**BROWSER'S NOTES**

# Browser's notes

## Acute unilateral sacroiliitis mimicking infection on magnetic resonance imaging with response to nonsteroidal antiinflammatory drugs: a distinct presentation of spondyloarthritis?

*Dubash S,* et al.
*J Rheumatol. (2018); 45(12):1708–10*

This case series describes four male patients (3 aged 19 years, 1 aged 41 years) with acute onset of unilateral non-infectious sacroiliitis that simulated septic arthritis. All patients had a rapid onset of symptoms from 2 to 30 days before presentation with MR findings of unilateral "florid" edema-like marrow signal involving >75% of the sacroiliac (SI) joint in 3 patients and between 25% and 75% in one. Soft tissue edema surrounded the affected SI joint on all MR studies. Acute phase serum markers were elevated in all patients with C-reactive protein levels between 15 mg/L and 262 mg/L. Two patients had fever at presentation and one had a sore throat and an elevated white blood cell count. Septic sacroiliitis was suspected and image-guided SI joint aspiration and biopsy was planned for all patients. However, treatment with non-steroidal antiinflammatory drugs (NSAIDs) produced rapid symptom resolution (between 1 and 14 days), and infection was no longer considered. All patients were HLA-B27 negative. Risk factors for spondyloarthropathies included ulcerative colitis in one, scalp psoriasis in one patient; the patient with a sore throat cultured positive for Group A *Streptococcus* raising the possibility of post-infectious reactive arthritis. These patients show that while rare, reactive, non-infectious, inflammatory sacroiliitis can present with symptoms, acute phase serum markers, and MR imaging findings identical to septic sacroiliitis. Rapid symptom resolution following treatment with NSAIDs can help clarify the diagnosis and eliminate the need for joint aspiration and biopsy.

## MRI analysis of peripheral soft tissue composition, not body mass index, correlates with outcomes following anterior cruciate ligament reconstruction.

*Milone MT,* et al.
*Knee Surg Sports Traumatol Arthrosc. (2018); 26(12):3711–6*

A retrospective study of 58 patients (median age 29.8 years, 36 males) who underwent anterior cruciate ligament reconstruction (ACLR) to determine if the relative sizes of the knee joint and periarticular soft tissues could predict postoperative knee function at 2 years. ACLR patients from 6 orthopedists were selected by availability of preoperative knee MR images and 2 year International Knee Documentation Committee (IKDC) scores. MR measurements of the knee structures, including the joint size, bone size and periarticular fat, were made from fat suppressed T2-weighted images. From an axial slice through the joint line, "KneeSize" (cm$^2$) was determined by outlining the skin surface of the knee. "KneeFat" (cm$^2$) was then calculated as the difference between "KneeSize" and the summed measurements the knee joint capsule and gastrocnemius/soleus muscle complex performed on the same slice. The knee bone size was calculated as the average between the circumferences of the femur (measured on the axial slice 2 mm distal to the physeal scar) and the tibial (measured on the axial slice 4 mm distal to the joint line). Finally, the parameter "KneeFatBoneRatio" (KFBR) was calculated by dividing KneeFat by the average knee bone size. When compared to the 2 year IKDC outcome score, only the KFBR (mean $1.1 \pm 0.5$, range 0.5–2.7) showed a statistically significant correlation ($p = 0.02$); neither the patient body mass index (BMI; mean $24.7 \pm 4$, range 18.6–36.9), KneeSize (mean $107.7 \pm 18$, range 71.4–158.2 cm$^2$), nor KneeFat (mean 38.6 $\pm 15$, range 20.1–91.1 cm$^2$) showed a significant correlation. Additionally, while BMI correlated with KneeSize, the correlations with KneeFat and KFBR were weak. IKDC scores were significantly higher for patients with KFBR >1 than

those with KFBR <1 (77.2 vs. 87.7, $p = 0.003$). The difference in IKDC scores was even greater between the top quartile of KFBR and the lowest quartile (68.9 vs. 87.3, $p = 0.0001$). The authors suggest that while BMI has not been found useful in prediction of surgical outcomes following ACLR, oth-

er, more local, measures of body composition may prove more sensitive.

**Abstracted by C. S. Winalski, M.D.**
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