

The Role of Neuro-Inflammation in Thermal Regulation  
(Abstract)

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The sympathetic nervous system (SNS) modulates thermal regulation; control of vital signs; and control of the immune system. Any stressor stimulates the immune system to cause inflammation, neurodermatitis, edema, skin eruptions, stimulation of T-cell lymphocytes and immunoglobulin up-regulation. In complex regional pain syndrome (CRPS), the inflammation is mistaken for carpal tunnel, tarsal tunnel, TOS, arthritis, and rotator cuff syndrome. The unnecessary surgical treatments severely aggravate the neuroinflammation. Neuropathic nerve injury causes vasoconstriction distally, and vasodilation in the corresponding paravertebral nerve regions due to the transmission and accumulation of SP, NO, etc to the spinal cord. Infrared Thermal Imaging (ITI) identifies the hyperthermic paravertebral accumulation of irritative neurokinins causing headache, dizziness, neck and back pain. Epidural and paravertebral nerve blocks and I.V. mannitol relieve the edema, pain and entrapment neuropathies sparing the patient from trauma of surgery.

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