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Complex Regional Pain Syndrome: A Brief Perspective

Khuong Lahn*

Vin University College of Health Sciences, Hanoi

Perspective

Complex regional pain syndrome, also known as reflex sympathetic dystrophy, refers to a group of painful diseases marked by persistent regional pain that appears to be disproportionate in time or severity to any known trauma or other lesion. Changes in the somatosensory systems, which process noxious, tactile, and temperature information; the sympathetic systems, which innervate skin structures like blood vessels and sweat glands; and the somatomotor systems, which control movement, cause complex regional pain syndrome. The modifications indicate that the central nervous system representations have been updated. Patients with complex regional pain syndrome also have abnormalities in their peripheral nervous system. Pain (spontaneous pain, hyperalgesia, allodynia), active and passive movement disorders (including an increased physiological tremor), abnormal regulation of blood flow and sweating, oedema of skin and subcutaneous tissues, and trophic changes of skin, skin organs, and subcutaneous tissues are the most common symptoms. Inflammation caused by the nerves' release of certain pro inflammatory chemical signals, sensitised nerve receptors that send pain signals to the brain, dysfunction of the local blood vessels' ability to constrict and dilate appropriately, and maladaptive neuroplasticity are all clinical features of the complex regional pain syndrome. The signs and symptoms of the complicated regional pain system usually appear close to the site of the injury. Extreme pain, such as searing, stabbing, grinding, and throbbing, are the most typical symptoms. The pain is too severe in comparison to the severity of the initial injury. It is generally impossible to move or touch the limb. Patients with either type I or type II of complex regional pain syndrome may experience searing pain and allodynia such as pain to non-painful stimuli. Autonomic dysfunction, which manifests as localized temperature fluctuations, cyanosis, and/or edema, is present in both disorders. These criteria are simple to utilise and were created with clinical application in mind. These criteria, however, are still excessively sensitive and lack specificity for scientific inquiry, and a more restricted definition should be adopted, as suggested by Bruehl and coworkers. A typical clinical picture of sensory, motor, and autonomic complaints is formed by complex regional pain syndrome. These symptoms will be described in depth in the following sections. The statistics mostly represent the findings of our department's study of more than 450 patients with complex regional pain syndrome. The most common symptoms are pain and hyperalgesia. At rest, 75% of patients experienced pain that was aching, burning, pricking, and occasionally shooting. The pain is usually located deep in the afflicted extremity in the majority of individuals. Hyperalgesia was reported by nearly all (100%) of the patients. Hyperalgesia to mechanical impact (pinprick) stimuli is discovered after a thorough research of hyperalgesia. The presence of indicators indicating substantial autonomic and inflammatory alterations in the pain location distinguishes complex regional pain syndrome from other chronic pain syndromes. The presence of indicators indicating substantial autonomic and inflammatory alterations in the pain location distinguishes complex regional pain syndrome from other chronic pain syndromes. Patients with the most severe form of the disease have a limb with extreme hyperalgesia and allodynia (normally non-painful stimuli like touch or cold are perceived as painful); obvious changes in skin colour, skin temperature, and sweating compared to the unaffected side; edoema and altered hair, skin, or nail growth patterns in the affected region; reduced strength; tremors; and dystonia. Reduced limb positioning accuracy, delays in identifying limb laterality, anomalous referred sensations and tactile perception, and changed subjective mental representations of the diseased limb may all be signs of impaired body perception and proprioception. The syndrome is frequently linked to severe impairments in daily activities and ability to operate. Since its discovery as an unique pain illness during the American Civil War,13 complex regional pain syndrome has gone by several names, including reflex neurovascular dystrophy, neuro-algodystrophy, shoulder-hand syndrome, reflex sympathetic dystrophy, and causalgia, to mention a few. The simple question of whether complicated regional pain syndrome should be classed as a neuropathic pain disorder continues to divide experts in the field. The motion-dependent amplification of pain in all individuals with complicated regional pain syndrome is explained by mechanical hyperalgesia. Mechanical hyperalgesia in complex regional pain syndrome may be caused by central sensitization, according to current basic scientific knowledge. This is especially true for the third of patients who suffer from allodynia (pain induced by a brush), such as those with long-term complicated regional pain syndrome. Although there is no specific diagnostic test for complex regional pain syndrome, a variety of tests can aid in the diagnosis; however, the most important job of testing is to rule out other illnesses. When vasomotor indications and symptoms are evident, vascular investigations are recommended to rule out a vascular cause. Although there is no specific diagnostic test for complex regional pain syndrome, a variety of tests can aid in the diagnosis; however, the most important job of testing is to rule out other illnesses. When vasomotor indications and symptoms are evident, vascular investigations are recommended to rule out a vascular cause. Electrodiagnostic tests may be used to rule out certain neuropathic disorders such peripheral neuropathy, entrapment neuropathies, and nerve damage. Complex regional pain syndrome is uncommon in the general population, although it affects 4%-7% of individuals who have had a limb fracture or surgery. Acute CRPS, which is characterised by a warm, red, and edematous appearance, often disappears with minimal intervention. In a subgroup of patients, complex regional pain syndrome develops into a chronic condition, generally accompanied by a change in appearance to one that is chilly, dark, and sweating.

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***Address for Correspondence:** Lahn K, Vin University College of Health Sciences, Hanoi, Email: khuonlahn343@gmail.com*

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