OP0142 FAMILY PAIN HISTORY PREDICTS CHILD HEALTH STATUS IN CHILDREN WITH CHRONIC RHEUMATIC DISEASE

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Objectives To examine the relationships between parental and family pain history and the pain report and physician-rated health status of children with chronic rheumatic disease, and to determine whether child coping strategy mediates the relationship between family pain history and the child's pain and physician-rated health status.

Method Parents of 100 children were recruited from a paediatric rheumatology clinic during routine visits. Parents completed questionnaires assessing parental pain history and family characteristics. Children in the study completed a series of questionnaires to assess pain and pain coping strategies. A paediatric rheumatologist provided a global assessment of disease severity as an index of child health status.

Results A high number of parents of children seen in a paediatric rheumatology clinic described a personal pain history. Over 90% of parents reported having at least one chronic pain condition, with an equal proportion reporting an episode of pain in the past month. Correlational analyses indicated that parents reporting higher levels of current pain and higher mean levels of pain during the past month were more likely to have children reporting higher levels of current pain. In addition, parents who sought more treatment for their own pain and reported higher levels of pain-related interference with activity were more likely to have children reporting higher levels of pain and presenting with poorer health status. Finally, a series of mediational statistical models confirmed that child use of the pain coping strategy, catastrophizing, mediated the relationship between several parent and family pain history variables and the child's own current pain ratings and physician global assessment.

Conclusions The results from the present study highlight potentially important relationships between parent and child pain experiences and suggest that parents should participate in interventions aimed at improving children's abilities to cope with pain.

OP0143 GENETIC DETERMINANTS OF THE TH1 BIAS IN RHEUMATOID ARTHRITIS

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Rheumatoid arthritis (RA) is a chronic systemic inflammatory disease, which is likely to be driven by activated pro-inflammatory Th1 cells. In contrast, Th2 cells and their cytokines, in particular IL-4 are rarely found in RA. It could recently be demonstrated that memory T cells from patients with early RA manifest a profound functional deficit in that they cannot differentiate into Th2 cells even at very early stages of the disease. The inability of memory T cells to mount immunomodulatory

Th2 effectors might contribute to the Th1 bias in RA and, thus, might be critically involved in the initiation of chronic autoimmune inflammation. The mechanisms, however, involved in this abnormality have not been delineated in detail. We have recently established a system to analyse T cell differentiation *in vitro* and have identified molecular mechanisms regulating Th2 effector generation in healthy individuals. In the current proposal, molecular mechanisms will be identified that are involved in the development of Th1 mediated immunity in patients with very early rheumatoid arthritis (symptoms at time of blood collection of ≤ 2 weeks) using gene chip microarray technology. Selected candidate genes associated with the Th2 cell differentiation defect will be tested for their functional significance in biological assays. The definition of mechanisms contributing to the Th1 differentiation bias in very early RA will provide important insights into the pathogenesis of the disease, in particular into the initial steps of the evolving immune response, and might lead to the development of novel therapeutic strategies.

OP0144 DEVELOPMENT OF A PROSPECTIVE, LONGITUDINAL, INCEPTION COHORT TO EVALUATE THE OUTCOME OF RHEUMATOID ARTHRITIS IN AFRICAN-AMERICANS

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It has been established that the prevalence of rheumatoid arthritis (RA) in African-Americans (AA) in the United States is comparable to that of the white population. However, data comparing the clinical manifestations and outcome of RA in AA and other ethnic groups is limited. Approximately 90% of the AA population of St. Louis, MO. lives within an area of twelve contiguous zip codes, within which is the Washington University School of Medicine (WUSM). Almost 60% of the individuals within these zip codes have incomes below the poverty level, and the vast majority of such patients receive their medical care at WUSM Rheumatology Clinic. In addition, our clinic provides care for patients from the surrounding geographic area who have a more diverse distribution of income and insurance status.

We propose to develop an inception cohort of AA patients with RA by ACR criteria to be entered within one year of diagnosis, and follow this cohort prospectively in a longitudinal fashion. The primary comparison group will be white patients with early RA seen at the same outpatient clinic; Russian immigrants, Hispanics, and Asian-Pacific rim patients will serve as additional comparison groups if numbers of patients are sufficient. Demographic data will be collected on zip code, income, education, medical insurance status, and literacy. Treatment for each patient will be non-randomised, and determined by the patient's treating rheumatologist. Outcome measures will include the ACR core data set (tender and swollen joint count, MD and patient global assessment, pain VAS by patient, HAQ, and ESR), to be collected at baseline and every six months. Sharp scores will be obtained on radiographs of hands in all patients at baseline and at yearly intervals.

Data will be analysed to compare ACR 50, ACR 70, mean ACR (N), HAQ scores, and Sharp scores for each group. We will also compare use of Disease Modifying Antirheumatic Drugs (DMARDs), specifically with regard to initiation in the first year, use of combinations of DMARDs, and use of biologic agents. Multivariate regression analysis will be performed to adjust for confounding variables which might influence outcome, such as