Hand service

CRPS management – hand specific guidance

Complex Regional Pain Syndrome (CRPS)

A debilitating, painful condition in a limb associated with sensory, motor, autonomic, skin and bone abnormalities.

Pain is typically the leading symptom, but is often associated with limb dysfunction and psychological distress.

Can be divided into two types based on the absence (type 1, much more common) or presence (type 2) of a lesion to a major nerve

Budapest diagnostic criteria

All of the following must be met

- Patient has continuing disproportionate pain
- Patient has at least 1 sign in 2 of the 4 categories
- Patient reports at least 1 symptom in 3 or more of the categories
- No other diagnosis can better explain the signs and symptoms

1 Sensory - Allodynia / Hyperalgesia

2 Vasomotor- Temperature asymmetry Skin colour changes/ Skin colour asymmetry

3 Sudomotor/Oedema / sweating changes/ sweating asymmetry

4 Motor/Trophic Decreased ROM/Power-weak tremor dystonia. Hair/ Nail/Skin changes

Assessment

- pain
- sensation
- swelling
- movement (also consider presence of dystonia)
- function
- Body perception disturbance
- skin temperature/colour
- hair/nail growth
- Emotional, psychological and behavioural disability perceived risk

Treatment Components

- Education
- Pain relief
- Physical rehabilitation
- Psychological intervention

Acute management (suspected or confirmed diagnosis)

- Focus should be on education to expedite recovery .Reassure and educate. This may or may not include any specific reference to CRPS. Celebrate and normalise gains.
- Aim to get the patient on side regarding why functional movement is now vital , why discontinuing immobilization is needed and ensure the concept that the 'injury' has healed are fully introduced.
- Avoid over use of specific exercises or manual techniques that may encourage an increase in pain response and guarding. Work more on gross functional movement patterns.
- Wean off any splints or encourage only intelligent use.
- Normalising movement and restoring a connection with the hand in functional use is vital early on.

Normalise body image

Teach strategies to correct body perception disturbance, involving looking, touching and thinking about the affected body part

Mirror box therapy started at an early stage can help to reduce body image changes. Initiate by just looking into the mirror until no pain is felt before proceeding to any active movements. Each progression is pain dependant and can vary in time taken to progress.

Mental visualisation to normalise altered size and form perception of affected body part

Splinting

Avoidance of over immobilizing the hand in early stages of the condition is vital to prevent dependency on 'abnormal' movement patterns and to restore the concept that the hand is not /no longer injured and needs to be treated normally. Restful splinting may still be required to help control pain levels in the early stages but intelligent use is vital.

Splinting – may be used to position whilst resting to prevent contracture or allow comfort, to improve a specific range of motion or to help with functional use.

Later stages of the condition may require night splinting to correct or prevent contracture. Again weigh up the pros and cons of each approach

Compression therapy

lycra gloves may be used to reduce swelling or to provide sensory stimulus. This may be useful at any stage of rehabilitation. Use of compression glove must be balanced with the psychological impact a glove may have on the individual.

Range of movement – prevent contracture and normalise movement patterns.

Functional movement techniques to improve motor control and awareness of affected limb position

Early prevention is vital as changes can occur very quickly. Educate the patient in how to self assess improvement and deterioration.

Management of CRPS-related dystonia is vital in early and later stages

Strength , dexterity and functional use

Functional strength should be restored using specific functional exercise. Make tasks work specific wherever possible even in a modified format, Principles of stress loading can be introduced to improve proprioceptive feedback

Pain

This is difficult to manage . Medication should be started within a few weeks of established CRPS , This does not take immediate effect. Patients will likely be sent to pain clinic for review. Medication should be continued for a period after resolution of symptoms to prevent reoccurance.

Physiotherapy directly for pain may include acupuncture and TENS glove.

Desensitise hyperaesthesia areas

Self-administered tactile and thermal desensitisation with the aim of normalising touch perception

Silicone patch should only be used where very specific scar hypersensitivity is noticed not in general hyperaesthesia.

Conflict allodynia re-education may be used to reduce fear of physical contact with others in community settings

<u>Later management</u>

- Focus may need to shift to more formal pacing and planning goals , sleep hygiene and relaxation skills , Coping skills may need to be addressed.
- At later rehabilitation stages it may be necessary to add specific exercises to address specific joint or tendon stiffness and prevent contracture development.
- Pushing into pain may become necessary in order to make gains.
- Referral onto pain clinics is very useful to ensure optimal medical management