New Frontiers in Chronic Myofascial Pain and Central Sensitization:
Integrating Advancements in the Pain Sciences with Evaluation and Treatment Strategies

Organizer: Jay P. Shah (USA)

Description

This workshop will explore the dynamic and pivotal roles that myofascial trigger points (MTrPs), central sensitization, limbic system dysfunction, and objective physical findings play in the evaluation and management of chronic myofascial pain. Fascinating knowledge emerging from the pain sciences will be presented in a clinically accessible way.

Spinal Segmental Sensitization (SSS) is a hyperactive state of the dorsal horn caused by nociceptive bombardment. Painful MTrPs are associated with chronic myofascial pain and are a common source of persistent nociception and sensitization, resulting in SSS and facilitated segments. Furthermore, maladaptive changes in subcortical structures and dysfunctional descending inhibition may create somatic tissue abnormalities (e.g., tissue texture changes, tenderness, etc.) in addition to adversely impacting mood, affect, and sleep. Typical manifestations of SSS include physical findings of dermatomal allodynia/hyperalgesia, sclerotomal tenderness, and MTrPs within the affected myotomes.

Participants will learn to recognize and examine these objective and reproducible physical findings in order to identify the dysfunctional spinal segment(s) that should be targeted for treatment. They will also learn needling techniques that deactivate painful MTrPs and the sensitized spinal segments associated with them in order to effectively alleviate chronic myofascial pain. The diagnostic and treatment techniques presented are applicable in the management of a variety of chronic musculoskeletal pain conditions.

Learning Objectives

Upon completion of this workshop, participants will have learned:

1) The unique neurobiology of muscle pain and the dynamic interplay of muscle nociceptors and endogenous biochemicals in the initiation, amplification, and perpetuation of peripheral and central sensitization

2) How to palpate and distinguish active (i.e., spontaneously painful) MTrPs from latent MTrPs and to identify the referred pain patterns commonly encountered in clinical practice

3) How to determine the reproducible physical manifestations of spinal segmental sensitization (involving dermatomes, myotomes, and sclerotomes) observed in chronic myofascial pain and dysfunction
4) Dry needling techniques that desensitize the involved segments, deactivate painful MTrPs, and alleviate chronic myofascial pain and dysfunction

Speaker Bio

Jay P. Shah, MD is a physiatrist and clinical investigator in the Rehabilitation Medicine Department at the National Institutes of Health in Bethesda, Maryland-USA. His expertise is in the evaluation and mechanisms of chronic and myofascial pain and treatment techniques such as dry needling and acupuncture. His presentations integrate the fascinating knowledge emerging from the basic and clinical pain sciences.

Dr. Shah and his co-investigators have utilized novel microanalytical and ultrasound imaging techniques that have uncovered the unique biochemical milieu (e.g., inflammatory mediators, neuropeptides, etc.) and viscoelastic properties of active myofascial trigger points (MTrPs). Their studies have revealed objective, reproducible, and quantifiable muscle tissue properties associated with MTrPs and quantitative effects of dry needling on these tissue properties.

Dr. Shah was selected by the American Academy of Pain Management as the 2010 recipient of the Janet Travell Clinical Pain Management Award for excellence in clinical care and by the National Association of Myofascial Trigger Point Therapists as the 2012 recipient of the David G. Simons Award for excellence in clinical research.