

Optimising well-being: is it the pain or the hurt that matters?

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ABSTRACT

In recent years there has been a commendable focus on patient-centred medicine, with increasing attention being paid to the timely assessment and management of acute pain. 78% of patients who attend the emergency department report pain, the severity of which is often used to determine clinical priority at triage. Clinical guidelines are increasingly including the timely provision of appropriate analgesia as a clinical standard. Pain scoring has been widely adopted, causing pain to be considered as the 'fifth vital sign' by some. Interestingly, there remains little evidence to support the benefit of this approach for patients. The aim of this review is to explore some of the assumptions that made in defining and addressing 'pain', and to explore whether it is truly 'nociception' or 'suffering' that ought to be addressed. Through two thought experiments, it is demonstrated that the current approach to pain relies heavily on addressing 'nociception' but does little to address the 'suffering' that is undoubtedly the key determinant of well-being in patients. It is demonstrated that the current naturalistic approach risks neglecting many 'non-nociceptive' sources of suffering, including physical (eg, nausea, vertigo, dyspnoea, pruritus) and mental (anxiety, depression, fear, anger) symptoms. In the humane quest to relieve suffering, there is a clear need to examine current practice. Indeed, the philosophical enquiry presented even questions whether our culture risks overemphasising the importance of pharmacological analgesia and calls for emergency physicians to take a more holistic approach to meeting patient needs.

MORPHEUS: GOD OF THE 'FIFTH VITAL SIGN'?

As many as 78% of patients who present to an emergency department (ED) have pain, which is severe (rated as $\geq 7/10$) in more than a third.^{1 2} There is evidence to suggest that pain is undertreated in the ED.²⁻⁴ This has led to significant focus on the importance of appropriate and timely assessment and management of pain, which some regard as the 'fifth vital sign', alongside pulse rate, respiratory rate, blood pressure and temperature.⁵ Indeed pain is now the target of international attention in emergency medicine (EM). The Manchester Triage System, an internationally recognised tool to guide triage priority, uses pain as one of six general discriminators to determine priority.⁶ Both the United Kingdom College of Emergency Medicine and the American College of Emergency Physicians have published clinical standards entirely devoted to the appropriate management of pain.^{7 8} The emphasis on pain management continues in clinical guidelines related to the management of specific conditions. The

United Kingdom College of Emergency Medicine conducted a national audit of the management of renal colic in 2010 in which six of the 11 published clinical standards focus on pain.⁸

It would seem that EM has developed an obsession with pain. In Greek mythology, Morpheus, who lived in a cave of poppy seeds, was the god of dreams. From his name we have derived the name for our gold standard magic bullet for pain, morphine. Now, it could be said that Morpheus has become one of EM's most prominent idols.

The focus on the provision of timely and appropriate analgesia is certainly not without good cause, as it is an extremely important part of the role of a physician. However, there is a lack of evidence that the current approach of considering pain to be the 'fifth vital sign' leads to actual benefits to patients.⁹ Therefore, this review aims to undertake a philosophical examination of the assumptions made in addressing and quantifying pain in order to develop better means of addressing the true needs of patients.

WHAT IS 'PAIN'?

The International Association for the Study of Pain defines pain as 'an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage'.¹⁰ As physicians, when we think of pain, we may actually envisage physiological responses: tachycardia, hypertension and other manifestations of a sympathetic response such as pallor and sweating. It is recognised that these are all responses to nociceptive afferent stimulation, which would be expected in a patient with a condition as notoriously painful as, for example, a fracture dislocation of the ankle.

According to this naturalistic view of pain as objective and physiological, the severity of pain could be determined by the intensity of the stimulus from nociceptors, transmitted via A δ and C fibres. This has led to considerable interest in identifying 'pain biomarkers' that may quantify this.¹¹ If the naturalistic view were correct, the relief of pain would be a simple matter of removing or antagonising the nociceptive stimulus, for example by the provision of pharmacological analgesia.

However, many patients who complain of severe pain do not exhibit any of the physiological responses outlined above. Investigations into 'pain biomarkers' have, to date, been unsuccessful.¹¹ Furthermore, if the pain experienced was proportional to the nociceptive stimulus alone, it might be expected to be highly correlated with the amount of tissue damage. If this were so, it would be expected that cardiac troponin level could be used

as a reasonable marker of how much pain a particular patient with cardiac chest pain was actually experiencing.¹² In the authors' everyday experience, however, this is not the case. The first reaction to seeing a particularly high troponin level, for example, is not to imagine how much pain the patient must have been in, nor is it to disregard a patient's pain on the basis that they have a low troponin level.

There is, therefore, a fundamental problem with this naturalistic conception of 'pain'. As physicians, we try to recognise pain in objective or physiological terms—in things we can observe and measure: the tachycardia, the hypertension, the signs of the sympathetic response. The experience of pain for the patient, however, may be very different.

THOUGHT EXPERIMENT 1: TO TREAT THE 'PAIN' OR THE 'HURT'?

