

# PAIN MANAGEMENT

## SPECIAL INTEREST GROUP

### President's Message

John E. Garzione, PT, DPT, DAAPM

The PMSIG program for CSM 2010 is: "Factors that Influence Musculoskeletal Pain: Fatigue, Sex, Personality, Psychology, and Genetics." Steve George, PT, PhD; Kathleen Sluka PT, PhD; and Laura Frey Law PT, PhD are the presenters of this extremely interesting and timely topic. The scheduled time is Friday, February 19th from 8:00 AM – 11:00 AM. The business meeting tentatively planned one hour before the program. Please consult the schedule for last minute changes and room assignments.

Thank you to all who took the time to complete the online questionnaire. The results have been tabulated and I will report on the outcomes in the next newsletter.

#### How Do We Know?

A recent discussion I had with a Physical Therapist brought up the topic of treatment of the chronic pain patient. The question this young man posed was "How do you know if the person is really having a lot of pain or saying so for secondary gain?" This question has haunted practitioners throughout time. There are many questionnaires asking people about their pain levels and impact on function which can be used in any setting to try to measure perceived pain and its effect on function. I was intrigued by a recent article suggesting a 5-panel blood screen to be used to distinguish severe pain levels from mild to moderate pain initially, and track treatment success.<sup>1</sup> Performing a blood test is based on the premise that severe pain affects the pituitary-adrenal-gonad system as well as producing an inflammatory response. Theoretically, a peripheral pain site consists of a damaged nerve, damaged blood vessel, and poor lymph drainage. The site collects plasma exudates, WBC, cytokines, and excess electricity which produce heat and inflammation.

The basic blood panel is: (1) A.M. Cortisol, (2) A.M. Pregnenolone, (3) ESR (Erythrocyte Sedimentation Rate), (4) CRP (C- Reactive protein), and (5) Total Testosterone. Some systemic causes of pain, such as rheumatoid arthritis and hepatitis, will cause an elevated CRP and ESR, but pain unrelated to an underlying disease may also cause these two markers to be elevated. When pain is controlled, these markers will normalize<sup>2</sup> to where low levels rise and high levels decrease. Elevations of pulse, blood pressure, adrenal hormone, and inflammation markers provide biologic evidence of severe pain.

This panel, in addition to a physical exam, should help us more effectively determine which patients truly have severe pain. Cytokine testing has also been suggested as an additional test to confirm chronic pain in our patients. There are 6 basic categories including: interleukins, interferon, chemokines, tumor necrosis factors, colony stimulating factors, and growth factors. Cytokines are a type of signaling molecule that helps with intercommunication between the cells of the body. They

are not produced by single organ like hormones and they do not have a narrow normal target range. Elevated levels of certain cytokines suggest that the body is reacting to injury, illness, or threat. Cytokines levels alone are not specific indicators to make a diagnosis, but provide evidence in favor of a diagnosis when used in conjunction with a history and physical examination.<sup>3</sup> While Cytokine testing and research supporting its use is still in its infancy, I believe further study on the usefulness of Cytokine testing will contribute in becoming another very useful piece of the pain puzzle.

Hope your Holidays were happy and healthy.

Looking forward to seeing you at CSM.

John

#### REFERENCES

1. Tennant F. Screening blood panel to evaluate new chronic pain patients. *Practical Pain Manage.* 2009;8(9):21-22.
2. Tennant F, Hermann L. Using biological markers to identify legitimate chronic pain. *Amer Clin Lab.* June 2002.
3. Singer RS. Cytokine testing in clinical pain practice. *Practical Pain Manage.* 2009;8(9):36-44.



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