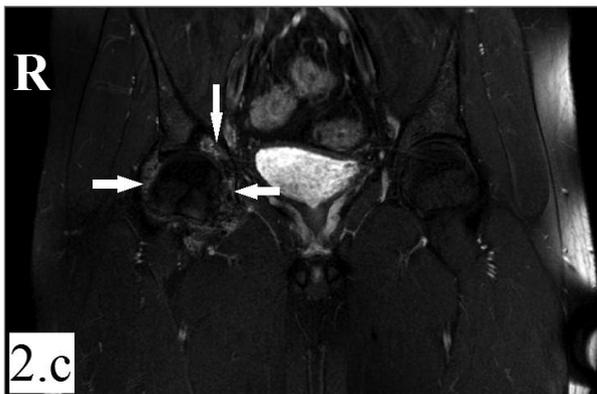
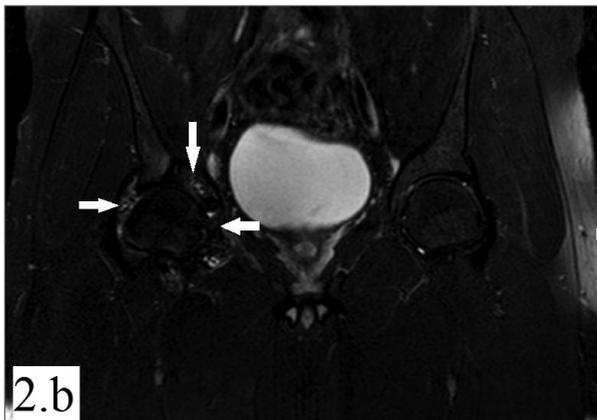
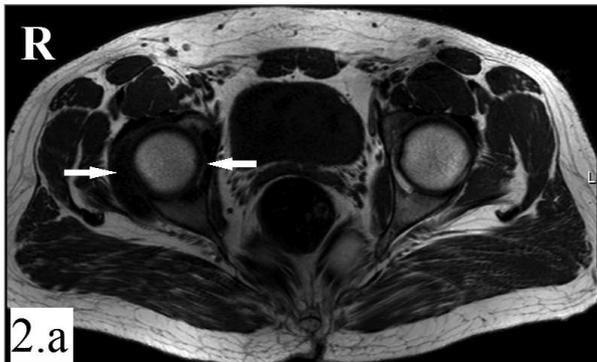
**FIGURE 1.** Radiography of the pelvis: narrowing of the right hip joint space and erosions on acetabular side of the joint. Nodule formation is not observed

diagnosis. The most common symptoms are insidious-onset mechanical pain around the affected joint, swelling, joint locking, and/or stiffness. The most common finding is a limited range of motion<sup>1,4</sup>. If there is no calcification at cartilaginous nodules, it is difficult to identify in radiographs. MRI can be used for synovial and soft tissue pathologies<sup>4</sup>, but may be negative in the initial period of synovial chondromatosis. In advanced stages, the synovium may form cartilaginous nodules called loose bodies. These may grow, calcify, and even ossify. This, in turn, can cause mechanical damage to articular cartilage, leading to osteoarthritis. Therefore, loose bodies must be removed surgically<sup>1</sup>.

Hip pain is a frequent disorder of the musculoskeletal system. Young patients, in particular, have nonspecific symptoms. Medical history review and physical examination often cannot provide enough clues for diagnosis<sup>5</sup>. Because synovial chondromatosis starts with nonspecific symptoms and early diagnosis is difficult, it is associated with significant disability. In this respect, we recommend keeping synovial chondromatosis in mind during differential diagnosis of chronic and stubborn hip pain.

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**FIGURE 2.** MRI of the right hip: Millimeter-sized, multiple intra-articular cartilaginous fragments, not all of which are ossified (white-arrows) can be seen on the axial-T1-sequence (a) and coronal-T2-sequence (b). They are heterogeneous-hypointense and fill the entire right coxofemoral joint space. Contrast enhancement can be seen in coronal-T1 post-contrast sequence (c)

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