Multidisciplinary Pain Management

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FANZCA (Anesthesiology, Aust/NZ)
FFPMANZCA (Pain Medicine, Aust/NZ)
Registered Acupuncturist
As a doctor, our task is:

*To cure is sometime
*To treat is often, but ...
*To comfort is always

A. Pare (1598)
Chronic pain – The burden

Economic burden of chronic pain.
Phillips CJ.
Prevalence of Chronic Pain

• Overall, **8.7%** of the study population had chronic pain. (ie about 392000 people)
• Incidence varies with gender and age.
• Female had a higher incidence.
  – **9.9% or 1 in 10 women** had chronic pain.
  – **7.0%** of men reported having chronic pain.
Prevalence of Chronic Pain

- Incidence increases with age:

<table>
<thead>
<tr>
<th>Age Group</th>
<th>% with Chronic Pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 - 49</td>
<td>6.0%</td>
</tr>
<tr>
<td>50 - 59</td>
<td>12.7%</td>
</tr>
<tr>
<td>60 and above</td>
<td>16.7%</td>
</tr>
</tbody>
</table>

慢性疼痛是一种疾病
Pain Management Services in Singapore

- Rapid growth last 8 years
- Private and Public Hospitals
- Current challenges and Unmet Needs:
  - Acute Perioperative Pain management
  - Preventive Pain Management
  - Chronic Pain Management
  - Cancer Pain Management
  - Special population: Paediatric; Obstetrics; Elderly
    (Drugs cleared by RES)
  - Multimodal analgesia to improve NNT, NNH
Acute pain + insufficient pain therapy
Collapse of the body's pain defenses
Central sensitization
Pain memory
Pain disease

Sandkühler, J.: Preventing Pain Memory. MMW 2002; Special edition 2
Cortical Reorganisation in Central Sensitisation

- At admission
- After 12 weeks functional treatment
Cortical Reorganization

Changes in Brain Gray Matter with Chronic Low Back Pain (CLBP)

- Age related losses in gray matter = 0.5%/year
- Chronic low back pain patients = 5.4% decrease
- Reduced in bilateral prefrontal cortex and right thalamus
- Impact of chronic low back pain is an additional 10 years of brain atrophy
- Duration of chronic low back pain is a strong predictor of gray matter changes

Apkarian et al. J Neuroscience 2004
GPs Play a Pivotal Role in the Ongoing Management of Neuropathic Pain

What type of doctor did you first see, what type of doctor is most responsible for treating the pain you just described?

Median #
MDs seen = 2
Visits in last year = 3

. Neuropathic Pain Patient Flow Survey
GPs Play a Pivotal Role in the Ongoing Management of Neuropathic Pain

Percentages of all patients surveyed in total (n=1056)

- 75% GP first doctor seen
- 46% GP refers to specialist
- 25% Referred back to GP by specialist
- 29% Never referred to specialist
- 54% GP currently managing pain
GPs are Most Challenged in Recognizing Neuropathic Pain

Recognizing most neuropathic pain is easy for me.

Neuropathic Pain Patient Flow Survey
GPs Find Neuropathic Pain More Difficult to Recognize in Some Conditions Than in Others

How challenging is it to recognize neuropathic pain in patients with the following conditions? (n=428 GPs)

Neuropathic Pain Patient Flow Survey
Patient Concerns
Before Surgery

<table>
<thead>
<tr>
<th>Concern</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain after</td>
<td>57</td>
</tr>
<tr>
<td>Improvement</td>
<td>51</td>
</tr>
<tr>
<td>Full recovery</td>
<td>42</td>
</tr>
<tr>
<td>Pain during</td>
<td>34</td>
</tr>
<tr>
<td>Professional</td>
<td>30</td>
</tr>
</tbody>
</table>

Warfield CA, Kahn CH. *Anesthesiology* 1995;83:1090-1094. (Survey of 500 U.S. adults)
Undertreatment of Chronic Pain

• >40% to 50% of patients in routine practice settings fail to achieve adequate pain relief

• In a recent study of 805 chronic pain sufferers, >50% had to change physicians to achieve relief because the physician:
  – was unwilling to treat pain aggressively
  – did not take the patient’s pain seriously
  – had inadequate knowledge about pain treatment

(American Pain Society, 2001; Glajchen, 2001; Lister, 1996; Portenoy, 1996)
## Persistent pain after surgery

<table>
<thead>
<tr>
<th>Surgery</th>
<th>Pain type</th>
<th>Incidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limb amputation</td>
<td>phantom limb pain</td>
<td>30-81%</td>
</tr>
<tr>
<td>Thoracotomy</td>
<td>postthoracotomy pain</td>
<td>&gt;50%</td>
</tr>
<tr>
<td>Breast surgery</td>
<td>chest wall, breast or scar pain; phantom breast pain</td>
<td>50%</td>
</tr>
<tr>
<td>Cholecystectomy</td>
<td>chronic abdominal pain</td>
<td>3-56%</td>
</tr>
<tr>
<td>Inguinal hernia</td>
<td>groin pain</td>
<td>11.5%</td>
</tr>
</tbody>
</table>

