Management options for (chronic non-cancer) pain

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Immediate Past President Australian Pain Society
DEFINITION of PAIN

PAIN is an unpleasant sensory, emotional, and cognitive experience associated with actual or potential tissue damage.

- INTERNATIONAL ASSOCIATION FOR THE STUDY OF PAIN (IASP) 1974
- PS “it is never a straight line”
MS, 65yo woman

- Persistent post-TKR pain 2 years (post-surgical neuralgia?)
- Widespread OA, including
- Years of worsening bilateral LBP (ZJ OA possible?)
- Emerged longstanding mood issues with large childhood traumas → psych/mtzp/pregabalin.
- But has lived a productive life.
It’s a Fan!

It’s a Wall!

It’s a Spear!

It’s a Tree!

It’s a Rope!
The biopsychosocial model of pain posits that biological, psychological, and social factors influence who develops chronic pain (pink circles) and that chronic pain has biological, psychological, and social consequences (blue circles).

**Biological and physical**
- Sex
- Genetics
- Lifestyle (active, sedentary)
- Magnitude of injury or disease
- Medication use
- Nervous system characteristics
- Physical conditioning or obesity
- Sleep pattern

**Psychological**
- Anxiety
- Cognitive beliefs
- Coping skills
- Depression
- Emotional stress
- Negative attitude, fears
- Personality
- Somatization, catastrophization

**Sociocultural**
- Financial barriers or health insurance
- Job satisfaction
- Language and cultural barriers
- Past pain experiences
- Social support system
- Societal expectations
- Substance misuse

**Biological and physical**
- Altered nociceptive pathways
- Loss of gray matter
- Biomechanical problems
- Deconditioning
- Medication use or misuse

**Psychological**
- Anxiety
- Cognitive impairment
- Depression
- Learned helplessness
- Poor concentration

Steven P Cohen, and W Michael Hooten BMJ
2017;358:bmj.j3221
What/where are some of these problems?

Spinal pain (cervical, thoracic, lumbar, sacral) 60%

Headache (migraine, ‘tension’, chronic daily) 15%

Chronic widespread pain- ‘fibromyalgia’, cervicobrachialgia, ‘RSI’, 5%

Abdominal and pelvic pain syndromes 15%

Facial/dental syndromes 5%

Neuralgias- postsurgical and post-injury, disease-related, toxins eg drugs 5%

Etc eg joints 10%
<table>
<thead>
<tr>
<th>Procedure</th>
<th>Estimated incidence of chronic pain</th>
<th>Estimated chronic severe (disabling) pain (&gt;5 out of score of 10)</th>
<th>US surgical volumes (1000s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amputation</td>
<td>30-50%</td>
<td>5-10%</td>
<td>159 (lower limb only)</td>
</tr>
<tr>
<td>Breast surgery (lumpectomy and mastectomy)</td>
<td>20-30%</td>
<td>5-10%</td>
<td>479</td>
</tr>
<tr>
<td>Thoracotomy</td>
<td>30-40%</td>
<td>10%</td>
<td>Unknown</td>
</tr>
<tr>
<td>Inguinal hernia repair</td>
<td>10%</td>
<td>2-4%</td>
<td>609</td>
</tr>
<tr>
<td>Coronary artery bypass surgery</td>
<td>30-50%</td>
<td>5-10%</td>
<td>598</td>
</tr>
<tr>
<td>Caesarean section</td>
<td>10%</td>
<td>4%</td>
<td>220</td>
</tr>
</tbody>
</table>

*Gall bladder surgery not included, since preoperative diagnosis of pain specifically from gall bladder is difficult and persistent postoperative pain could therefore be related to other intra-abdominal disorders. National Center For Health Statistics, Ambulatory and Inpatients Procedures, USA, 1996.

