

# COMPLEX REGIONAL PAIN SYNDROME TREATED WITH COMBINED STELLATE GANGLION AND AXILLARY BRACHIAL PLEXUS BLOCKS

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## BACKGROUND

Finding an algorithmic approach to treating chronic regional pain syndrome remains elusive. This case series tracks the development of CRPS in tandem with varying treatment modalities. In particular, these received combinations of stellate ganglion blocks and somatic nervous system blockade with reported improvement in pain relief.

## METHOD

Two patients identified to have chronic regional pain syndrome type I were followed in clinic over the course of one and five years, respectively. During clinic visits patients underwent routine physical examinations and were asked questions detailing the development and improvement of their symptoms. When appropriate, medical therapies were adjusted as needed.

## RESULTS

A 23-year-old female with Ehlers-Danlos and multiple joint dislocations requiring a total of 20 surgeries including, bilateral di-rotational osteotomies, open-reduction-internal-fixation-left-knee-surgery, and hardware removals presented with CRPS-I. She failed therapeutic measures with physical therapy, medical management, and multiple lumbar plexus blocks. She experienced relief with a spinal-cord-stimulator, but symptoms spread to her left-upper extremity. A left stellate ganglion block provided symptomatic relief for one week. Combined stellate ganglion and axillary brachial plexus blocks allowed complete resolution with slow recurrence after one week. Repeated blocks with diminishing efficacy were delivered three weeks later with return of lower extremity symptoms. Two weeks later, the blocks were repeated with stimulator reprogramming resulting in relief lasting three weeks. She underwent a cervical spinal cord stimulator trial and presented two weeks later with CRPS-like symptoms in her right upper extremity. Subsequently, her CRPS involved the right leg and both upper extremities, and she underwent right lumbar sympathetic, stellate ganglion, and brachial plexus blocks with symptomatic improvement.

A 31-year-old female with thoracic outlet syndrome status-post left first-rib removal and veno-lysis in February 2002, presented with worsening left-sided neck and upper-extremity pain, weakness, temperature-changes, and numbness for three months. She was diagnosed with CRPS-I in her left upper extremity after failing therapy with a chiropractor, heat and cold, multiple physical therapy regimens, and medical management. Relief from spinal cord stimulator, periodic brachial plexus and stellate ganglion blocks, and several surgeries excising scar tissues, allowed her to wean off hydromorphone. Almost six months after her initial combination blocks, her pain remained manageable with repeat blocks, spinal cord stimulator, and adjustments to medical management. Both patients continue to be followed.

## CONCLUSION

More studies are needed on the treatment options of CRPS including those exploring the viability of combined sympathetic and somatic nervous systems blockade.

## ACKNOWLEDGMENTS

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