

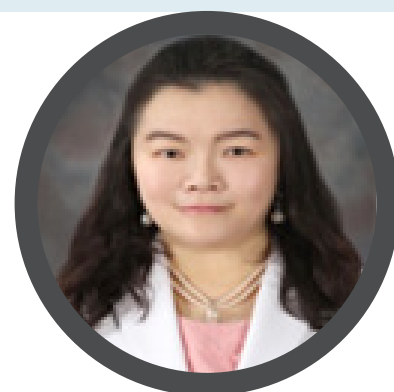
September 10-11, 2018
Prague, Czech Republic

Areerat Suputtitada, J Nurs Health Stud 2018 Volume: 3
DOI: 10.21767/2574-2825-C4-010

MYOFASCIAL PAIN SYNDROME AND SENSITIZATION IN NURSING CARE

Areerat Suputtitada

Chulalongkorn University and King Chulalongkorn Memorial Hospital, Thailand



Myofascial pain syndrome (MPS) is a major musculoskeletal pain that occur in every age group, and has been associated with numerous pain conditions including radiculopathies, osteoarthritis, disc syndrome, tendonitis, migraines, tension type headaches, computer-related disorders, spinal dysfunction, pelvic pain and pain during pregnancy. Myofascial pain is identified by palpating skeletal muscle for myofascial trigger points (MTrPs). An MTrP is classically defined by Professor Janet G Travell and Professor David G Simons as "a hyperirritable spot in skeletal muscle that is associated with a hypersensitive palpable nodule in a taut band" Although the specific pathophysiological basis of MTrPs development and symptomatology is unknown, there are evidences of histological, neurophysiological, biochemical, and somatosensory abnormalities. These emerging findings suggest that myofascial pain is a complex form of neuromuscular dysfunction consisting of motor and sensory abnormalities involving both the peripheral and central nervous systems. Sensitization in corresponding spinal segments plays a major role in the formation of continuous pain in a given part of the body. The term called by Professor Andrew A Fischer for this phenomenon is "spinal segmental sensitization" (SSS). SSS is a hyperactive state of the spinal cord caused by irritative foci sending nociceptive impulses from a sensitized damaged tissue to dorsal horn neurons. The clinical manifestation of dorsal horn sensitization includes hyperalgesia of the dermatome, pressure pain sensitivity of the sclerotome and myofascial trigger points within the myotomes, which are supplied by the sensitized spinal segment. There are significant elevated levels of substance P, calcitonin gene-related peptide (CGRP), bradykinin, tumor necrosis factor- α (TNF- α) and interleukin-1 β (IL-1 β), serotonin, and norepinephrine in the vicinity of the active myofascial trigger point. Overall, pH was significant lower in the active trigger point. The mechanism consists of the nociceptive stimuli generated in the sensitized areas bombarding the dorsal horn of the spinal cord. This causes central nervous system sensitization with resultant hyperalgesia of the dermatome and sclerotome and spreads from the sensory component of the spinal segment to the anterior horn cells, which control the myotome within the territory of the SSS. The development or amplified activity of MTrPs is one of the clinical manifestations of SSS. The Segmental Desensitization treatment consists of injection of local anesthetic agents in the involved dermatome to block the posterior branch of the dorsal spinal nerve along the involved paraspinal muscles. In addition, local anesthetic injection is applied peripherally near the foci of irritation in local soft tissue, directly into taut bands and trigger points, using a needling and infiltration technique. Stretching exercises, local heat application and additional transcutaneous electrical nerve stimulation (TENS) treatment complete the muscular relaxation after the injections. Extracorporeal shockwave therapy (ESWT) and High Intensity Laser (HTL) also play a role as desensitization. Prevention of recurrence should focus on appropriate ergonomic changes common in patients' day-to-day activities to avoid repetitive stress to the injured muscles. In conclusion, MPS, a common pain syndrome consists of local pathology and SSS. Hence therapeutic approaches require varieties of techniques for eradication of trigger point and desensitization of the whole related spinal segment, Therapeutic exercises and proper postures during daily activities are important for prevention of recurrence.

Biography

Areerat Suputtitada is Professor of Rehabilitation Medicine, full time working faculty at Chulalongkorn University and King Chulalongkorn Memorial Hospital in Bangkok, Thailand. She received 14 national awards, 7 international awards, and published more than 60 international and 20 national articles in the areas of her experts including neurological rehabilitation, spasticity and dystonia, gait and motion, and Pain. She has also been invited to lecture as the keynote speakers, parallel and symposium speakers and be chairpersons for over 100 international conferences.

prof.areerat@gmail.com

Areerat.Su@chula.ac.th