SPARTAN

SPondyloArthritis Research & Treatment Network

Volume 4 Issue 2

SPARTAN NEWS

Greetings!

Welcome to another edition of the SPARTAN Newsletter, with special thanks to Dr. Michael Weisman, Elizabeth Chang, Jessie Walsh, and Mark Hwang for their ongoing contributions. In this edition of the newsletter, we summarize the recent SPARTAN Annual Research and Education Meeting, review two recent publications (which happen to be from two of our members), and highlight upcoming meetings, including a save-the-date for next years' SPARTAN meeting. Please request that trainees at your respective institutions have time set aside now to allow them to attend next year's SPARTAN meeting in Madison.

In conjunction with our European colleagues, a tremendous effort is underway to initiate the CLASSIC study, which will validate the ASAS Classification Criteria. The SPARTAN Board of Directors is also considering a re-alignment of standing committees to better execute the business of promoting our mission.

We would also like to officially welcome Cassie Shafter as Chief Executive Officer of the Spondylitis Association of America (SAA). SPARTAN has been working with the SAA and the American College of Rheumatology to complete a revision of the axial spondyloarthritis treatment guidelines.

Thank you to all the individuals who volunteer their time for SPARTAN--your efforts are making meaningful contributions.

Liron Caplan, MD, PhD
Associate Professor of Medicine/Rheumatology
Univ of Colorado School of Medicine
Rocky Mountain Regional Veterans Affairs Medical Center

SPARTAN ANNUAL MEETING HIGHLIGHTS

The 16th Annual SPARTAN meeting featured presentations in both clinical and basic science Spondyloarthritis research and care. The meeting also held its first "Unmet Needs" breakout sessions. Below highlights two of the scientific sessions from the meeting:

Rik Lories from the Clinical division of Rheumatology , KU Leuven, Belgium spoke on basic science research using mouse models for spondyloarthritis. Enthesitis is very common in rodent models for spondyloarthritis. Enthesitis develops in mice with TNF overexpression. Paw unloading was found to prevent arthritis in TNF-dARE mice models. Anti IL-17 and IL-23 have be effective in treatment and prevention of structural damage in HLA-B27 transgenic rats. New bone formation is likely steered indirectly by inflammation from growth factor casades such as BMPs, Wnts and Hedgehogs as inhibition of inflammation tends to inhibit ankylosis. Animal models suggest that biomechanical factors/stress may trigger enthesis or arthritis. Also rodent models suggest anti-cytokine strategies may be effective on enthesis and structural damage in spondyloarthritis.

Angelo Papachristos, an advanced practice Physiotherapist from St. Michael's Hospital, Toronto reviewed the current role of physical therapy in the Biologic Era. He reviewed current evidence in patients with spondyloarthritis and recommendations for physical therapy from the American College of Sports medicine (ACSM). Physical therapy is included in the ACR/SPARTAN 2015 treatment recommendation for Ankylosing Spondylitis/nr-Axial Spondyloarthritis with land-based therapy preferred over aquatic based physical thearpy. The ASCM recommends moderate-intensity of cardiovascular exercise for at least 30 minutes per day or 150 minutes per week; resistance training, neuromotor exercise and flexibility training at least twice a week. JR Millner, et al (2016) made 10 recommendations including anti-TNF therapy and exercise in a 2016 review in Sem In Arthritis & Rheumatism. Review of 12 clinical trials in spondyloarthritis with a total of 826 AS patients evaluated, which included cardiovascular exercise, only one trial met ACSM recommendations for intensity, frequency and length of exercise period with the greatest improvement in aerobic capacity (effect size=2.19). Overall the clinical trials showed small improvements in spinal mobility (ES=0.02-0.67). Although five trials included muscle strengthening, none measured physiologic responses not meeting the muscle strength improvement recommendation. A study of 120 Dutch outpatients with Ankylosing spondylitis underwent three weeks of spa exercise therapy with follow-up weekly group therapy which was found to be more effective and cost effective.(van tubergen et al 2002 Arthritis Rheum).

As the evidence is not strong for physical therapy as there are no specific protocols for physical therapies being used in studies, Mr. Papachristos concluded that with diagnosis patients should be educated about their disease, medication therapy and a baseline fitness assessment should be made. In the first 6-9 months, the patient would be introduced to basic exercises for range of motion and flexibility with gradual increase of exercise efforts. At 12 months, patient would start core cervical and lumbar strengthening followed by cardiovascular and sport recreation.

- Elizabeth Chang, MD

CRITICAL REVIEW OF LITERATURE

Dubreuil M, Louie-Gao Q, Peloquin CE, Choi HK, Zhang Y, Neogi T. Risk of myocardial infarction with use of selected non-steroidal anti-inflammatory drugs in patients with spondyloarthritis and osteoarthritis. Ann Rheum Dis. 2018 Apr 19. [Epub ahead of print]

