When is the best to treat?

Dr Munglani and Dr Spencer
Cambridge Medicolegal conference
Peterhouse 2016
When to treat in Chronic Pain cases?
The Psychiatrist's Perspective

“When you awaken you will feel fresh and relaxed – with absolutely no memory of changing my lightbulbs.”
Why does *The Psychiatrist’s Perspective* matter in chronic pain?
the nature of pain

• An unpleasant *sensory and emotional experience* associated with actual or potential tissue damage, or described in terms of such damage...

It is unquestionably a sensation in a part or parts of the body, but it is *also always unpleasant and therefore also an emotional experience*

(International Association for the Study of Pain)
4-stage model of pain processing

(Price and Wade)

- immediate appraisal
- sensory features of the pain
- immediate emotional response
- immediate implications: moment-to-moment suffering, annoyance and distress
- only limited cognitive processing
- longer-term reflective processes
- meanings and implications of pain
- suffering, frustration, anger, anxiety, depression
- overt behavioural expression of pain
- moaning; lying down during the day; declining to participate in daily responsibilities
4-stage model of pain processing

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- successive stages – more psychological
- all stages influenced by psychological factors
depression heightening pain perception

• experimentally induced depressed mood enhances pain perception

• clinically depressed subjects show increased pain processing, both in anticipation of and during, pain stimulation
PTSD symptoms maintaining pain

PTSD symptoms (particularly hyperarousal symptoms) predict the persistence and severity of pain and disability
[eg. following whiplash injuries from RTAs; Buitenhuis et al, 2006]

Treatment of PTSD in chronic pain patients (following RTA) symptoms gave rise to a reduction in pain-related disability
[eg. Shipherd et al, 2003]

- The anxiety features and hypervigilance in PTSD may alter the perception and experience of physical complaints

- PTSD symptoms may fuel a catastrophic interpretation of the pain, inflating pain intensity, disability and psychological distress

- Development of mutually-maintaining interactions between PTSD symptoms and pain-related disability
• Chronic pain as a persistent reminder of the traumatic event
  – triggering PTSD symptoms and accompanying distressing emotions
  – in turn triggering avoidance of the cause of the pain sensations and the associated memories of the trauma
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  – in turn triggering avoidance of the cause of the pain sensations and the associated memories of the trauma
  – setting up a pattern of *mutual maintenance* where avoidance of sensations associated with the trauma leads to escalating levels of disability and distress
  ...
  and the distress further fuels the avoidance and enhanced pain perception...
  ...

*Image of a child running up stairs with an 'avoidance' sign, a car crash, a wheelchair, a crying face, and a face with PTSD symptoms.*
impact of blame / perceived injustice

• High levels of perceived injustice predicted the persistence of post-traumatic stress symptoms (in RTA whiplash patients).

  Perceived injustice: encompasses elements of blame and the sense of a loss that is severe, irreparable and unfair.  

(Sullivan et al, 2009)

• Patients seeking treatment for chronic pain who felt that their pain was someone else's fault, relative to those not identifying a fault source, reported significantly more concurrent distress and significantly less expected benefit from treatment
psychological factors contributing to chronification / transfer from acute to chronic pain and disability

• **Chronification**

• Psychological factors include: anxiety, depression, fear-avoidance and catastrophization

in addition to... important neuronal / biological factors incl. *central sensitization* and *wind-up*
Timing of Pain treatment in relation to addressing untreated psychological problems

- Depression?
- PTSD symptoms?
- Anxiety?
Timing of Pain treatment in relation to levels of insight & acceptance

- Readiness to change;
- Readiness to accept and adopt a self-management approach to managing pain and associated problems;
- The conscious embrace of psychological experiences, when to otherwise attempt to avoid them negatively impacts on overall functioning;
- Insight into and acceptance of the interactions between psychological factors and the pain

Acceptance = the most important predictor of treatment outcome on a multidisciplinary pain treatment programme

pain-related life interference, including interference with: family and marital functioning; work and work-related activities; and social-recreational activities

(n=409; Akerblom et al, 2015)
1. I am getting on with the business of living no matter what my level of pain is.
2. My life is going well, even though I have chronic pain.
3. It's OK to experience pain.
4. I would gladly sacrifice important things in my life to control this pain better.
5. It's not necessary for me to control my pain in order to handle my life well.
6. Although things have changed, I am living a normal life despite my chronic pain.
7. I need to concentrate on getting ride of my pain.
8. There are many activities I do when I feel pain.
9. I lead a full life even though I have chronic pain.
10. Controlling my pain is less important than any other goals in my life.
11. My thoughts and feelings about pain must change before I can take important steps in my life.
12. Despite the pain, I am now sticking to a certain course in my life.
13. Keeping my pain level under control takes first priority whenever I'm doing something.
14. Before I can make any serious plans, I have to get some control over my pain.
15. When my pain increases, I can still take care of my responsibilities.
16. I will have better control over my life if I can control my negative thoughts about pain.
17. I avoid putting myself in situations where my pain might increase.
18. My worries and fears about what pain will do to me are true.
19. It’s a great relief to realize that I don’t have to change my pain to get on with life.
20. I have to struggle to do things when I have pain.

