Complex Regional Pain Syndrome – Psychological Care

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CRPS - History

• CRPS (complex regional pain syndrome) initially considered in early 1800s by Claude Bernard et al.

• During the Civil War soldiers who suffered from low-velocity, high-mass missile injuries developed a neuropathic pain that was termed "causalgia" by Silas Weir-Mitchell.

• In 1940s the term of RSD (reflex sympathetic dystrophy) came into use.

• Since that time much study and frustration has come from this relatively rare condition of which the pathophysiology is still not fully understood.

• CRPS is rare, but has started to see an increase in diagnosis.
Background

- Often seen after injury to a limb or related to some inciting event.
- The patient complains of and can manifest skin color/temperature/appearance changes in the affected limb.
- Pain often excruciating – burning, tingling, electric-like, etc. are often symptoms that patients feel. The pain is often out of proportion to stimulus or the event.
Diagnostic Criteria

IASP (International Association for the Study of Pain) diagnostic criteria include 4 subjective and/or objective findings:

- 1. The presence of an initiating event or a cause of immobilization – peripheral injury or central (stroke, etc)*. (Injury)
- 2. Continuing pain, allodynia, or hyperalgesia in which the pain is disproportioned to inciting event. (Sensory)
- 3. Evidence of edema, changes in skin blood flow, or abnormal sudomotor activity in region of pain. (Vasomotor)
- 4. Diagnosis is excluded by the existence of other conditions that would otherwise account for the degree of pain/dysfunction.

One symptom from each category (except #1 as 5% of pts lack known event) and at least one sign from 2 categories must be evident to diagnose CRPS, at least by research criteria.

*Not always present or identifiable.
Symptoms

- A "burning" and "stinging" sensations that occur spontaneously. seen in as many as 87% of cases.
- 69% of patients report hyperesthesia with light touch (such as clothing laying on the skin or even draughts of blowing wind).
- Vasomotor dysfunction is manifested by asymmetrical edema in affected limb, skin color and temperature changes, abnormal sweating and skin/ nail changes.
- Patients may also complain of muscle jerking, myoclonus, or rigidity in affected limb including contractures of hands and feet.
CRPS I & II

• The majority of patients seen are diagnosed with CRPS type I – or reflex sympathetic dystrophy (RSD). This is the less painful, debilitating of the two.

• CRPS II (causalgia) is related to a known injury to a specific major nerve with neuropathic pain frequently following along the distribution of that nerve alone, though not always.
Treatment

Treatment usually consists of several objectives:

• Functional restoration of affected limb - often should be considered first before other treatments
• Sympathetic and/or motor blocks
• Cognitive behavioral techniques
• Psychotherapy
• Pharmacotherapy
• Occupational and physical therapy
Diagnosis
CRPS
Care Continuum

Pain Management with
Oral and Topical Drugs
Psychological Treatment
with Educational Focus

Rehabilitation Pathway

Psychological Treatment
- Assess for Axis I Disorders
- Pain Coping Skills
- Biofeedback/Relaxation Training
- Cognitive Behavioral Therapy for Treatment of Axis I Disorders

Interventional Pain Management
Minimally Invasive
- Sympathetic Nerve Block(s)
- IV Regional Block(s)
- Somatic Nerve Block(s)

More Invasive
- Epidural and Plexus Catheter Blocks
- Neurostimulation
- Intrathecal Drug Therapy (e.g. Botox, Kenalog)

Surgical or Experimental Therapies
- Sympathectomy
- Motor Cortex Stimulation

Inadequate or Partial Response

Failure to Progress in Rehab

Progress

Failure to Progress in Rehab

EXCELLENT RESPONSE

Follow Up

Relapse

Repeat Pathway
Behavioral Medicine/Psychology

• High incidence of depression and anxiety
• CRPS patients also develop a type of PTSD termed "kinesophobia" or fear of movement related to prior pain or initial injury. The patient develops "negative reinforcements" through fear of initial movements that caused the injury of prior movements that resulted in extreme pain in the past. Fear of movement often results in contractures and reduced functionality.
• Cognitive behavioral therapy (CBT) is the most beneficial psychotherapy to help patients with these concerns, though other interventions including family therapy are also beneficial.
CRPS Prognosis

• Overall the prognosis for patients with CRPS is relatively low. Effective treatments are very patient specific and patient satisfaction, mental state, willingness to be involved in their treatment all contribute to their pain reduction.

• Many patients report extreme lack of satisfaction with their pain control and are usually disabled.

• More research is required into chronic pain and developing better methods to treat chronic autonomic dysfunctional pain.
References