Persistent postsurgical pain is a common but under-recognized problem

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Estimated incidence of persistent postsurgical pain</th>
<th>Estimated incidence of severe (disabling) pain</th>
<th>Estimated US surgical volumes (1000s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inguinal hernia repair</td>
<td>10%</td>
<td>2–4%</td>
<td>600</td>
</tr>
<tr>
<td>Lower limb amputation</td>
<td>30–50%</td>
<td>5–10%</td>
<td>160</td>
</tr>
<tr>
<td>Breast surgery (lumpectomy or mastectomy)</td>
<td>20–30%</td>
<td>5–10%</td>
<td>480</td>
</tr>
<tr>
<td>Thoracotomy</td>
<td>30–40%</td>
<td>10%</td>
<td>200</td>
</tr>
<tr>
<td>Total knee arthroplasty</td>
<td>12%</td>
<td>2–4%</td>
<td>550</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>

Risk factors for development of persistent postsurgical pain

1. Genetic susceptibility
2. Moderate to severe preoperative pain
3. Psychosocial factors
4. Age and sex
5. Surgical approach with risk of nerve damage
6. Poorly controlled postoperative pain

Assess the **person**, not just the pain

**Organic factors** + **Culture**

**Past experiences**

**Attitude**

**Expectations**

**Coping efforts**

**Mood**

**Resources; Response of family**

**Impact of pain on life**

**Meaning of the pain in the situation**

**Patient’s perception of pain**
Chronic Pain Management Modalities

• Pharmacological
• Non-pharmacological
• Surgical
• Interventional
• CBT
Figure 4. Estimated prevalence of neuropathic pain depends on individual estimates for each of a wide range of etiologies. Here the numbers of patients are estimated for a U.S. population assumed to total 270 million. Figures for causalgia, reflex sympathetic dystrophy, phantom (i.e., postamputation) pain, and tic douloureux are especially uncertain. The total exceeds 1.6 million patients (0.6% of the population). However, the total is dramatically influenced by low-back pain. Even if only one in 10 such cases has a neuropathic component, as assumed here, the prevalence of neuropathic pain more than doubles, to 1.5% of the population.
Chronic Back Pain Despite Surgery/ Failed Back Surgery Syndrome
Differential Diagnosis

- Internal Disk Disruption - 39% +
- DDD (with or without IDD)
- Facet syndrome - 15% to 45%
- Disc herniation - 4% to 6%
- Sacroiliac Joint Disorders - 19% to 30%
- Degenerative disorders & myofascial syndromes - 5% to 10%
- Post laminectomy & spine fusion syndromes

Schwartzter Spine 19:801-806, 1994
Post Surgical Syndromes

• 20% - 40% of spinal surgeries are not successful initially
• Less than 1 out of 4 of disc surgeries are successful after 5 years
• Re-operation rate of 17-20%
Chronic Post Surgical Pain
Advanced Interventional Pain Management
Permanent Implantable IPG
Acupuncture

- Patel and Colleagues. All randomised controlled trials for chronic pain. J Epidemiol 1989. “Results favourable to acupuncture were obtained significantly more often than chance alone would allow”


- Expert opinions and RCTs
APPROACH TO CRPS MANAGEMENT

• Early diagnosis and treatment
• Interdisciplinary team approach
• Aggressive and comprehensive medical treatment
  – Exercise therapy
  – Pharmacotherapy
  – Regional Anesthetic Techniques
  – Neuromodulation
  – Behavioral support

SURGERY

• surgical techniques may be indicated, eg.:
  ➢ RFA / neurolysis sympathetic ganglia
  ➢ Reconstructive surgery – foot, hand/wrist
  ➢ Amputation – for severe infection or palliation
  ➢ MCS for refractory UE CRPS
  ➢ DBS
Trophic Changes

Extreme
Cognitive Behavioural Therapy
CBT: Evidenced-Based Practice

• Turner and Clancy (1988)
• Bradley, Young, Anderson et al. (1987)
• Keefe, Caldwell, Williams et al. (1990)
• Syrjala, Donaldson, Davis et al. (1995)
• Morley et al. (1999)
Team Members

Pain specialists

- Doctors (Physicians/Oncologist, Radiologist, Surgeons, etc.)
- Physiotherapists/Rehab/OT
- Psychologists
- Nurses
- Pharmacist
Details of Program:

- Eight days
- 9 am to 5 pm
- Mon-Thu the first week
- Tue-Fri the following week
Challenging Your Thought Processes

Distraction Techniques

Pacing

Maintaining Changes

Making Changes to Achieve Goals

Stress and Problem Solving

Sleep Hygiene
Are you pinned down by chronic pain? About 15 to 20 per cent of the population here are thought to have the problem. But pain management programmes can help by challenging how you view and react to your suffering. Shefali Srinivas finds out more.

Mrs Teo still experiences pain, but she now has the tools to deal with it emotionally.

WOUND HEALS BY PAIN MEMORY STORES

‘Pain is not a straight line. Research shows that it is plastic, it can expand. The memory of pain stays on, even when the thing that caused it has healed.’

A pain management programme is directed at undoing the mental process by changing the way pain is perceived, through a change in behaviour. It is called cognitive behaviour therapy and is supported by physiotherapy.

It cannot cure pain but it is...
Average scores SF-36 Questionnaire CBT#2

Scores Max = 100

Components of SF-36 Questionnaire

- PF
- RFP
- BP
- GH
- V
- SF
- RFE
- MH
Everything is pain; Delivery is pain, disease is pain, aging is pain, death is pain, to be away from your beloved is pain, even hatred is pain. Buddha
Thank You

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