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DEBUNKING THE "SCIENCE" OF COMPLEX REGIONAL PAIN SYNDROME - TYPE I

Origin and Evolution of RSD and CRPS I Diagnosis

Complex Regional Pain Syndrome – Type 1" (CRPS-I) remains a controversial condition best considered as a "default condition" to be applied only when an exhaustive differential diagnostic process has failed to provide any other explanation for the clinical presentation.

Despite the presence of this symptom complex being reported since the mid-19th century, no laboratory studies, pathophysiology or "true positive" has ever been established to confirm or refute this condition. In other words, the construction of this default condition is based upon supposition.

A concept of "Syndromic" diagnoses abound in contemporary medicine. It is not unusual for such conditions to become established clinically based upon a variety of subjective complaints (including pain) without the ability to establish any objective support or substantiation for the presence of tissue pathology or "disease." This can lead to unfortunate consequences including poor outcomes and iatrogenic complications (including addiction).

DIAGNOSIS ELEMENTS

Establishment of any diagnosis requires that the evaluating healthcare provider complete a history and thorough physical examination directed toward the presenting clinical scenario. This should be followed by appropriate laboratory and diagnostic evaluations (blood tests, x-rays, et cetera). Treatment would then be directed toward presumptive conditions and re-evaluation within a narrow time frame should interventions fail to produce expected clinical benefit.

Appropriate intervention should be followed by exhaustive additional evaluation should the initial treatment fail to produce improvement in clinical status.

When this process fails to provide the expected scientifically based explanation for the clinical presentation then the clinician could conclude the presence of "medically unexplained symptoms" (MUS) exists. This scenario would represent subjective complaints without any clear scientifically based medical explanation.

The implication here is that subjective complaints be accurately reflected in an explanatory pathological disease process (diagnosis): There must be a medical explanation for the clinical presentation. If there is no such explanation, then all avenues must be pursued to address those symptoms. This would include both the physical and the non-physical.

All too often in the situation of "CRPS type I," history and physical examination information is not provided, nor are alternative explanations pursued. Rather, a course of interventions in accompaniment with narcotics is provided with very limited results.

Further establishment of this theoretical disease state (especially in compensation seeking scenarios) is often accompanied by statements of causation usually without scientific or medical explanation ("Ipse Dixit"). Absent scientific support from concepts such a "Biologic Plausibility", and "dose response", the presence of a "disease state" is very difficult to support.

CRPS as a MEDICAL-LEGAL DIAGNOSIS

The legal issues surrounding CRPS I reflect the lack of clarity in the science. This may primarily be secondary to the subjective nature of this condition coupled with a lack of objective substantiation of its presence. This can often produce great confusion among legal experts.

Medically unexplained symptoms have been associated in the clinical literature with anxiety and depressive disorders. It is not unusual for emotional disturbances to manifest themselves as physical problems. This is best delineated with a thorough history and physical examination and an understanding of pathophysiology.

The clinical picture now termed "CRPS type I has been reported in the clinical literature for centuries; however, the clinical presentation has been confusing. There are now approximately 80 names for this condition and almost as many diagnostic criteria. More recently, the International Association for the Study of Pain (IASP) have revised their "diagnostic criteria" and have removed the term "injury" replacing it with "inciting event."

The American Medical Association (AMA) textbook of causation has addressed this as an issue noting that this change in the diagnostic criteria removes the capability of utilizing scientifically based criteria of causation, significantly weakening any association with science and the default condition known as CRPS type I.

Evolution of "RSD" to "CRPS"

Previously, the condition discussed herein has been referred to as Reflex Sympathetic Dystrophy, or "RSD." In 1994, the IASP abandoned this definition of the condition as it was not scientifically or medically supportable and the clinical presentation too inconsistent. Implementation of the "CRPS type-I" construct was provided and "RSD" abandoned as a clinical construct as it was no longer sustainable.

CRPS was subdivided into type I and type II with type II reflecting an actual and definable peripheral nerve injury. The term “Complex regional pain syndrome” was adopted, but remains an extremely vague and ill-defined term.

In 2004, in a private "by invitation only" conference held in Budapest, the diagnostic criteria were altered and the concept of "injury" removed. This was an attempt to improve the "sensitivity" and "specificity" of the diagnostic process.

These terms (sensitivity and specificity) reflected the hallmark of diagnostic accuracy. The term "sensitivity" reflects the ability of a test or process to detect "true positives" and "specificity” true negatives. This distinction is based on medical and scientific certainty. Since there is no diagnostic test, study, process or procedure to identify "true positives" with CRPS I and "true positives" are mandated if one is to use epidemiologic tenets, then sensitivity and specificity are useless and meaningless terms in the discussion of complex regional pain syndrome type I.

In other words, there is no way to ascertain that an individual receiving the default condition known as “CRPS I” truly HAS that condition.

Dangers of RSD/CRPS I Diagnosis to Insurers and Defense Counsel

In numerous instances the complexity of defending a claim for RSD or currently CRPS Type 1 damages has led to inflated damages awards.

The Failure to Make a Jury/Commissioner Understand the Issues Leads to Inflated Damages Awards.

For several reasons including the subjective nature of the diagnosis, some personal injury lawsuits have arrived in the nation’s courtrooms to be decided by jury panels before a comprehensive game plan for defending against the claims could be devised and tested. The results in some instances have been alarming.

