

Reflex Sympathetic Dystrophy: A Medical-Legal Challenge

Reflex Sympathetic Dystrophy (RSD) also known as Complex Region Pain Syndrome (CRPS), is a chronic, progressive neurological condition that affects the skin, muscles, joints and bones. The syndrome most frequently develops after an injury such as a broken bone, however many cases involve only a minor injury such as a sprain. The injury may be so minor that the person does not even remember being injured. In some cases, no precipitating event can be identified. Plaintiff attorneys face an uphill battle trying to get the defense to accept this condition or a jury to understand that just because the person before them appears normal that they could have this debilitating condition.

Incidence and Prevalence

Millions of people in the United States suffer from this chronic pain syndrome. RSD affects both men and women, but is more common in women. It can occur at any age, including children, but usually affects adults between 40 and 60 years old.

According to the National Institute of Neurological Disorders and Strokes, 2% to 5% of patients with peripheral nerve injuries and 12% to 21% of patients with paralysis on one side of their body develop RSD as a complication. The Reflex Sympathetic Dystrophy Association of America reports that RSD occurs after 1% to 2% of fractures.

Causes and Risk Factors

RSD is not well understood. It is best described as an injury to a nerve or soft tissue that does not heal in the normal way. As stated above, it does not depend on the severity of the injury.

Conditions that are associated with the onset of RSD include:

- ❖ Trauma (leading cause). RSD may occur in up to 30% of Colles (wrist) and tibial (lower leg) fractures

- ❖ Lesions in the brain
- ❖ Heart disease, heart attack
- ❖ Infection
- ❖ Paralysis on one side of the body
- ❖ Radiation therapy
- ❖ Repetitive motion disorders such as carpal tunnel
- ❖ Spinal disorders
- ❖ IV infiltrations
- ❖ Injections and routine venipuncture (blood drawing)
- ❖ Surgery
- ❖ No direct cause can be found in 10-20% of cases.

Diagnosis

Early diagnosis is critical, but RSD is often difficult to diagnose. A thorough history and neurologic exam are extremely important. The exam involves comparing extremities for skin color and temperature, swelling and reactivity of blood vessels, overgrown and grooved nails, swollen and stiff joints; muscle weakness and atrophy (wasting). Other conditions are ruled out with appropriate testing that may include MRI, blood work, EMG (to study the nerves and muscles) and a test known as a thermogram, which uses an infrared video camera to measure the emission of heat from the affected limb. A normal thermogram does not mean the patient does not have RSD, but an abnormal one may be helpful before a jury when there are minimal objective findings documented in the medical record. Certain patterns of abnormal heat emission are also more indicative of the presence of RSD.

In order to make a diagnosis of RSD the patient must have pain that is out of proportion to the initial injury or event, plus one or more of the following:

- ❖ Abnormal function of the sympathetic nervous system (burning pain, extreme sensitivity to even light touch, skin color and temperature changes).
- ❖ Swelling
- ❖ Movement disorders (difficulty moving or initiating movement, stiff joints, tremors, severe and incapacitating muscle cramps).
- ❖ Changes in tissue growth.

Characteristic Signs and Symptoms

RSD is very unpredictable but the symptoms may progress in three stages.

1. **Stage I or Acute:** (First 1-3 months) Onset of severe pain limited to the site of injury, localized swelling, increased sensitivity to touch, increased hair and nail growth in the affected area, joint pain and stiffness, color and temperature changes (red, blue, hot, cold) and increased sweating.
2. **Stage II or Dystropic:** (3-6 months) Constant, severe pain and swelling that is more widespread; hair may become coarse, then scant; nails may grow faster then slower and become brittle, cracked and heavily grooved; extremity feels cool and looks bluish; spotty wasting of bones (osteoporosis) may become severe and widespread; muscle wasting begins.
3. **Stage III or Atrophic:** Cool and shiny skin, irreversible, marked wasting of muscles and tissues, intractable pain involving the entire limb. Symptoms may spread to opposite extremity. A small percentage of people develop generalized RSD affecting the entire body.

In RSD, pain is made worse by changes in temperature, active and passive movement of the extremity, light pressure from clothing or air currents, emotional stress and excitement. Since even the slightest movement can cause extreme pain, the affected extremity is usually kept immobile or splinted. There can be a remission of symptoms for weeks, months or years.

Treatment

The cornerstone in the treatment of RSD is normal use

of the affected extremity. This is accomplished through physical therapy, medications, nerve blocks and TENS units (transcutaneous electrical nerve stimulation).

Psychosocial evaluation must be considered in all patients with RSD. This should be performed by an expert in chronic pain and should include assessment of pain coping skills, drug abuse potential and suicide risk.

Other treatment options are sympathetic blocks, sympathectomy (removal of a sympathetic nerve to the affected extremity), spinal cord stimulation (uses low intensity, electrical impulses to stop pain messages from the brain) and implanted pumps using either morphine or baclofen (a muscle relaxer).

Problems and Effects of RSD

- ❖ Extreme Pain
- ❖ Lifelong pain for some patients
- ❖ Depression and anxiety
- ❖ Prolonged family disruption
- ❖ Family sorrow for loved ones
- ❖ Disability and unemployment
- ❖ Misdiagnosis and disbelief of pain syndrome
- ❖ Improper treatment and therapies
- ❖ Multiple operations and unsuccessful surgeries
- ❖ Loss of quality of life
- ❖ Increased health care costs
- ❖ Physician inexperience in dealing with RSD

Source: <http://rsds.org>. Also of interest: "Handling Expert Witnesses in Complex RSD Cases" at <http://www.doereport.com/20010105rsd.php?A=> ♦

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