The development of a non-invasive, portable 'pain scanner' was a landmark in pain research. It enabled the precise identification, quantification and origins of nociceptive stimulation. Dr X, a consultant in EM, used the scanner to guide the treatment of two patients but now he had a dilemma.

His first patient was a 20-year-old man who had fallen while skateboarding and sustained a non-displaced fracture to the neck of his humerus. He requested a sick note to excuse him from his unsatisfying work on a production line, but was not apparently distressed by his injury. In fact, he thought it was 'cool' to have fractured a bone and was enjoying having the admiration of family and friends. The 'pain scanner' suggested that the patient had significant nociceptive stimulus but he denied experiencing significant pain and declined analgesia.

His second patient was also a 20-year-old man who complained of shoulder pain. He complained of a 'constant throbbing' that had kept him awake all night. He was very worried because his brother died of osteosarcoma that had presented in a similar fashion. The pain scanner suggested that there was very little nociceptive stimulus. The patient, however, complained of severe pain and was significantly distressed.

In light of the scan results, Dr X had spent considerable time convincing his first patient of the need to take analgesia given the clear objective evidence that he was 'in pain'. The consultation with his second patient had also been lengthy as Dr X explained that he actually had 'very little pain' so ought to calm down a little. Neither patient had been satisfied by this approach. Dr X began to doubt the value of his pain scanner.

DISCUSSION

In this thought experiment, it becomes clear that attempts to address objective measures of 'nociception' alone are unlikely to be successful for the treatment of 'pain' as they fail to address the subjective experience of the bearer. The importance of this subjective experience to the pain felt by the bearer is emphasised by examples of pain persisting even after surgical disruption of all conceivable afferent pathways for painful stimuli,¹³ of phantom limb pain even among people born without one or more limbs¹⁴ and by the frequent reported absence of pain among seriously injured soldiers.¹⁵

In *The Challenge of Pain*, Ronald Melzack wrote that 'Pain is a unified stream of experience that is generated by the brain and is influenced by all of its cognitive functions such as memories of prior experiences and the meaning of the current situation'.¹⁶ Thus, pain is not to be understood as a one-way process by which nociceptive stimuli are transmitted to the brain, but as a far more complex function of the brain in which, 'Perceptual

qualities of pain are produced by built-in neural networks in the brain which may be activated by sensory inputs but can also be generated spontaneously'.¹⁶

Clearly, there are deficiencies in a purely naturalistic approach to the study of pain. An alternative approach is that of phenomenology. This focuses on studying the experience of the individual rather than on any objective criteria. Phenomenology as a philosophical approach developed in the middle of the twentieth century with existentialism. Its focus was on what it was like to exist, on the experience of the individual human being, rather than any objective reality. Thus, a phenomenological approach would hold that the most important factor when considering 'pain' is the subjective experience of the bearer. Although pain is, by definition, an unpleasant experience, there are many factors besides the degree of nociceptive stimulation that may influence how 'unpleasant' that experience is for a particular patient following a particular painful stimulus.

For example, a very severe but momentary pain in the abdomen may cause negligible suffering if it is not repeated and bears no added significance to the bearer. Meanwhile, a mild, dull ache in the abdomen may be the source of tremendous suffering if a recurrent nature carries with it the knowledge that it will repeat, thus engendering fear, leaving a trace in the memory and colouring the past with its negativity.¹⁷ As in the case of Dr X's second patient, the 'pain' may be greatly enhanced if it engenders an anxiety about its root cause (eg, many patients suffer significantly with the concern that cancer or other serious disease is to blame). Our mood and social circumstances also have important bearings. Indeed, in chronic illness, psychological and social factors alone have been shown to precipitate or amplify symptoms.^{18 19}

When we talk of the benefits of relieving pain, perhaps what we seek in reality is to ease the 'suffering' it causes rather than merely 'pain'. To quote LW Sumner, 'It is plausible to say of suffering, as it is not of pain, that its presence necessarily compromises our happiness, and thereby also our well-being. Suffering seems just the sort of condition which, in itself and apart from any further accompaniment, makes our lives go worse'.²⁰

THOUGHT EXPERIMENT 2: ALL THAT HURTS IS NOT PAIN

In 2020, a landmark case is heard in court. A 60-year-old man, alleged that the staff at St. Elsewhere's Hospital had been clinically negligent in ignoring his symptoms. He had woken during the night with intense vertigo, had been unable to walk due to ataxia and vomited repeatedly. On arrival at the ED, his symptoms were recorded by the triage nurse, who suspected that he may be having a stroke and assigned him to a cubicle to await urgent medical attention. The doctor arrived promptly and, following a thorough assessment, also suspected a posterior circulation stroke. He immediately organised a cranial CT scan, which confirmed the diagnosis. The patient was admitted under the care of the stroke team and was prescribed a cocktail of treatment aimed at secondary prevention.