This well-designed observational study evaluates the relationship between NSAID exposure and myocardial infarction (MI) risk in people with two types of spondyloarthritis (SpA), ankylosing spondylitis or psoriatic arthritis. The incidence of MI was compared between the SpA group (n=8140) and a control group of osteoarthritis (OA) patients (n=244,339). The MI incidence was also compared amongst subgroups with current, recent, and remote NSAID exposure (≤180 days vs. 181-365 days vs. > 365 days, respectively). In SpA patients, the MI incidence in current diclofenac users was elevated compared to remote diclofenac users (adjusted OR 3.3, CI 1.6-7.0). In contrast, the MI incidence in current vs. remote NSAID users was not elevated in the naproxen group or the other NSAID group in SpA patients. In OA patients, the MI incidence was also higher in current diclofenac users than remote diclofenac users (adjusted OR 1.3, CI 1.1-1.4). The difference between current and remote diclofenac use was more pronounced with SpA than with OA (ORSpA:OROA 2.6, CI 1.2-5.6), but the statistical significance did not persist with sensitivity analysis. The authors acknowledged that the association between diclofenac and MIs was insufficient to conclude that diclofenac caused an increased MI risk, since NSAID prescriptions may be a marker for other factors that may impact MI risk (i.e. increased pain or disease activity). Furthermore, the number of adjustment covariates was large relative to the number of events (MIs). The findings were provocative, and the methodologies were sound, but the findings should be confirmed with further research prior to changing practice patterns with NSAID selections for SpA patients.

Wang DM, Lin L, Peng JH, Gong Y, Hou ZD, Chen SB, Xiao ZY. Pannus inflammation in sacroiliitis following immune pathological injury and radiological structural damage: a study of 193 patients with spondyloarthritis. Arthritis Res Ther. 2018 Jun 8;20(1):120.

The relationship between pannus formation, structural joint damage, and inflammation was evaluated with sacroiliac joint (SIJ) biopsies from 193 axSpA patients (mean age 23.5, mean disease duration 4.0 years). Pannus was defined as highly vascular granulation tissue from inflamed synovium or subchondral bone marrow. Subchondral pannus was the most common distinguishing feature between the axSpA patients and 12 autopsy controls without axSpA (81.9% vs. 0%) and was frequently observed in axSpA patients with low grade sacroiliitis (77% of SIJs with grade 0-1 sacroiliitis). In axSpA patients with available radiographic data (n=98), cartilage pannus (OR 2.99) and endochondral ossification (OR 3.97) were statistically associated with radiographic progression. To explore the relationship between pannus and inflammation, inflammatory mediators in cartilage were compared in axSpA subsets with and without cartilage pannus: inflammatory mediators (VEGF, MMP-3, TNF-a) were higher in the subset with pannus. Despite this association, the causal relationship between pannus and inflammation remains uncertain. It is not clear from reading the article that the histological and immunological studies were carried out blinded to the imaging findings of sacroiliitis, making the conclusions problematic. [JW1] Nevertheless, the finding that there is a primary subchondral component in early sacroiliitis suggests that the initiation of SIJ pathology may not depend on invasion of inflammatory cells from the joint cavity, such as might occur in Rheumatoid Arthritis. We need additional immune-histologic studies of SIJs with clear definitions of disease features that are made independently from one another, and comparisons should be made in a masked manner.

- Jessica Walsh, MD

Jane Bruckel Early Career Investigator Award in Axial Spondyloarthritis

As part of the ongoing mission to expand horizons in spondyloarthritis research, the Spondylitis Association of America hopes to encourage new, upcoming rheumatologists and researchers to focus on the future of treatment and research in ankylosing spondylitis and related diseases.

About the Award
This is a Spondyloarthritis Research Grant recognizing outstanding contributions to the care and understanding of patients with spondyloarthritis. This is an annually awarded, unrestricted research grant toward axial spondyloarthritis research.

Who should apply?
MDs and PhDs at the level of Assistant Professor or below, currently working at a US institution, who have contributed to the care and understanding of patients with spondyloarthritis.

What do I need to apply?
Complete the online form to submit your basic contact information plus your curriculum vitae, a one-page personal statement discussing accomplishments and plans, and one letter of nomination from a senior investigator.

Application deadline
Applications must be submitted by Saturday, September 15th, 2018.

Spondylitis Association of America™

SpA RELATED SESSIONS AT ACR

Use this handy list of ACR SpA and PsA sessions (clinical and basic science symposia, study groups, meets the professor) to help plan your schedule.

SPARTAN-GRAPPA-ASAS Symposium on Axial Spondyloarthritis (3 hours CME)
Wednesday, October 24
1:00 - 4:00 pm
Marriott Marquis Chicago
Great Lakes B
Registration

CLASSIC INVESTIGATORS' MEETING

CLASSIC

Sunday, October 21
6:00 p.m.
Pizano's | 2106 S Indiana Ave | Chicago, IL 60616

We are now very close to securing all the funding necessary to implement the CLASSIC study. The study protocol has been approved by all our industry partners

and contracts are being finalized. We will be proceeding with ethics applications for sites that have already indicated their interest in participating. Since we announced the site budget there have been many queries about the study procedures, particularly those pertaining to imaging. We are therefore planning a meeting of CLASSIC investigators and coordinators that will be attending ACR this year. This will be very informative and may also save you money! It is also a great opportunity to meet everyone and compare notes regarding patient recruitment over dinner.

Investigators, coordinators, and industry partners planning to attend should **register here**.

Best regards,
Walter P. Maksymowych
on behalf of the CLASSIC Steering committee
Lianne Gensler, Atul Deodhar, Liron Caplan

UPCOMING SPONDYLOARTHRITIS EVENTS

SAVE THE DATES!

International Congress on Spondyloarthritis
October 4-6, 2018
Ghent, Belgium

ACR
October 19-24, 2018
Chicago

SPARTAN
May 2-4, 2019
Madison

EULAR
June 12-15, 2019
Barcelona

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