The search continues for biomarkers of osteoarthritis progression

The search for a reliable biomarker of osteoarthritis progression has been ongoing for over 20 years. In a new study, none of the biomarkers investigated predicted progression of joint-space narrowing (JSN) over a 30-month period. There were, however, indications that one biomarker should be studied further.

In a previous trial of doxycycline, plasma samples were taken from 431 patients at baseline and at 6-month intervals for 30 months. Mazzuca *et al.* selected 60 participants from this trial who had shown osteoarthritis progression in radiographic assessments, and 60 participants who had not. They compared the concentrations of several biomarkers (i.e. the proteoglycan aggrecan epitope CS846; markers for collagenase cleavage of type II collagen, collagenase cleavage of type I and II collagens, and type II collagen synthesis; and the ratio of collagenase cleavage of type II collagen to type II collagen synthesis) in all the plasma samples of the two groups.

Mazzuca *et al.* did not find any strong evidence that these biomarkers predicted osteoarthritis progression. Neither baseline nor serial biomarker levels predicted JSN progression over the entire 30-month study period; however, an association was noted between CS846 and JSN progression in the knee over the first 16 months ($P<0.01$). The authors note that their cohort comprised patients from the extreme ends of the JSN spectrum, and recommend that further studies explore the connection between CS846 and JSN progression in a more-representative population.

Original article Mazzuca SA *et al.* (2006) Associations between joint space narrowing and molecular markers of collagen and proteoglycan turnover in patients with knee osteoarthritis. *J Rheumatol* **33:** 1147–1151

ANCA titers predict relapse in patients with anti-proteinase-3-ANCA-associated vasculitis

Although immunosuppressive treatment of anti-neutrophil cytoplasmic autoantibody (ANCA)-associated vasculitis results in a 10-year survival rate of 60–90%, a substantial number of patients suffer relapse following induction of remission. These relapses are associated with high morbidity and mortality. The identification of risk factors associated with relapse might allow for improved management of those patients at greatest risk.

In this retrospective study, the cytoplasmic ANCA (cANCA) positivity status and anti-proteinase-3 (PR3)-ANCA levels of 87 patients with PR3-ANCA-associated vasculitis were determined at diagnosis and during immunosuppressive maintenance therapy (continued cyclophosphamide and corticosteroids or switched to azathioprine). Overall actuarial relapse-free survival was 72% at 2 years and 34% at 5 years. There was no difference in relapse-free survival between patients on cyclophosphamide maintenance and those who were switched to azathioprine. A significantly lower risk of relapse was found in patients who became and stayed negative for cANCA ($P=0.01$) or PR3-ANCA ($P=0.02$) until 24 months after diagnosis, whereas positive cANCA titers at 3, 12, 18 and 24 months were strongly associated with relapse within 5 years of diagnosis. Median time to relapse was 20 months in patients who were cANCA-positive >6 months after diagnosis. PR3-ANCA levels of >10 U/ml at 18 and 24 months were predictive of relapse within 5 years. In patients who switched to azathioprine maintenance, relapse was associated with a positive cANCA titer at the time of switching.

The authors conclude that cANCA positivity and elevated PR3-ANCA titers at various time points during early follow-up can identify patients with PR3-ANCA-associated vasculitis who are at increased risk of relapse.

Original article Sanders JS *et al.* (2006) Prediction of relapses in PR3-ANCA-associated vasculitis by assessing responses of ANCA titres to treatment. *Rheumatology (Oxford)* **45:** 724–729

Reduced habituation in response to somatosensory stimulation in fibromyalgia

Recent research suggests that the chronic pain and tenderness experienced by patients with fibromyalgia might result from altered neurobiological mechanisms involved in the processing of somatosensory information. Previous studies have investigated the brain mechanisms involved in processing painful