

International Conference and Exhibition on
Pain Medicine

June 08-10, 2015 Chicago, USA

Brain networks predict placebo response in experimental and clinical models of placebo treatment

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The advent of new imaging methods and data modeling techniques has revolutionized our capacity to understand and utilize brain signals. With these techniques, the dynamic interactions between the complex elements of the brain can be used to effectively decode the neurological substrates of pain perception and modulation. The task to discover how intricately connected brain networks process and modulate pain is an important scientific challenge that can leeway into novel clinical tools and improved pain therapeutics. This talk will present evidence that brain network properties can be used to predict the time course of pain experiences. We have reported that synchronizations in specific brain networks in particular BOLD frequency bands forecast outcomes of placebo treatment in chronic back pain patients that were tested in clinical trial conditions. More recently we have discovered that computationally characterized whole brain network alignments predict subsequent induced placebo analgesia in a clinical population of knee pain patients. These findings indicate a role of network configurations in facilitating adaptive pain modulation.

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Interventional procedures for patients with thoracic pain syndromes

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Thoracic back pain is common throughout life however isn't studying as neck pain or low back pain. Thoracic pain symptoms are significant, however the quantity of publications on the etiology of thoracic pain is limited. The objective of this focused review is to discuss the interventional procedures (fluoroscopic or ultrasound guided techniques) commonly used for chronic thoracic pain syndromes and then introduce these syndromes during discussion. Thoracic selective nerve root block is useful in diagnosis and treatment of thoracic radicular pain that can be created by intercostal neuralgia and pressure to nerve root that exists from intervertebral foramen or because of rib pathology, scare of thoracic surgery or due to scoliosis. Intercostal nerve block is useful in the evaluation and management of pain involving the chest wall, upper abdominal wall, post-thoracotomy pain, cancer pain, rib fractures, metastatic lesions of the liver, liver hemangioma and PHN. Thoracic medial branch block should be considered if the patient complains of paravertebralpain that worsens with prolonged standing, hyperextension or rotation of the thoracic spinal column. Thoracic sympathetic block is used in the control of chronic benign and malignant thoracic and mediastinal pain syndromes, including: neuropathic pain in thorax, chest wall, thoracic viscera, herpes zoster, PHN, phantom breast pain, cancer of the esophagus, heart, bronchi, trachea, lung, pleura, or other chronic pain of esophagus. Thoracic paravertebralblock is useful in the evaluation and management of pain involving the chest wall, the upper abdominal wall, thoracic spine, post-thoracotomy pain,posterior rib fractures, PHN, cancer pain, including invasive tumors of the thoracic spine.As the intercostal nerve block is a simple block and most of thoracic pain syndromes respond to this injection. It seems, after a correct diagnosis, pain management of thoracic pain syndromesis not difficult.

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