CHRONIC REGIONAL PAIN SYNDROME
INFORMATION FOR CLINCIANS & PATIENTS

NB) This information has been added to this flowchart as an interim measure whilst awaiting review & addition of CRPS information to the MSk Index Hand pathway.

(Thank you to Rosemarie Quinn, Patrice Berque & Elaine O'Hara for producing this information).

Description:

CRPS typically affects an extremity, such as the hand or foot, and frequently follows a traumatic event such as a fracture, sprain, surgery, immobilization (tight casts or frozen shoulder), and even stroke. The majority of CRPS occurs after a fracture, but can also occur after soft tissue trauma and without identifiable triggering trauma.

The mean age of patients who present with CRPS ranges from 36 to 42 years, with 60% to 80% of patients being female.

Psychiatric co-morbidities such as anxiety and depression were previously reported as being common in CRPS sufferers. However, the Royal College of Physicians state that it is now clear that CRPS is not associated with a history of pain-preceding psychological problems.

https://www.rcplondon.ac.uk/guidelines-policy/complex-regional-pain-syndrome-adults

Diagnosis:

'Budapest Criteria' for complex regional pain syndrome

Complex regional pain syndrome describes an array of painful conditions that are characterised by a continuing (spontaneous and/or evoked) regional pain that is seemingly disproportionate in time or degree to the usual course of any known trauma or other lesion. The pain is regional (not in a specific nerve territory or dermatome) and usually has a distal predominance of abnormal sensory, motor, sudomotor, vasomotor, and/or trophic findings.

There is also evidence of elevated sympathetic activity, and central abnormalities including disruption of sensory cortical processing, and desinhibition of the motor cortex. Cortical reorganisation with shrinkage of the cortical representation of the affected limb, spatial representation deficits (body schema), reduced tactile acuity, reaction time delays have also been observed, and could explain the neglect sometimes occurring with CRPS.

CRPS has been described as a disease of the central nervous system. The syndrome shows variable progression over time.

To make the clinical diagnosis, the following criteria must be met:

- Continuing pain, which is disproportionate to any inciting event.
- Must report at least one symptom in all four of the following categories:
    a) sensory – reports of hyperaesthesia and /or allodynia
    b) vasomotor – reports of temperature asymmetry and /or skin colour changes and /or skin colour asymmetry
    c) sudomotor /oedema – reports of oedema and/or sweating changes and /or sweating asymmetry
    d) motor /trophic – reports of decreased range of motion and /or motor dysfunction (weakness, tremor, dystonia) and /or trophic changes (hair, nail, skin).
- Must display at least one sign at time of evaluation in two or more of the following categories:
    a) sensory – evidence of hyperalgesia (to pinprick) and /or allodynia (to light touch and /or temperature sensation and /or deep somatic pressure and /or joint movement)
    b) vasomotor – evidence of temperature asymmetry (> 1 °C) and /or skin colour changes and /or asymmetry
    c) sudomotor /oedema – evidence of oedema and /or sweating changes and /or sweating asymmetry
    d) motor /trophic – evidence of decreased range of motion and /or motor dysfunction (weakness, tremor, dystonia) and /or trophic changes (hair, nail, skin)
- There is no other diagnosis that better explains the signs and symptoms.

Differential Diagnosis:

As CRPS is a clinical diagnosis of exclusion, it is important to rule out neurologic, rheumatologic, infectious, metabolic, and vascular diagnoses that can present with similar symptoms.

Management:

https://www.nhs.uk/conditions/complex-regional-pain-syndrome/treatment/

Treatment for CRPS involves:

- **education and self-management** (advice about any steps you can take to help manage the condition)
- **physical rehabilitation** (to help improve your function and reduce the risk of long-term physical problems)
- **pain relief** (treatments to help reduce your pain)
- **psychological support** (interventions to help with the emotional impact of living with CRPS)
- **graded motor imagery** (to activate pre-motor cortical areas without evoking pain. This involves laterality recognition, motor imagery, and mirror therapy performed in that order).

Guidelines:

https://www.rcplondon.ac.uk/guidelines-policy/complex-regional-pain-syndrome-adults

https://www.evidence.nhs.uk/search?q=complex%20regional%20pain

https://www.noigroup.com/evidence-base-for-graded-motor-imagery

Physiotherapy and Patient Resources: Education and self management resources.

286895 CRPS Desensitisation Bookl

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286897 CRPS Patient Info Booklet.pdf

286896 CRPS Imagery Booklet.pdf

286898 CRPS Mirror Booklet.pdf

286899 CRPS Laterality Booklet.pdf

https://www.nhs.uk/conditions/complex-regional-pain-syndrome/treatment/

http://www.gradedmotorimagery.com/

https://www.noigroup.com/product/recogniseapp/

(Recognise APP can be purchased from NOI Group-available on IoS and Android)

Evidence:

Moseley GL (2004) Graded motor imagery is effective for long-standing complex regional pain syndrome: a randomised controlled trial. *Pain*. Vol.108:192-198.

Moseley GL (2004) Imagined movements cause pain and swelling in a patient with complex regional pain syndrome. *Neurology*. Vol.62:1644.

Moseley GL (2005) Is successful rehabilitation of complex regional pain syndrome due to sustained attention to the affected limb? A randomised clinical trial. *Pain*. Vol.114:54-61.

Moseley GL (2006) Graded motor imagery for pathologic pain – A randomised controlled trial. *Neurology*. Vol.67:2129-2134.

Moseley GL (2008) Pain, brain imaging and physiotherapy – Opportunity is knocking. *Manual Therapy*. Vol.13:475-477.

Moseley GL, Gallace A, Spence C (2012) Body Illusions in health and disease: physiological and clinical perspectives and the concept of a cortical body matrix. *Neuroscience and Biobehavioral Reviews*. Vol.36:34-46