In the Louisiana case of LeMasters v. Boyd Gaming Corp., the defense had the claimant independently examined by a neurosurgeon who testified RSD is difficult to confirm and diagnosis was based on the plaintiff’s subjective complaints of pain and decreased grip strength. The defense Independent Medical Examination (IME) physician did not exclude RSD and the result was a modest jury award which was substantially increased by an appellate court which ruled as a matter of law

In 2014, the Florida Supreme Court affirmed policy limits judgment against an insurer based upon evidence of RSD type 1 diagnosis. A jury had awarded the sum of $4.6 million dollars for injury although the insurer’s liability was limited to the extent of its insurance policy limits of $100,000. In defending the claim, the insurer claimed an IME was essential because the claimant sought recovery of significant losses due to complications from injuries but the diagnosis was completely subjective in nature.

The Failure to Select the Correct IME Physician Leads to Admission of Junk Science

In a May of 2014 Arkansas workers comp case, the claimant sustained injuries at work to right upper extremity and was paid for a 37% anatomical impairment. The claimant subsequently sought compensability of RSD in right hand/wrist as natural consequence of compensable injury. The selected IME Physician testified RSD is a dynamic disease which may be present one day and absent the next. The doctor testified the patient's symptoms could be attributed to non-related carpal tunnel syndrome, diabetic neuropathy and thyroid problems. The doctor testified RSD may occur spontaneously and disagreed with other physicians' diagnoses of RSD and impairment rating.

The Arkansas Court of Appeals held the evidence supported the Commission's findings of RSD, a compensable consequence of compensable injuries and the IME Physician's testimony was weighed by court and found to be less credible than that of treating physicians with the result being a judgment for the claimant was affirmed.

Essential Elements of CRPS

The existing CRPS diagnostic criteria include four basic components according to IASP. In order to satisfy the diagnostic criteria items 2, 3 and 4 must be satisfied.

Criteria I includes the presence of "an initiating noxious event or cause, which is listed as "not required for diagnosis." Criteria 2 and 3 require a description of pain and a report of skin changes neither of which are mandated as being documented by the examining physician, only a report of same.

Criteria 4 is exclusionary, noting that this diagnosis "is excluded by the existence of other conditions that would otherwise account for the degree of pain and dysfunction"

Criteria 4 is never discussed, addressed or utilized.

The Flaws in Diagnostic Criteria for CRPS I

The clinical scenario, which is presented with CRPS type-I is consistent with a painful limb and altered function of the sympathetic nervous system referred to as "dysautonomia".

The sympathetic nervous system is the "fight or flight" response intrinsic to human function and controls factors such as skin temperature, sweat patterns, hair and nail growth, gastrointestinal, cardiac and genitourinary function.

The clinical presentation referred to as "CRPS type I" is consistent with a "painful limb" (and/or possibly painful peripheral neuropathy) and dysautonomia.

OTHER FACTORS CAUSING THE SYMPTOMS ASSOCIATED WITH CRPS

Common causes of this combination include obesity, diabetes, infectious processes such as hepatitis or Lyme disease, rheumatoid arthritis, alcohol abuse, autoimmune phenomenon, cancer, Crohn's disease, etc. The actual list is quite extensive.

The most common among these include obesity, alcoholism, and diabetes. Painful peripheral neuropathy may follow any of these conditions based upon nutritional and metabolic abnormalities, which can lead to a painful neurologic disorder and the above-noted dysautonomia.

The population at risk for the development of this combination includes individuals with obesity (especially those who have had a gastric bypass or major abdominal surgery), alcohol and tobacco users those with severe systemic disease or autoimmune conditions, diabetes or hepatitis. The complete list is quite long

The concept of "CRPS type I" as "spreading" is equally unsustainable. However the concept of "spreading" of a painful peripheral neuropathy is predictable based upon an understanding of the underlying science

A condition known as "CRPS type-I" has been reported to spread to other extremities. This concept is unsustainable from a medical and scientific perspective. However, the concept of "spreading" of painful peripheral neuropathy is predictable based upon an understanding of the underlying science. This occurs commonly among diabetics and alcoholics.

The Future of CRPS - I

The condition know has "CRPS type-I" when it appears in the clinical record should be a red flag for a medically trained physician and/or legal professional to begin an exhaustive and intense effort to search for the underlying cause of this clinical presentation. If one does not search for the underlying cause then it is highly unlikely that any benefit with respect to any form of intervention will be achieved. This concept may explain why the recovery rate from "CRPS type-I" is a limited.

Mental health issues must also be a serious consideration especially when investigating the differential diagnostic possibilities of this clinical presentation. Common conditions which can lead to significant immobilization of an extremity includes severe anxiety, somatoform disorder, depressive disorders, psychotic disorders, personality disorders.

It is not unusual for individuals with painful limbs and/or dysautonomia to be treated with narcotics since such intervention does nothing to address the underlying cause. The

narcotics become effective only transiently and/or increased over a period of time. This increase will result in addiction over a relatively brief time frame (approximately two months). Addiction and addiction behaviors must therefore also be considered in the differential diagnosis of this presentation.

CONCLUSION / QUESTIONS

Complex regional pain syndrome type-I is a default condition to be established only when an exhaustive differential diagnostic process has failed to produce any other explanation. Failure to evaluate an individual with such a clinical presentation often results in poor outcomes and ongoing treatment directed toward symptoms not the underlying pathologic process.