Table 1: Estimated incidence of chronic postoperative pain and disability after selected surgical procedures*

<table>
<thead>
<tr>
<th>Positive symptoms and signs</th>
<th>Neuropathic pain</th>
<th>Inflammatory pain</th>
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</thead>
<tbody>
<tr>
<td>Spontaneous pain in damaged area</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Heat hyperalgesia</td>
<td>Rarely</td>
<td>Often</td>
</tr>
<tr>
<td>Cold allodynia</td>
<td>Often</td>
<td>Rarely</td>
</tr>
<tr>
<td>Hyperpathia (increased threshold and explosive suprathreshold pains)</td>
<td>Often</td>
<td>Never</td>
</tr>
<tr>
<td>Aftersensations</td>
<td>Often</td>
<td>Rarely</td>
</tr>
<tr>
<td>Paroxysms</td>
<td>Often</td>
<td>Rarely</td>
</tr>
<tr>
<td>Burning pain</td>
<td>Often</td>
<td>Rarely</td>
</tr>
<tr>
<td>Throbbing pain</td>
<td>Rarely</td>
<td>Often</td>
</tr>
</tbody>
</table>
PAIN MANAGEMENT PRINCIPLES

“to seek not only a medical diagnosis but also
- emotional
- social
- behavioural
- and occupational diagnoses”
PAIN MANAGEMENT PRINCIPLES

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Remember:
- Validation of the complaint
- ‘Non-specific’ pain=undiagnosed
- Pain is always variable
- Treat the brain processor
- What is the pain
  - Who has the pain
  - With what resources?
MANAGEMENT OF (CHRONIC) PAIN

• MEDICATIONS
• PHYSICAL THERAPIES
• PSYCHOLOGICAL STRATEGIES
• LIFESTYLE and WORK STRATEGIES

• Medical PROCEDURES
MANAGEMENT OF (CHRONIC) PAIN

MEDICATIONS (remember NNT and NNH)

‘direct analgesics’:
- simple analgesics – paracetamol
- ‘compound’ analgesics- with or without opioid (usu. codeine)
- anti-inflammatory
- Pure opioids (immediate and Slow-release). TAPENTADOL

‘adjuvant’ analgesics, ‘pain modulating’:
- Antidepressants- noradrenergic DULOXETINE
- Anti-epileptics- carbemazepine, gabapentinoids, valproate
- Topical- eg capsaicin, anti-inflammatory, compounded multiples
- Cannabis

NNT:
- 2-20
- 2-20
- 5
- 5+
- 5
- 2.6-7
- 8-10
- 25
<table>
<thead>
<tr>
<th>Interventions</th>
<th>Condition</th>
<th>NNT</th>
<th>NNH</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epidural</td>
<td>Low-back pain</td>
<td>7.0 - 14</td>
<td>6</td>
<td>3mths-12mths</td>
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<tr>
<td>Facet joint injection</td>
<td>Neuropathic pain</td>
<td>13</td>
<td></td>
<td></td>
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<tr>
<td>Spinal cord stim</td>
<td>Ischaemic leg pain</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spinal cord stim</td>
<td>Low-back pain</td>
<td>3.2</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>RF neurotomy</td>
<td>Low-back pain</td>
<td>4.4</td>
<td></td>
<td></td>
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<tr>
<td>Root sleeve injection</td>
<td>Radiating leg pain</td>
<td>2.7</td>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Medications</th>
<th>Condition</th>
<th>NNT</th>
<th>NNH</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panadol</td>
<td>Arthritic pain</td>
<td>4.5</td>
<td>12</td>
<td></td>
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<tr>
<td>Neurontin</td>
<td>Neuropathic pain</td>
<td>4.3</td>
<td>2.5</td>
<td></td>
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<tr>
<td>Lyrica</td>
<td>Neuropathic pain</td>
<td>5</td>
<td></td>
<td></td>
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<tr>
<td>Tramadol</td>
<td>Neuropathic pain</td>
<td>3.8</td>
<td>8.3</td>
<td></td>
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<tr>
<td>Endep</td>
<td>Neuropathic pain</td>
<td>3.6</td>
<td>6.0-28</td>
<td>major-minor</td>
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<tr>
<td>Efexor</td>
<td>Neuropathic pain</td>
<td>3.1</td>
<td></td>
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<tr>
<td>Duloxetine</td>
<td>Fibromyalgia</td>
<td>6.8</td>
<td>9.6-16.2</td>
<td>major-minor</td>
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<tr>
<td>Opioids</td>
<td>Neuropathic pain</td>
<td>2.7</td>
<td>4.2</td>
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<table>
<thead>
<tr>
<th>Behavioural</th>
<th>Condition</th>
<th>NNT</th>
<th>NNH</th>
<th>Comments</th>
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<tr>
<td>CBT</td>
<td>Chronic headache pain</td>
<td>2.3</td>
<td></td>
<td></td>
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<tr>
<td>CBT</td>
<td>Abdominal pain</td>
<td>2.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBT</td>
<td>Fatigue</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBT</td>
<td>Inflammation (IBS)</td>
<td>2.1-3.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBT</td>
<td>Mood</td>
<td>2</td>
<td></td>
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MANAGEMENT OF (CHRONIC) PAIN