(McCracken et al., 2004)
Our culture does not prepare patients to learn to live with pain

- They learn that the presence of a symptom indicates the need to consult a physician;
- They maintain their attempts to avoid pain;
- However, this simply serves to move the person increasingly away from the things that are important to them
The Pain Medicine perspective......
The (inhibitory) role of the medicolegal process on recovery.

- There is a widespread belief that the very process of going through the medicolegal process inhibits outcome.
disability. In fact, the rate of chronic pain patients seeking compensation has dramatically increased over the past 30 years (Fordyce, 1985). For example, there was a 2,680% increase in the rate of compensation for low back pain (LBP) between 1960 and 1980, with no corresponding evidence of a change in the incidence of this disorder (Fordyce, 1985). This increase may be due to factors other than changes in the disorder, such as increased awareness and reporting of chronic pain disorders.
Pre-biopsychosocial model of pain: no effect of compensation

Fordyce (1985) described the traditional model of pain as a closed system. In such a system, it is assumed that a patient's experience of pain is the result of an injury that has occurred within the body and has resulted in nociception from the site of the injury across afferent pathways to the central nervous system. A logical extension of this theory would be that compensation should have no effect on a patient's pain experience, as remuneration occurs outside the system. In
Post 1985 the biopsychosocial model of pain

experience, as remuneration occurs outside the system. In contrast, the behavioral model proposed by Fordyce (1985) posits that pain is a subset of behavior in general and thus is governed by the same principles that govern all behavior (i.e., positive reinforcement, negative reinforcement, or both; punishment; and extinction).

According to this theory, compensation is expected to reinforce or maintain a patient’s demonstration of pain behavior. Fordyce (1985) did not address the issue of whether this means a patient’s experience of pain is affected by the receipt of financial compensation or whether they simply behave more
Financial and emotional factors

painfully. A third hypothesis that can be deduced from the writings of Mendelson (1982) is that the economic instability a patient experiences while suffering from a disabling injury may precipitate depression, anxiety, and a concomitant increase in a patient’s sensitivity to nociception. Thus, the emotional and financial stability one obtains through compensation should diminish a patient’s experience of pain (see also Melzack, Katz, & Jeans, 1985; Rothberg et al., 1987).
What is the most likely understanding of this association? Does compensation result in increased pain, does increased pain result in compensation, or is a third factor controlling the obtained association? We assert that the most likely interpretation of this association is that compensation results in an increase in pain perception and a reduction in the ability to benefit from medical and psychological treatment. There are
Does compensation effect outcome in relation to the magnitude of injury
What does claiming compensation do to outcome?

- The NDI scores of both the mild and moderate trajectories increased by 8–10%.

- In practical terms, claim submission within 12 months will be associated with an increase in symptoms of those who would have recovered such that they will be estimated to report ongoing mild pain/disability.

- Of those left with residual mild pain and disability will now be estimated to be moderate.

- This change did not extend to the chronic severe patients where there was no significant association with claim lodgement.
What about reverse causality?

- Rather than the perceived route that compensation claims leads to reduction in function
- Alternatively those who have been badly effected by an injury are more likely to claim
- Fortunately, it is possible to adjust for the effects of joint causal pathways by using statistical techniques that are commonly applied in the social sciences to address this problem
- This study uses the relationship between claiming for injury compensation and recovery from whiplash neck pain as an example,
You can not differentiate between the presence of high pain scores and the decision to litigate.

**Fig. 2.** Comparison of neck pain scores (visual analogue scale 0–100) in claimants and nonclaimants over time (unadjusted).
Does the medicolegal process lead to poorer care post accident?
What did they find?

- These examined the effect of
  - lawyer involvement,
  - litigation,
  - claim submission,
  - or previous claims on pain and other health outcomes.
- Among the 16 results reported were 9 statistically significant negative associations between compensation-related factors and health outcomes.
- Three studies acknowledged the possibility that negative associations between compensation related factors and health might reflect worse health among claimants (reverse causality).
Is the best therapy the ending of the medicolegal process?
Among the three reviews of prognostic factors in whiplash, two reviews concluding that compensation is a mediating factor in whiplash recovery both accepted claim duration as a proxy for recovery.

