Clinical Stream

Chronic Pain in Primary Care

Dr Steve Main
For what avails, valour or strength though matchless, quelled with pain which all subdues and makes remiss the hands of mightiest?

Sense of pleasure we may well spare out of life perhaps and not repine, but live content which is the calmest life.

But pain is perfect misery, the worst of evils and excessive, overturns all patience.ò

—from John Milton “Paradise Lost” (1667)
Define chronic pain

Â Present for more than 3 months!
Â But neuroimaging shows changes within 8 days (experimental animals)
Â Chronic pain rats – sciatic ligature experiments
Â So chronic pain can effectively exist from day one
Incidence of chronic pain

- Reports vary from 2% to 80%
- Best estimate 20% for > moderate pain
- Women more than men
- >50% of over 65s
Causes of chronic pain

- Trauma – major or minor, including surgery
- Following acute illness – e.g. post-herpetic neuralgia
- Rarely apparently spontaneous
- Think of it as a functional scar
- Poor communication
Whiplash

What's going on here?
Incidence varies from country to country
Canada and USA – high
Australia high
New Zealand low
Lithuania very low
Culture and belief can have a profound influence on the experience of pain as well as its expression.
Modulation of Pain Transmission

Gate controls in dorsal horn

Repetitive C-fibre activity facilitates transmission i.e. sensitises the dorsal horn ("wind up" mechanism involves NMDA and substance P receptor)

Descending pathways from midbrain and brainstem can strongly inhibit dorsal horn transmission (PAG, LC, NRM, NRPG) using encephalin, 5HT, NA, adenosine

Opioids act by activating descending inhibition as well as inhibiting dorsal horn transmission and the excitation of peripheral sensory nerve endings

Cortical projections to descending pathways allow emotions and beliefs to influence pain transmission
MECHANISMS OF PLACEBO ANALYSIS

- Placebo
- Expectation
- Conditioning
  - Psy-Neuro Mechanisms
Placebo and nocebo mechanisms

Nocebo
Suggestion of hyperalgesia

Placebo
Expected or conditioned analgesia

Non-opioid mediators

Anxiety

Cholecystokinin

Pain

Endogenous opioids

Adrenocorticotropic hormone

Cortisol
Placebo and Nocebo in the Clinic

Conditioning

- The importance of the first impression
  - Conditioning effect (placebo and nocicebo) of the previous treatment
  - Start low, go slow; maybe, but start wisely (best effect as early as possible)

Expectation

- What you say to the patient plays a major role on outcomes:
  - You can block or enhance the therapeutic effect
  - Verify and positively influence the patient expectations about the treatment
    - Too much make the goal impossible, too low will have a nocebo effect

Potential effects and duration

- Can have very important clinical effects
- Seems to have a very long effect if nourished by an active (even small) effect
Fear may also be generated later by the responses from physicians after the collision:

Å “You had better see a specialist”,
Å “You suffered a little nerve damage”,
Å “I am not sure what’s wrong with you”,
Å “It’s just some arthritis of the spine”, and
Å “Your radiograph shows degeneration of the spine”.
Responses of the legal profession like “We had better wait for a few years before settling your claim because you never know how badly off you may become,”

and “As the representative for the insurance company, we ask that you see one of our specialists,” can only serve to increase concern
The pathway to chronic pain.

Symptom amplification
Acute pain occurs in accident setting
Pre-accident symptoms are amplified

Expectation of chronic pain
Minor physical injury
Anxiety while driving
Anger
Fright
Cultural fashion
Mediap
Rumour
Lack of reassurance
Failure of multiple therapies aimed at physical injury
Poor posture

Frightening diagnoses
"Radiograph shows disc disease and early arthritis"
"Torn ligaments and discs"
"TMJ injury"
"Nerve damage"
"Severe whiplash"
"Loss of cervicallordosis"
"Spine out of alignment"

Frightening prognoses
"Pain might never go away"
"May take years to resolve"
"Could turn to arthritis"
"I recommend waiting a few years before settlement, to see just what becomes of you. You just never know what might happen"

Symptom attribution
(to accident)
Pre-accident symptoms (amplified)
Spontaneous, non-accident related symptoms (amplified)
Occupational symptoms (amplified)

Battles with insurance company

Three Main Areas of Pain Management

- **Reduce signals from the periphery**
  (eg anti-inflammatory measures or local anaesthetics)

- **Reduce dorsal horn sensitisation**
  (eg analgesic drugs, TENS, acupuncture, spinal manipulation/massage)

- **Increase descending inhibition**
  (chiefly through cognitive interventions – eg education, reassurance, addressing beliefs, treat anxiety and depression)

And Professionals please remember “Careless Talk Costs Lives”
Drugs all have drawbacks

- Paracetamol
- NSAIDs
- Opiates
- Local anaesthetics
- Adjuncts (TCADs, anticonvulsants, clonidine)
- Beware opiate hyperalgesia and tolerance
- Avoid strong opiates for chronic nonmalignant pain (if at all possible)
Advice for WAD grades 1 and 2
Ferrari 2002


- Maintain normal activities as much as possible even though it may hurt.
- Continue work, or if you must stop work, enter into a very active exercise programme immediately.
- Avoid the development of poor posture because you are inactive or slouch to reduce the symptoms.
Do exercises (even though some may hurt) that give back normal range of motion.

Avoid letting the stress of dealing with litigation and insurance people cause more muscle tension.

Do not pay too much attention and worry over every new ache and pain or symptom.

Do not wear a collar.

Do not rely on medications rather than activity to “heal” the injury.
Compare overall effect size (y axis) for combination of more effective clinical setting (DrA) with a less effective clinical setting (DrB) for a more effective (drug a) or less effective (drug b) treatment.
Medical care is rich in irony and paradox. In the past, doctors, lacking effective treatment could console, encourage and adjust attitudes, but seldomly (sic) could they cure. Most were respected, even loved, for their time and compassion, and in many cases, these were all they had to give. Now, effective, evidence-based treatments can often improve or cure, yet if delivered without time and compassion can also alienate, dehumanize, and anger. The nocebo effects of a bad medical encounter may cancel any evidence-based benefits. Physicians, health-care managers, and enlightened public must find ways to restore healing relationships and ensure that health care is as evidence based as possible.

Closing paragraph of;
Chronic Low Back Pain Interviews
Mike Osborne & Joanthan Smith (BJ Health Psych 1998)

Four Main Themes:

1. Searching for an Explanation
2. Comparing this “self” with other “selves”
3. Not being believed
4. Withdrawing from Others
From Sue’s Pain Blog
https://susannemain.wordpress.com

Â At least you’ve got both legs
Â You’re in pain because you don’t believe in God
Â I hope you don’t mind me asking, but...
Â Can I pray for you?
Â Someone I know who has hip replacements now runs marathons
Â You don’t look like you’re in pain
Â You look dreadful
Â We don’t want to see your pain at work
Â Hip replacements at your age – how old are you?
Â Cheer up, it might never happen
She’s making it up/ doing it for attention/ using it as an excuse
   Why are you still in pain?
     You’re so brave
   Can I have a go on your crutches/ in your wheelchair?
     You poor thing
     Have you tried...?
   What’s wrong with you?
   You are fiercely independent
     I admire your determination
     You’ve overcome so much
   How do you still manage to work?
     Can you have children?