Pain Diagnostics and Interventional Care

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Pictured above id Dr. Provenzano with Dr. Bremer at the West Virginia Society of interventional Pain Physicians (WVSIPP) Pain Medicine meeting in Miami, Florida. At this meeting Dr. Provenzano gave lectures on complications with implantable devices, new methods of using ultrasound in pain medicine, and CDC guidelines on the prescription of opioids.



# Complex Regional Pain Syndrome (CRPS)

## Background

Complex regional pain syndrome (CRPS), formerly known as Reflex Sympathetic Dystrophy (RSD) is a condition that typically affects the extremities. The condition is usually a response following injury or trauma to the affected area such as deep cuts, crushing injuries, fractures, or surgery. Although the specific cause or mechanism of CRPS is unknown, it is believed to be caused by damage or malfunction of the nervous system. It is

The symptoms experiences with CRPS are typically more severe than one would expect following an injury and persist even after the injury has healed.

The Symptoms of CRPS usually impact day-to-day activities in a significant way and may spread to other areas. This condition is typically diagnosed using the Budapest Consensus Criteria; however, the condition is a diagnosis of exclusion. This means that other causes are considered prior to the diagnosis of CRPS. No specific diagnostic test is available.

CRPS commonly involves symptoms of temperature, color, and sweating changes, decreased range of motion, and changes in thought that the nervous system overreacts to a stimulus causing a variety of symptoms. CRPS can be classified as type I or type II.

CRPS type I involved symptoms not connected with an injury to the nerves and accounts for >90% of cases. CRPS type II, referred to as causalgia, occurs when there is direct injury to the nerve.

### Symptoms

the pattern of hair or nail growth. Less frequently, patients may complain of resting tremors, pan occurring with a nonpainful stimulus such as light tough (allodynia), or an abnormally increased sensitivity to pain such as to pinprick (hyperalgesia).



#### **Mission**

To professionally and passionately provide evidence-based medical care for patients with varied pain states and to advance the science of pain medicine through research and education.

#### Practice Spotlight

We warmly welcome a new Practice Manager to our team for the start of the 2022 calendar year.

Carolyn has been a longtime friend of Dr. Provenzano and has helped with the practice's accounting needs in the past.

With her arrival, Carolyn brings with her years of experience as a certified public accountant and a desire to optimize efficiency in the clinic.

## **Treatment Options**

The condition can be challenging to treat. Early diagnosis and treatment is critical for a successful outcome, but more advanced technologies may be warranted. The idea is to "push" the patient in the direction of healing.

Injections such as stellate ganglion blocks or lumbar sympathetic blocks are used to "reset" the sympathetic nervous system, a part of the nervous system responsible for producing symptoms associated with the condition in some individuals. Medications such as nerve pain and anti-inflammatory medications are often prescribed. If these conservative treatments are not producing favorable results, more advanced technologies may be employed such as spinal cord stimulation or dorsal root ganglion stimulation. These technologies are used to interrupt the pain signals from reaching the brain. Extensive research has demonstrated the effectiveness of these treatment options for CRPS.

It is important to attend regular physical or occupation therapy sessions while being treated with other intervention. Many would think to allow the injured

### **Clinical Research**

At Pain Diagnostics and Interventional Care, we engage in clinical research to further the science of Pain Management and to help in the advancement of treatment options for our patients. Furthermore, by conducting clinical research we can reach the lives of others who we do not meet directly but are positively affected by our contributions to the science.

Our research department is currently enrolling patient's in two studies related

to Radiofrequency Ablation. Our research department is an integral part of our clinic's mission, and we are proud to have had such success with our endeavors.

We owe a big thank you to past and present patients who have agreed to be part of the research and we look forward to continuing our work with new patients in the future.

#### **Current Studies**

#### Avanos Lumbar

This study is being performed to assess the relative effectiveness of medial branch nerve ablation with the cooled radiofrequency probe to manage chronic low back pain stemming from facet joints when compared to radiofrequency ablation using a standard radiofrequency probe. Both treatments are already proven to be effective and are FDA approved.

#### **RAPID Study**

The purpose of this study is to gather data related to the duration of pain relief provided through routine clinical use of the FDA approved Boston Scientific radiofrequency ablation system. This study is unique in that it focuses on the use of radiofrequency ablation but is not confined to a specific area of the body.