- So limit the claim duration (BC scenario no whiplash can exist after 24 months)

Conversely, the review by Scholten-Peeters specifically limited their focus to measures of symptoms and disability (i.e., health outcomes) and found strong evidence of no association between the legal process of litigation and recovery from whiplash.
Expectation of outcome (and the desire to litigate)

Systematic Review of the Ability of Recovery Expectations to Predict Outcomes in Non-Chronic Non-Specific Low Back Pain

ARTICLE in JOURNAL OF OCCUPATIONAL REHABILITATION · FEBRUARY 2009
Fig. 2 Predictive strength according to timing of baseline measure. ● Specific, timed measure and RTW outcome; ○ multiple-item scale and RTW outcome; □ non-specific measure and RTW outcome; ◇ non-specific measure and activity limitation outcome
So we rush in and treat early...
What patient factors should you consider when considering therapy?

Factors determining the success of radiofrequency denervation in lumbar facet joint pain: a prospective study

Konrad Streitberger · Tina Müller · Urs Eichenberger · Sven Trelle · Michele Curatolo
**Methods** This prospective observational study included 44 patients who received RF denervations at the University Hospital of Berne. Success was defined as at least 50% pain reduction 7–21 days, 6 months and 1 year after RF therapy. The Cox-regression analysis was performed to evaluate the influence of the following factors on the duration of success: age, sex, depression, work inability and previous surgery.

**Results** Complete follow-up was available for 41 patients. The success rate 7–21 days after the denervation was 76%. It decreased to 32% at 6 months and to 22% at 1 year. The median success duration was 17 weeks (95% CI 10–26). The Cox-regression analysis showed a significant shorter duration of success for patients with depression (hazard ratio [HR] 2.97, 95% CI 1.32–6.65), previous surgery (HR 2.39, 95% CI 1.10–5.21) and number of treated joints (HR 1.95 for each increase in the number of joints, 95% CI 1.14–3.33). In bivariate analyses, only depression was kept to be significant.
Minimally invasive treatment for CLBP leads to significant pain reduction, including potential placebo effects.

However, psychologically vulnerable patients, characterized by,

- reduced life control, disturbed mood, negative self-efficacy, catastrophizing, high anxiety levels, inadequacy, and poor mental health,
- tend not to respond to this treatment.
- Patients characterized by a.o. reduced pain and interference levels, positive expectations, and reasonable physical and social functioning, react more favorably.

From both a clinical and a financial perspective, psychosocial evaluation and selection of patients seems appropriate, before applying minimally invasive procedures for CLBP.
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Conclusion The most helpful components for predicting persistent disabling low back pain were maladaptive pain coping behaviours, nonorganic signs, functional impairment, general health status, and presence of psychiatric comorbidities.
According to their litigation and employment status these patients were divided into four groups,

- a non-litigating non-working group,
- a non-litigating working group,
- a litigating non-working group and
- a litigating working group.

three questionnaires, one at intake, one at a minimum of 2 years later with the final questionnaire completed at a minimum of 15 months thereafter (for litigants after they had settled their claim).
4.1. Litigation effect

In interpreting these results there appear essentially three explanations for the ‘litigation’ effect:

(i) the litigating group incurred more serious injury than the non-litigating group;
(ii) for litigation purposes, the litigating group continue to describe their pain and disability at the level experienced at the time litigation was initiated – a perseveration effect;
(iii) the stress of litigation interacts with pain to exacerbate the level of felt pain and disability.
The ‘working’ effect

- the non-working group had experienced more severe injuries than the working group;
- working generates a feeling of satisfaction that alleviates the perception of pain and disability;
- working facilitates recovery from injury.
Pain management efforts should thus be directed towards minimising nomogenic factors while maximising the chances of returning injured workers with back pain to their workplace, even if this is in an alternative, reduced capacity.

If inclusion in a return to work program is not viable due to the severity of injury,

vocational rehabilitation efforts should be redirected towards avocational activities integrating the perceived benefits of working (namely inclusion in a social support system, provision of financial certainty,

and the obtaining of activity/work satisfaction) into the treatment/rehabilitation programs of those severely injured individuals with back pain unable to return to work.
Does all rehab work in this context?

Does Multidisciplinary Rehabilitation Benefit Whiplash Recovery?
Results of a Population-Based Incidence Cohort Study

J. David Cassidy, PhD, DrMedSc,*†‡ Linda J. Carroll, PhD,§ Pierre Côté, DC, PhD,†¶
and John Fránk, MD, MSc†¶||

**Methods.** All Saskatchewan adults treated for whiplash (n = 6,021) over a 2-year period were followed up at 6 weeks, 3, 6, 9, and 12 months. Recovery was defined by self-report of improvement. Recovery times were compared between those attending fitness training at health clubs (n = 833), multidisciplinary outpatient rehabilitation (n = 468), and multidisciplinary inpatient rehabilitation (n = 135) to those receiving usual insured individual care.
Exclusions

- 3 treatments cf usual care.
  - Fitness/gym program
  - Out patient MDT program 2-4 hrs per day
  - In patient MDT program
  - C.f usual care
Intervention did not help

Results. Recovery was 32% slower in those receiving fitness training within 69 days of injury ($P = 0.001$) and 19% slower when received within 119 days of injury ($P = 0.041$). Recovery was 50% slower in those receiving outpatient rehabilitation within 119 days of injury ($P = 0.001$). Attending inpatient rehabilitation did not influence recovery rates during the follow up ($P = 0.131$). Multivariable adjustment for important prognostic factors did not change these results.
How do we define susceptibility and effect size of the vulnerability to be influenced by the context of litigation?

