

# The Role of Mobilization and Physical Therapy in the Treatment and Prevention of Complex Regional Pain Syndrome

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## Short Communication

Complex Regional Pain Syndrome (CRPS) is a chronic, debilitating pain condition thought to be caused by heightened sympathetic nervous system activation in response to an injury [1]. CRPS can present with features including pain that is out of proportion to the initial injury or trauma, skin and nail changes, redness, discoloration, and edema of the affected extremity. CRPS is a difficult disease to treat due to a lack of understanding of its cause and predisposing factors.

The patient is a 44-year-old woman who presented to our neurology clinic with complaints of severe ongoing pain in her right ankle and lower leg associated with swelling, redness, and skin changes. She developed the symptoms following surgery to repair a ruptured Achilles tendon that was then managed with immobilization for eight weeks followed by physical therapy. Her exam was significant for allodynia, hyperesthesia, and vasomotor changes in the R ankle and lower leg, and she was diagnosed with early CRPS [1]. The patient was treated with sympathetic nerve blockade, a total of 2400 mg of gabapentin per day, TENS unit, and aggressive physical therapy. The physical therapy involved treatment four times a week for 6 months with emphasis on desensitization with varying textures and increased weight-bearing activity. Physical therapy also included massages using lymphedema techniques for skin stretching, along with active and passive range of motion exercises. She had complete resolution of her symptoms.

This case report and literature review emphasizes the key role of aggressive physical therapy, rather than immediate immobilization, in the treatment and possible prevention of CRPS. Physical therapy has been demonstrated to be effective as a treatment of complex regional pain syndrome if started

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early after disease onset (within 6 months) [2]. Immobilization may contribute to the disease process, as a previous study has shown that immobilization alone, without a previous underlying injury, can elicit a constellation of symptoms similar to CRPS [3]. Furthermore, a retrospective case review of 134 patients with CRPS found that 47% of those individuals had a history of physician prescribed immobilization [4]. Lastly, immediate use of passive motion following supraspinatus tendon repair has been reported to reduce the incidence of CRPS when compared to those patients treated with immediate immobilization [5]. While it is known that starting physical therapy early in the course of CRPS may help to reduce disability and pain and improve functional status, we believe that further study on the benefit of immediate passive range of movement exercises in reducing the incidence of CRPS and aggressive physical therapy for 6 months or longer as a treatment for chronic CRPS is warranted.

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