



## R.S.D. AND SYMPATHETICALLY-MAINTAINED PAIN

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If you represent injured persons, you may encounter a puzzling condition. Your client has suffered a relatively minor trauma to an arm or leg or perhaps a hip or shoulder and now has pain complaints that seem out of proportion to the injury. Perhaps the condition followed minor surgery to an arm or leg, or even an IV line or injection of a pain medication, or perhaps prolonged stretching of a limb during surgical positioning. The client complains of excruciating pain in an arm or leg a persistent, deep burning pain and extreme sensitivity to even the lightest touch, such as a breeze or contact with clothing. Over time, there may be objective changes to the extremity, such as swelling, changes in coloration, or even hair loss or changes in nail characteristics.

What your client is probably experiencing is a form of sympathetically maintained pain (SMP). The terms used over the years for this condition have been varied: causalgia, reflex sympathetic dystrophy (RSD), and shoulder-hand syndrome. The condition was first described after the Civil War, when Dr. Weir Mitchell noted extreme, burning extremity pain in soldiers who had suffered bullet injuries that were otherwise healed. The term "causalgia" was used, meaning "a syndrome of sustained burning pain after a traumatic

nerve injury combined with vasomotor and sudomotor dysfunction and later trophic changes."

Over the years since Dr. Mitchell's writings physicians have continued to describe the phenomenon, but medicine is only at the threshold of understanding the pathophysiology of this condition. It seems to involve the most complex aspects of pain mechanisms in the sympathetic nervous system and in the transmitting of pain signals through the spinal cord to the brain.

One model supposes a person with an abnormal sympathetic reflex who suffers a painful, although perhaps minor, lesion. Because of the hyperactive sympathetic nervous system, the lesion leads to a persistent maintenance of sympathetic vasoconstriction. This leads to painful ischemia, and thus sets up a "pain reflex" which leads to constant sending of pain signals through the spinal cord, even when the stimulus for the pain is relatively minor. Thus, with a minor touch to the involved extremity, the "pain message" sent to the brain is that of significant trauma. The body responds by further vasoconstriction, leading to such symptoms as swelling, discoloration, changes in hair growth and sweat patterns, etc.

Eventually, in advanced forms of RSD, there will even be changes in bone structure, leading to osteoporosis that can be seen on bone scan, and joint and muscle atrophy. The explanations of how this relates to nociceptive nerve

fibers and the operation of neurons and mechanoneuroreceptors are more complex than this author, and probably most of the readers of this article can understand.

Just as there are many theories explaining SMP, there is also much disagreement about the diagnosis and treatment of the condition. Diagnosis is usually made on the basis of the clinical features described above, plus the response to sympathetic nerve blocks (anesthesia of the ganglia for the involved part of the sympathetic nervous system). If the nerve block provides immediate pain relief and increased temperature of the extremity, the diagnosis is considered confirmed. In some cases, the nerve blocks also serve as treatment, and even as a cure, of the condition. However, if the blocks lead only to temporary relief of the painful symptoms, surgical interruption of the sympathetic nervous system is sometimes attempted through a "sympathectomy," or severing of the involved part of the sympathetic nervous system.

Other treatments may include antidepressants and narcotic pain medications. Some physicians believe that trigger point injections of anesthesia may help relieve the pain cycle. In persistent or extreme cases, morphine pumps may be surgically installed to control the pain, or spinal cord stimulators may be implanted.

Treatment methods are controversial, and there is little agreement about what works and why. One consensus, however, is that early diagnosis of the condition, followed by physical therapy for the affected limb (range of motion and strength exercises), offers the best chance of stopping the progression of symptoms. Splinting or immobilization of the limb is considered a cause of worsening pain symptoms.

If your client presents with some of the signs or symptoms described above, don't be confident that the primary care physician will come up with the correct diagnosis. Many physicians will think the patient is exaggerating his/her symptoms, and may conclude that there is a psychological problem or secondary gain involved. The "psychological" diagnosis may be reinforced by the fact that those with SMP often exhibit depression and mental distress, and that some of the SMP symptoms seem to worsen with certain emotional states, such as anger, fear, and mental distress.

Those most familiar with and able to diagnose SMP or RSD are neurologists and psychiatrists, or other physicians involved with chronic pain clinics (such as anesthesiologists), but many family practitioners will know little of this phenomenon. If your client complains of SMP symptoms, you should be sure that they are referred to a neurologist or other physician who is more likely to understand and be able to treat this serious and potentially disabling condition.

In representing someone with SMP, keep in mind, also, that even though the "triggering" trauma may be relatively minor, or the SMP symptoms

only occur after treatment for the initial trauma, the very serious symptoms of SMP are nonetheless caused by the initial trauma. Thus, a minor foot injury may involve soft-tissue damage that leads to SMP symptoms that then cascade into full-scale RSD. What would otherwise be a minor damage claim could now be a 100% disability for someone engaged in physical labor. Even if the injured person doesn't face occupational disability, the chronic pain of SMP may be a life-time affliction that has a dramatic emotional impact on the client and his/her family.

You may face a cynical and disbelieving claims representative if you make a claim of SMP after a relatively minor trauma. Many insurance representatives will scoff at such a claim and assume the claimant is making up or exaggerating the symptoms. This makes it even more important that you consult with knowledgeable physicians who can explain SMP, its seriousness, and its causative relationship to the tort-caused trauma. It also mandates that you consult the medical literature about this condition so that you can start the process of figuring out how to explain it to a jury. If the claims representative knows that you are able to educate a jury about SMP and its impact on your client, the value of your claim has greatly increased.

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