Compensation Neurosis: A Too Quickly Forgotten Concept?

Ryan C. W. Hall, MD, and Richard C. W. Hall, MD

- ICD 9, 10 but not DSM 4, 5
Compensation neurosis

- The more modern definition of the condition is seen in the 1946 quote from Foster Kennedy that
- “Compensation neurosis is a state of mind, born out of fear, kept alive by avarice, stimulated by lawyers, and cured by a verdict”
<table>
<thead>
<tr>
<th>Table 1</th>
<th>Various Names for the Concept of Compensation Neurosis That Have Been Used Over Time</th>
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<tbody>
<tr>
<td>Accident neurosis</td>
<td>Aftermath neurosis</td>
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<td>Cogniform disorder</td>
<td>Compensation hysteria</td>
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<tr>
<td>Compensation neurosis</td>
<td>Entitlement neurosis</td>
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<tr>
<td>(Ethnic or national group) neurosis/injury</td>
<td>Fright neurosis</td>
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<tr>
<td>Greenback neurosis</td>
<td>Injury neurosis</td>
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<tr>
<td>Justice neurosis</td>
<td>Litigation neurosis</td>
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<tr>
<td>Postaccident syndrome</td>
<td>Posttraumatic syndrome</td>
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<tr>
<td>Profit neurosis</td>
<td>Railway spine</td>
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<tr>
<td>Secondary gain neurosis</td>
<td>Social iatrogenesis for disease production by well-intended social programs</td>
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<tr>
<td>Syndrome of disproportionate disability</td>
<td>Traumatic hysteria</td>
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<td>Traumatic neurasthenia</td>
<td>Traumatic neurosis</td>
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<tr>
<td>Triggered neurosis</td>
<td>Unconscious malingering</td>
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<tr>
<td>Various work groups (usually manual labor) neurosis</td>
<td>Whiplash neurosis</td>
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<tr>
<td>Workman’s compensation neurosis</td>
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</table>
What Is Compensation Neurosis?

- We propose that compensation neurosis is an exaggeration of symptoms that occur as a result of the unique stressor of seeking legally awarded compensation.
- It is brought about primarily by internal motivators coupled with a lesser degree of anticipation of secondary gain.
- Financial reward can clearly be a component in the condition and may influence the course, but the overall constellation of symptoms is due to more than just the pursuit of money.
The place of compensation neurosis in predicting response to treatment in the context of litigation

- Who Contracts Compensation Neurosis?
- least likely to have the condition are generally young, well-motivated, and better-educated, with clearly identifiable illnesses or deficits (e.g., amputees) and without the tendency to engage in prolonged self
Who is likely to be affected by compensation neurosis?

- Individuals who were believed to be prone to the condition often have diagnoses of more ambiguous and subjective symptom-based injuries
  - such as soft tissue injury (e.g., back strain or whiplash),
  - pain syndromes (e.g., causalgia, fibromyalgia, reflex sympathetic dystrophy),
  - primary psychiatric injuries (PTSD, depression, or anxiety).
- In addition, those with only pain symptoms also frequently have a comorbid psychiatric condition, with onset either before or after the injury, and frequently downplay or deny the existence of the preexisting psychiatric condition.
- People prone to the condition have characteristics of
  - lower preinjury cognitive abilities,
  - poor preinjury psychosocial functioning,
  - low preexisting job satisfaction, hypochondriacal personality components, high suggestibility, tendency to assign blame for their difficulties to others, cluster B personality traits and defense mechanisms (e.g., entitlement, hysteria, or narcissism), and cluster C personality disorders (e.g., dependency). These characteristics at times are also found in populations of patients who malingering or have factitious disorder.
Compensation Neurosis

- Malingering
- Factitious Disorder
- Compensation Neurosis
- Conversion Disorder (DSM 5 Functional Neurological Disorder)

Spectrum of level of intentional symptom production increasing from left to right

Change in motivation going from internal at the bottom to more external at the top
So do we wait to treat?

Work-Related Chronic Low Back Pain

Return-to-Work Outcomes After Referral to Interventional Pain and Spine Clinics

Rathin N. Vora, MD, MPH, Bruce A. Barron, MD, MS, Anthony Almudevar, PHD, Mark J. Utell, MD

How about your perspective?

– open to the floor...