Researchers Confirm PsA Susceptibility Allele

BY KERRI WACHTER
FROM ARTHRITIS & RHEUMATISM

European researchers have confirmed a new independent susceptibility allele for psoriatic arthritis (PsA) independent of the main PSORS1 risk allele.

Data Source: A study of 2,224 individuals.

Disclosures: The study was supported by a research grant from the Italian Association for the Defense of Psoriatic Patients, the Interdisciplinary Centre for Clinical Research at the University of Erlangen-Nuremberg (Germany), and the Bath (England) Institute for Rheumatic Diseases. Two researchers were granted receipts from Wyeth-Pharm GmbH (Germany).

Major Finding: TNF*-857T is a susceptibility allele for PsA independent of the main PSORS1 risk allele.

Findings Confirms Earlier Research

A most intriguing aspect of psoriasis epidemiology is that about a quarter of these patients will develop psoriatic arthritis, and this disease clusters in families with remarkably high heritability. Despite evidence for genetic factors in this disease, the search for genes associated with arthritis and not psoriasis has been challenging because almost all PsA patients also have psoriasis. PSORS1/HLA-C is the most strongly predictive PsA-associated susceptibility factor independent of other genetic and environmental factors. The discovery of TNF*-857T as a susceptibility allele for PsA independent of PSORS1 promises to increase our understanding of the underlying genetic factors and to catalyze additional genetic and pharmacogenetic studies to better understand the diagnostic and functional significance of this allele in psoriatic disease.

Christopher T. Ritchlin, M.D., is professor of medicine, allergy/immunology, and rheumatology at the University of Rochester (N.Y.). He reported having no conflicts of interest that are relevant to this piece.

New Protein Marker Predicts Success of JIA Treatment

BY JENNIE SMITH
FROM THE 15TH EUROPEAN PEDIATRIC RHEUMATOLOGY CONGRESS

BRUGES, BELGIUM — Blood levels of an inflammatory protein have been found to be strongly predictive of how well a child with juvenile idiopathic arthritis will do on methotrexate, U.K. researchers have learned.

Children with higher serum levels of myeloid-related protein 8/14 (MRP8/14) were seen to respond considerably better. The MRP8/14 findings came from Sparks CHARMs (Childhood Arthritis Response to Medication Study), which used a cohort of 109 previously untreated children with JIA to assess predictors of success with methotrexate. The findings represent a step toward the “ambitious goal” of personalized medicine for JIA, said Halima Moncrieffe, Ph.D., of University College London (Pediatr. Rheum. 2011;9[Suppl. 1]:O10), who presented the data on MRP8/14. Dr. Moncrieffe noted that serum MRP8/14 is relatively easy to measure, and that samples do not require cold storage.

High levels of MRP 8/14 were shown to be the most strongly predictive factor in a JIA patient achieving an American College of Rheumatology score of 50 or higher at 6 months on methotrexate, with the likelihood of achieving ACR50 or better increasing with every 500-ng/mL serum increase. Of patients with MRP8/14 levels above 3,000 ng/mL at baseline, 96% went on to achieve an ACR50 or higher response to methotrexate. High serum levels were predictive of response to methotrexate regardless of the type of JIA or age at onset; however, patients with systemic JIA were excluded from the study.

Dr. Mariëne Otten of Erasmus University Medical Center in Rotterdam (the Netherlands) presented data on clinical indicators of treatment success or failure with etanercept in a cohort of JIA patients (Pediatr. Rheum. 2011;9[Suppl. 1]:O28). Ongoing research is examining the usefulness of baseline MRP levels as response predictors, she noted.

Dr. Otten pointed out that, as noted in previous studies, 262 patients who had never been prescribed a biologic agent to control their disease before starting etanercept. The patients had been enrolled in the Dutch Arthritis and Biologics in Children register, which since 1999 has kept data on all Dutch JIA patients using etanercept. The register is funded in part by an unconditional grant from Abbott.

They collected baseline clinical data using the physician’s global assessment of disease activity and children’s health assessment questionnaire scores. The investigators’ goal was to identify clinical predictors of poor response to etanercept and which clinical characteristics might predict adverse events during treatment. However, the study failed to show any significant associations for adverse effects. “It has been proven that etanercept is highly effective in juvenile idiopathic arthriti,

Findings Conforms to Previous Data

The study supported by a research grant from the Italian Association for the Defense of Psoriatic Patients, the Interdisciplinary Centre for Clinical Research at the University of Erlangen-Nuremberg (Germany), and the Bath (England) Institute for Rheumatic Diseases. Two researchers were awarded grants from Wyeth-Pharm GmbH (Germany).

Major Finding: MRP8/14 is a susceptibility factor for PsA independent of the main PSORS1 risk allele.

Variable(s) / Findings:

- **Risk allele:** MRP8/14 T
- **Survival rate:** 96% of patients negative for the PSORS1 allele reached the goal of inactive disease.
- **Survival rate:** 56% of patients positive for the PSORS1 allele and also were typed for TNF*-857T reached the goal of inactive disease.
- **Survival rate:** 4% of patients positive for PSORS1 and with TNF*-857T reached the goal of inactive disease.
- **Survival rate:** 4% of patients negative for PSORS1 and with TNF*-857T reached the goal of inactive disease.

Conclusion(s):

- The survival rate of patients with JIA who went on to respond well to methotrexate.
- High serum levels were predictive of survival at 6 months.
- Of patients with MRP8/14 levels above 3,000 ng/mL at baseline, 96% went on to achieve an ACR50 or higher response to methotrexate.
- High serum levels were predictive of response to methotrexate regardless of the type of JIA or age at onset; however, patients with systemic JIA were excluded from the study.
- They collected baseline clinical data using the physician’s global assessment of disease activity and children’s health assessment questionnaire scores.