*psychological strategies will address:*

- Education about Pain
- Fear-Avoidance Behaviour
- Catastrophising (rumination, magnification and helplessness)
- ‘Pacing’
- Coping Styles
- Depression and Anxiety
- Trauma
- Pre-Onset psych factors
MANAGEMENT OF (CHRONIC) PAIN

*Physical strategies will address:*

- Education about functioning despite persisting Pain
- activity modification by behavioural principles
- Physical functional goals, despite persisting pain
- Pre-Onset physical factors
- Some limited hands-on
- Therapeutic massage/touch
MANAGEMENT OF (CHRONIC) PAIN

PROCEDURES Diagnostic and Therapeutic

• Trigger point injections
• Joint injections - peripheral and spinal
• Nerve injections = (peripheral, spinal, epidural, plexus)
• Neurotomy - damaging a nerve by thermocoagulation
• Disc procedures
• Stimulator procedures
• Surgery

NNT - varies with time-frame and degree

3
?
TFE = 3
1.2-2
?
1.5 (can’t do control group)
3-10 (ditto)
MS, 65yo woman

• Good responses to L5/S1 zygapophysial joint injections
• Good response to knee nerve (infra-patellar branch saphenous nerve) injections
• Maybe small fibre neuropathy to explain her burning feet
• → has reasons for her pain, and understands her treatment strategies.
• Her pain continues but she has a realistic plan and is committed.
neuroplasticity

• The physiological function of the brain and spine is not fixed in its current state in any individual

• We are modifiable according to ‘inputs’
neuroplasticity

- The physiological function of the brain and spine is not fixed in its current state in any individual

- We are modifiable according to ‘inputs’
Issues to consider:

• Low levels of physical activity in our communities
• Pain resources- appropriateness, availability, affordability, and accessibility
• Pain resources- time and cost commitment by a motivated patient
• Pain levels are always variable in intensity and spread ➔ any continuous use of analgesics means dependency,
Issues to consider:

• The INTERDISCIPLINARY approach is valuable:

• Recognise the effects of a range of combined and co-ordinated options to assist a person deal with their range of issues

• Assist setting the stage for ‘readiness to change’
SELF-MANAGEMENT

• Self-management is founded on a patient’s capacity to participate and this is likely to depend on a wide variety of patients’ specific issues including:
  • ability to identify and understand health messages
  • access to information and services
  • skills to decide what is useful information.

• Understanding these will optimize a patient’s capacity to seek, understand and utilize health information to participate in decisions about their health.

• Although patients accumulate extensive lay knowledge and experience in coping and managing their chronic condition on a daily basis, this does not necessarily mean they become aware or have the ability to access and use health information resources effectively to enhance self-management.

• Facilitate or augment current evidence-based practice

• Self-management educational activities are directed at behavioural change.
Management options for (chronic non-cancer) pain

• Non-opioid options exist with evidence of equal and better efficacy
• Non-medical Pain management options are time-consuming, but show efficacy no worse than many medical treatments.
• Calibrating patient expectations to what they can do despite persisting pain, and that improvements from pain management is measured in not-large percentages is important.
• This is, after all, all that can be achieved with baggage-laden opioids which carry many risks.
Vision: All people will have optimal access to pain prevention and management throughout their life.

Local and IASP Global Year Resources:
• THANKYOU!