

## Issue 3: American College of Rheumatology (ACR) Conference Update

***The Annual Meeting of the American College of Rheumatology (ACR) held at Chicago, Illinois, from November 5 to 8, 2011, covered some of the exciting new developments and recent research findings in the field of rheumatology.***

### State of the art Lectures and Symposia

In a state-of-the-art lecture, Brady L. Stein (Medicine-Hematology/Oncology, Northwestern Feinberg School of Medicine), discussed recent theories of how inflammatory diseases may lead to anemia. One of these included the role of hepcidin, a master regulator of iron metabolism. Hepcidin levels are found to be higher in anemic patients with rheumatoid arthritis (RA); higher hepcidin levels interfere with iron transport and result in anemia. Stein sums it up aptly: "Inflammation leads to iron starvation in the face of plenty."

Other clinical symposia covered aspects of spondyloarthritis, with a special focus on magnetic resonance imaging (MRI); early ankylosing spondylitis (proposed to be called axial spondyloarthritis, which would more appropriately describe this heterogenous disease), psoriatic arthritis, including a discussion of whether methotrexate is truly a disease modifying antirheumatic drug (DMARD); and the role of chlamydial infection in reactive arthritis were discussed. In one presentation, Walter Maksymowych presented his MRI work demonstrating that fatty replacement rather than bone marrow edema may better predict new bone formation in the spine of patients with ankylosing spondylitis.

Cardiovascular disease is common among patients with auto-immune disorders. A state-of-the-art lecture by Dr. Neil J. Stone (Northwestern University) emphasized the need for rheumatologists to become more comfortable with lipid management. All statins are not created equal; therefore, rheumatologists need to become more familiar with the different statins and their use in clinical practice, including the influence of factors such as metabolism by the liver and/or excretion by the kidney, and adverse effects such as myopathy.

### Up and coming Biologic Targets

The plenary sessions and several poster presentations covered recent developments involving newer DMARDs and biologic therapies for the management of rheumatoid arthritis (RA). Prominent among these agents are the janus kinase (JAK) inhibitors, which appear to be comparable with other available drugs for managing RA. Another therapeutic possibility for managing autoimmune diseases could involve the modification of reactive T-cells.

A late-breaking abstract by Gerd Burmester et al. described the rapid (within 2 weeks) and significant clinical effect of mavrilimumab, an anti-GM-CSFR $\alpha$  monoclonal antibody, when compared with placebo in subjects with RA. In a 12-week double-blind study involving 223 patients with active RA, 55.7% of mavrilimumab-treated subjects met the primary endpoint (DAS28-CRP reduction of  $\geq 1.2$ ) versus 34.7% in the placebo group ( $p=0.003$ ).

### Lupus Guidelines and Treatment

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#### Faculty:

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#### Osteoporosis

A late-breaking abstract by J.P. Brown et al. described the results from the FREEDOM extension trial involving six years of denosumab treatment in postmenopausal women with osteoporosis. Six continuous years of treatment with denosumab was found to be well tolerated, maintained reduced bone turnover, and continued to significantly increase bone mineral density (BMD). Fracture incidence remained low. Thus denosumab could be a useful option in osteoporosis, particularly for patients who cannot tolerate first line agents.

#### Gout

In a phase 2B study of adult subjects with gout, Michael Becker et al. showed that BCX4208, a purine nucleoside phosphorylase inhibitor, combined with allopurinol increases response rates in patients with gout who fail to reach goal range serum urate on allopurinol alone. Twelve weeks of BCX4208 daily dosing combined with allopurinol was generally safe and well tolerated.

While this review only touches upon the many aspects of rheumatic

New guidelines for lupus nephritis confirm that patients with suspected nephritis should have a renal biopsy. Hydroxychloroquine should be employed as adjunctive therapy in lupus nephritis patients, in addition to therapy with an angiotensin converting enzyme (ACE) inhibitors and angiotensin receptor blockers (ARBs). The treatment algorithm relies on histological findings, and new targets can be expected to be included in the guidelines when they are published in 2012.

No single biomarker is adequate to evaluate disease severity in SLE, but combinations of biomarkers may be useful. Candidate biomarkers include ANA, anti-MCV, anti-double stranded DNA, EC4d and BC4d.

In a study by Richard Furie et al., patients with lupus nephritis received mycophenolate mofetil with either abatacept or placebo. Time to complete renal response (the primary efficacy endpoint) did not differ between the groups. On the other hand, David Wofsy et al., using two accepted outcome measures to define complete response, showed that abatacept was superior to placebo for one set of measures but not for the other, thereby highlighting the importance of the choice of outcome measures for lupus nephritis trials. These findings suggest that further work is needed to identify the most sensitive measure(s) for evaluating lupus nephritis therapies. Otherwise, some patients may be missing out on the possible benefits of currently available drugs.

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disease covered at this year's ACR with record-breaking attendance, it reflects the continued excitement in rheumatology, as new therapeutic targets are identified and improvements in disease management continue.

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## In the next issue

Coming up in the next Rheumatoid Arthritis Newsletter, we will discuss the **value of x-rays for following RA**.

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