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Painful, Disabling Disorder

Easily Misdiagnosed, RSD May Be Liability Trap

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REFLEX Sympathetic Dystrophy, a nervous system disorder, is usually treatable in its early stages, but is often misdiagnosed, which leads to a delay in treatment. RSD results in constant burning, stabbing pain and skin surface changes in the affected area, almost always accompanied by severe swelling. The pain can be exacerbated by the slightest touch, change in temperature and even sudden noise or emotional distress. Given the problems of misdiagnosis and the devastating results, RSD — which occasionally comes up in disability, employer negligence and product liability litigation — could be a liability trap for health care providers as well. Furthermore, medical care itself can sometimes trigger the disorder.

RSD usually develops secondary to injury, although there have been cases in which no initiating injury could be identified. S.W. Mitchell, a Civil War physician who studied this disorder in soldiers suffering gunshot wounds, noted that patients experienced a burning, stabbing pain that was disproportionate to the severity of the injury, and persisted long after the wound had

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Potential for RSD Claims Lies on Two Fronts

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ealed. He called the disorder causalgia, from the Latin causaticus, to burn, due to the burning nature of the pain.

Since this ground-breaking work, there has been a great deal of investigation into this disorder. Today, reflex sympathetic dystrophy is a blanket term for causalgia and other disorders involving the characteristic burning pain, swelling and trophic changes.

Numerous Risk Factors

There are many recognized risk factors linked to the development of RSD, although the precise cause and mechanism continues to mystify the medical community. The disorder is known to arise secondary to trauma, including high-velocity projectiles, bone fracture, sprain, amputation, carpal tunnel syndrome, spinal disk disease, nerve injury and even a simple cut. It may also arise secondary to an injection, tight casts, traction injury or as a surgical complication. Thus, as medical procedures can be significant contributing factors in the development of RSD, they, too, may become the basis for potential lawsuits.

RSD involves a malfunctioning sympathetic nervous system (SNS). The SNS is part of the autonomic nervous system (ANS), known as the self-governing nervous system. The ANS controls bodily functions that do not require and are usually considered beyond conscious control, such as blood circulation, digestion, heartbeat, etc. The SNS is the part of the ANS that controls the "fight or flight" reaction — the body's physiological response to situations of stress or emergency.

In an emergency situation, the SNS responds by evacuating waste products from the body, increasing energy production and availability to the muscles. Glands throughout the body release hormones that prepare the body for immediate response. To protect against excess blood loss in the case of injury, the SNS constricts blood vessels in the limbs to decrease the volume of blood in the limbs.

As the emergency situation dissipates, the SNS enters a "reflex" period in which the blood vessels dilate, increasing the blood flow to the limbs. In RSD, this mechanism is somehow disrupted. Blood begins to engorge the area, causing swelling and destruction of smaller blood vessels and other tissues, resulting in pain. This pain re-excites the SNS, which kicks in the fight-or-flight response, and the malfunctioning system feeds on itself.

Left untreated, RSD will progress through three stages. The first stage involves swelling and pain to the affected area and increased sensitivity to touch, temperature change and even slight wind, sound or other air vibrations. The second stage involves moderate swelling with increased nail and hair growth to the affected area, deterioration of muscles and tendons in the limb, with continued pain. Stage three involves the spread of the pain and associated symptoms to other parts of the body. Stage three RSD is rarely cured, and patients often find life impossible with the excruciating pain.

As mentioned, the successful treatment relies almost entirely on early diagnosis, which is not always obtained. The disparity of the pain associated with a given injury and that experienced with RSD often leads physicians to the erroneous conclusion that the patient is malingering or exaggerating. Patients often will describe the sensation as if a painful glove or stocking was covering the affected area. This pathology violates the physiology of the nervous system, and often is taken by physicians to indicate a hysterical or conversion disorder, although the distribution of pain likely does reflect the area of damaged tissue. Consequently, patients often are referred for psychiatric evaluation, resulting in critical loss of time in the delivery of appropriate treatment.

Proper Diagnosis & Treatment

The diagnosis of RSD relies heavily on the clinical evaluation of the patient. Patients will usually exhibit swelling, burning and stabbing pain, and changes in the skin appearance in the affected area. Diagnosis can be supported with radiographic and thermographic techniques. Some patients will also respond to treatment with steroid hormones. The confirmation of RSD is almost always made with sympathetic blockade — the injection of an anaesthetic into the bundle of nerves from the affected area as they enter the spinal cord.

The treatment of RSD depends on the disorder's state of advancement at the time of diagnosis. In early stages, RSD can be treated effectively with aggressive physical therapy, often combined with ice baths, transcutaneous electric nerve stimulation and thermal biofeedback. More advanced stages of the disease can be treated effectively with sympathetic blockade, as mentioned above, combined with physical therapy.

Patients who do not respond to sympathetic blockade may benefit from sympathectomy, the surgical severing of the nerve bundles as they enter the spinal

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cord. Advanced, stage three RSD may not respond to this treatment. In these cases, treatment consists of the implantation of a morphine pump by which the patient controls the administration of the narcotic to help ease the pain.

Patients in all stages of RSD require psychotherapy to help deal with the severity and handicaps of the pain. The constant pain leaves the patient with significant emotional distress.

Patients fortunate enough to have a swift diagnosis and effective treatment usually experience full recovery. But for individuals who are diagnosed late in the progression of the disease or who are given treatment that is not sufficiently aggressive or effectively followed through, the quality of life can be drastically reduced.

Thus, for health care professionals, the potential for litigation over RSD lies on two fronts: Imprudent or negligent medical treatment actually can initiate the disorder, and the condition can be exacerbated by continual misdiagnosis or delay in appropriate treatment.