

## RA joint deterioration despite clinical remission is predicted by imaging of synovitis

Previous studies of rheumatoid arthritis (RA) have demonstrated that synovial inflammation can persist even when patients are in a state of clinical remission. A longitudinal study of a group of such patients has now suggested a direct relationship between subclinical synovitis and joint structural deterioration and, furthermore, that inflammation detected by MRI and musculoskeletal ultrasonography could predict subsequent radiographic progression.

The study cohort included 102 patients with RA receiving conventional treatment with DMARDs who were determined by their rheumatologist to be in clinical remission. After 1 year, however, despite a lack of change in overall disease activity, 17 of 90 (19%) patients for whom imaging at both time points was available showed significant radiographic disease progression.

The likelihood of deterioration over 12 months was associated with the baseline findings of positive power Doppler signal (odds ratio [OR] 12.21;  $P < 0.001$ ), power Doppler score (OR 4.0;  $P < 0.001$ ) and MRI-detected synovitis score (OR 2.98;  $P = 0.002$ ); no such associations were found between deterioration and baseline clinical scores. The results confirm earlier findings that joint deterioration can persist despite clinical remission, and point to subclinical synovitis as the cause.

The authors contend that conventional remission criteria are insufficiently sensitive to detect ongoing inflammation in states of low RA disease activity, and propose that imaging modalities, such as MRI and ultrasonography, should be used instead.

**Original article** Brown AK *et al.* (2008) An explanation for the apparent dissociation between clinical remission and continued structural deterioration in rheumatoid arthritis. *Arthritis Rheum* 58: 2958–2967

## The prevalence of meniscal tears on MRI is higher than previously thought

MRI findings of meniscal damage are a common indication for arthroscopic partial meniscectomy in patients with knee symptoms (i.e. pain, aching or stiffness) of undetermined cause.

However, this procedure has been associated with an increased risk of osteoarthritis. Data are lacking regarding the correlation between MRI-detected meniscal tears and subjective knee symptoms or radiographically evident osteoarthritis.

Englund *et al.* used MRI to detect meniscal damage (i.e. tears, maceration or destruction) in the right knees of a large sample of individuals who were representative of the US urban population ( $n = 991$ , aged 50.1–90.5 years). Meniscal damage was detected in 35% of participants, with the majority (61%) of tears seen in those who had experienced no knee symptoms during the previous month. In addition, the prevalence of meniscal damage increased with age. Importantly, participants with radiographically visible evidence of osteoarthritis were more likely to have meniscal damage on MRI than those without such evidence.

Despite a number of limitations, which are addressed by the authors, this study provides convincing evidence that meniscal tears are a common incidental finding on MRI studies in older individuals. According to the authors, surgical resection of meniscal tears to treat knee symptoms in patients who also have radiographically evident osteoarthritis could be of limited value, as their symptoms are likely to be related to the osteoarthritis itself. In addition, the authors postulate that meniscal tears could be an early indication of osteoarthritis.

**Original article** Englund M *et al.* (2008) Incidental meniscal finding on knee MRI in middle-aged and elderly persons. *N Engl J Med* 359: 1108–1115

## Body composition correlates with physical function in patients with RA

Increased body fat mass and decreased lean body mass are independently correlated with impaired physical function in patients with rheumatoid arthritis (RA); body fat mass and lean mass in the arms and legs (appendicular areas) showed the strongest correlation.

The physical function of 197 patients with RA, who had participated in the Johns Hopkins ESCAPE-RA study of subclinical cardiovascular disease, was measured via a Health Assessment Questionnaire (HAQ). HAQ scores were analyzed in relation to patients' total and region-specific fat mass, lean mass and bone mass,