Body perception disturbances: Assessment and treatment

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Assessment of body perception disturbance

**General screening**

1) Targeted questioning
   - emotions
   - sense of belonging
   - perceived size

2) Simple observation
   Positioning of limb, posture

**Detailed assessments**

Modified Galer and Jensen neglect score
Bath CRPS body perception disturbance scale
Modified Galer and Jensen neglect score

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>If I don’t focus my attention on my painful limb it would lie still, like dead weight.</td>
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<td>2</td>
<td>My painful limb feels as though it is not part of the rest of my body.</td>
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<td>3</td>
<td>I need to focus all of my attention on my painful limb to make it move the way I want it to.</td>
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<td>4</td>
<td>My painful limb sometimes moves involuntarily, without my control.</td>
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<td>5</td>
<td>My painful limb feels dead to me.</td>
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1) On a scale of 0-10 how much a part of your body does the affected part feel? 
Very much a part = 0_1_2_3_4_5_6_7_8_9_10 = Completely detached

2) On a scale of 0-10 how aware are you of the physical position of your limb? 
Very aware= 0_1_2_3_4_5_6_7_8_9_10 = Completely unaware

3) On a scale of 0-10 how much attention do you pay to your limb in terms of looking at it and thinking about it? 
Full attention = 0_1_2_3_4_5_6_7_8_9_10 = No attention

4) On a scale of 0-10 how strong are the emotional feelings that you have about your limb? 
Strongly positive = 0_1_2_3_4_5_6_7_8_9_10 = Strongly negative

5) Is there a difference between how your affected limb looks or is on touch compared to how it feels to you in terms of the following:
Size yes □ no □ Comment………………………………………
Temperature yes □ no □ Comment……………………………
Pressure yes □ no □ Comment………………………………
Weight yes □ no □ Comment………………………………

6a) Have you ever had a desire to amputate the limb? Yes □ No □
6b) If yes, how strong is that desire now? 
Not at all= 0_1_2_3_4_5_6_7_8_9_10 = Very strong
Desired amputation site………………………………………………
Baseline mental representation of affected left leg

Three weeks later
Treatment

Aim: To perceive the limb in a more normal manner

Guiding principles

UK Clinical guidelines for CRPS
Free download at
www.rcplondon.ac.uk/resources/complex-regional-pain-syndrome-guidelines

Complex regional pain syndrome in adults
UK guidelines for diagnosis, referral and management in primary and secondary care

May 2012

Endorsed by:
- The British Psychological Society
- British Orthopaedic Association
- College of Occupational Therapists
- Royal College of General Practitioners
- The Society of Chiropodists and Podiatrists
- BSRM
- The Physiotherapy Pain Association

Also endorsed by the British Society of Rheumatologists and British Health Professionals in Rheumatology
The four pillars of treatment for CRPS

An integrated interdisciplinary approach

Early appropriate intervention is key to outcome
CRPS treatment and referral pathway

Phase 1
Undiagnosed CRPS
Identify CRPS signs and symptoms

Phase 2
Diagnosing CRPS
Consider differential diagnoses
Meet Budapest diagnostic criteria
Confirm diagnosis via GP/Consultant

Phase 3
Managing diagnosed CRPS
Mild/moderate symptoms
Commence treatment
Noticeable response to treatment within 4 weeks and ongoing improvement

Moderate/severe symptoms*
Failing to respond to treatment in 4 weeks
Pain management programme
Refer for specialist CRPS rehabilitation
The Royal National Hospital for Rheumatic Diseases, Bath

* and/or dystonia

Noticeable response to treatment within 4 weeks and ongoing improvement
Sensory discrimination training- (Desensitisation)

- Magnitude of body perception disturbance is associated with worsening tactile acuity and poor stimulus localisation (Förderreuther 2004, Lewis & Schweinhardt 2012)

- Somatosensory blurring (Haggard 2013)

- Tactile stimulation sharpens cortical representation of the painful body in S1 (Flor et al. 2001)

- Somatosensory sharpening (Haggard 2013)

- Effectiveness of training is enhanced by viewing the limb (Moseley & Wiech 2009, Lewis et al 2010)
Why is using distinctly different tactile stimulation important?

Tactile discrimination rather than just stimulation alone has been shown to.....

Tactile discrimination, but not tactile stimulation alone, reduces chronic limb pain

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Improve pain and tactile acuity in CRPS

Normalise cortical representation in phantom limb
Flor H; The Lancet Neurology 2002
Tactile mislocalisation

• Finger misidentification- (finger agnosia)

• Tactile localisation training ¹

¹ Sumi, M et al Neurocase 2014
Royal National Hospital for Rheumatic Diseases (RNHRD)
Bath
De-sensitisation
Guiding principles

• Reduce anxiety
• Visually concentrate on body area
• Use distinctly different stimuli and encourage patient to discern the qualities of each stimuli
• Encourage emotional engagement sense of ownership of the limb
Mirror visual feedback

Treatment

Aim: To perceive the limb in a more normal manner

Other specific interventions
Imagery-static & imagined movements
Pictures and observing the corresponding limb of others

Normalising limb
- painting nails
- wearing jewellery
Neurocognitive Rehabilitation
Dr Carlo Perfetti
70/80s- Perfetti approach/method
• Somatosensory / proprioceptive information to solve a cognitive problem
• Aim to regain multi sensory/motor coherence of the central representation of the body
• Predominantly used in stroke. Now applying to neuropathic pain
• Re-educate healthy side to correctly interpret multisensory information to solve cognitive problem (mainly with eyes closed) – guidance often required to understand how to interpret sensory information on healthy side to answer question
• Relate to non-painful past sensory experience (tactile memory)
• Transfer this to painful side
• Post grad AHPs attend Santorso Institute to become an accredited Perfetti Therapist
Is Perfetti effective in treating pain?

- Little published evidence
- Anecdotal reports - good outcomes
- Little CRPS reported in Italy

- CRPS Case report - lower limb
- 4 weeks of intensive treatment 3hrs per day
- Pain free returned to normal gait

- Theory is inline with central mechanism approach. Similar to incongruence theory of pathologic pain.

- Robust controlled trials are required to determine whether Perfetti method is effective in treating neuropathic pain
Complex Regional Pain Syndrome Conference
IASP SIG 2015
Satellite to EFIC Congress Vienna

Monday 31st August to Tuesday 1st September 2015
Balgrist University Hospital
Zurich, Switzerland

Programme details www.balgrist.ch
IASP members 300€, non members 350€
Registration email: kongress@balgrist.ch