Twenty-four hours later and after a sleepless night with intractable vertigo and vomiting, the patient received intramuscular prochlorperazine, which improved his symptoms. Subsequently, he alleged that the doctors had been negligent by ignoring his symptoms and leaving him to suffer for so long. His lawyer successfully argued that leaving the vertigo and vomiting untreated for so long had caused significant suffering. 'Had the patient been in pain', he argued, 'he would have received powerful analgesic medication immediately. It is clearly indefensible to leave a patient in severe pain for a night without

providing appropriate analgesia. The patient's symptoms caused him to suffer just as much as a severe pain would, and yet his symptoms were left untreated'.

The serious case review at St. Elsewhere's identified that the patient reported a pain score of '0/10' on several occasions. To prevent similar occurrences in future, it was suggested that the 'pain score' should be replaced by a 'suffering score'.

DISCUSSION

As depicted in thought experiment 2, there are many physical symptoms that are not 'pain' but that may cause 'suffering'. Nausea, pruritus, dyspnoea, weakness, thirst, hunger, tingling and feeling too hot or too cold are all examples of physical symptoms that may lead to suffering. Each of these is potentially remediable and worthy of our attention as physicians. In the humane quest to improve the lot of our patients, focusing only on addressing nociception risks neglecting these important sources of suffering.

As is the case with pain, other sources of physical suffering can be considered as complex perceptions contributed to by both physiological and psychosocial elements.²¹ Ultimately, it is not the physical symptom itself that is so distressing but rather the mental anguish it causes. By treating physical symptoms, it is hoped to relieve this mental anguish.

Even after accepting the numerous physical sources of suffering, we should still not be duped into believing that relief of physical symptoms is all that is required in order to relieve suffering. Indeed, mental suffering may occur in the absence of pain and in the absence of any physical symptoms.

Havi Carel, in her book *Illness* writes of her 'pain' on hearing of her diagnosis of lymphangioleiomyomatosis and its likely consequences.²² It is unlikely that this 'pain' arose from any nociceptive stimulus at all (nor any other physical symptom) and pharmacological analgesia was undoubtedly not indicated, but to her the experience will still have been very real. Perhaps her feelings would be better described as 'suffering'. Compared to 'pain', 'suffering' is a far broader term, encompassing that complex function of our entire consciousness, which depends on a subjective experience (or symptom, 'painful' or otherwise) and its interpretation by or significance to the bearer. As Eric Cassell says, suffering results from 'injury to the integrity of the person'.²³ The mental anguish that was no doubt being described by Carel is one of many examples of mental suffering including low mood, anxiety, grief, anger, boredom, panic, jealousy, hopelessness, doubt, fear, frustration and yearning.

IMPLICATIONS FOR PRACTICE

The two thought experiments undertaken here demonstrate the inadequacy of the current approach to addressing the suffering of patients. It is now routine practice to record a patient's pain score in the ED. Whereas EM abounds with examples of targets to achieve timely and effective management of 'pain', similar targets to address alternative sources of 'suffering' (such as vomiting or vertigo) cannot be found. This disparity is reflected in the medical literature. In the MEDLINE database there are 22 thesaurus headings containing the word 'pain' compared to only two for 'nausea' and one for 'vertigo', and 'suffering' is indexed only under the thesaurus heading 'Stress, Psychological'.²⁴

The authors would advocate greater focus on the 'non-nociceptive' sources of suffering. In EM, if we truly have the needs of our patients at heart, we must strive to adopt a more holistic and humane approach to ease the 'sufferings' of our patients rather than our current oversimplified processes and targets to

address 'pain'. At present, we are at risk of addressing only nociception, failing to realise that it is the 'suffering' that truly matters. To address the wider 'suffering', analgesia is only one of the many strategies we must employ. Timely reassurance, explanation, sympathy, provision of a safe and calm environment and provision of ancillary treatment (such as antiemetic medication) are all notable examples.

Sigmund Freud identified three potential sources of human suffering, the symptoms produced by our own body being only one of them. He also identified the mental suffering caused by the external world, 'which may rage against us with overwhelming and merciless forces of destruction' and, perhaps even more importantly, from our relationships with other people. Indeed, Freud said, 'We are never so defenceless against suffering as when we love, never so forlornly unhappy as when we have lost our love object or its love'.²⁵

In the noble quest to relieve patient suffering, we should take note of this. Our approach ought not to be entirely naturalistic, treating only the objective and biomedical consequences of disease. Rather, we should take a more phenomenological approach, appreciating the biopsychosocial nature of suffering and the intricate interlinking of body, self and society that contributes to its origin and propagation.²⁶

CONCLUSIONS

Some of the many assumptions currently made in the assessment and management of pain in the ED have been explored. As demonstrated in two thought experiments, there are clear differences between nociception, pain and suffering. Although the increasing focus on improving the management of pain is commendable, it ignores many important factors including the significant contribution of 'non-nociceptive' sources to human suffering. Although important, sole reliance on pain scores to help improve the immediate well-being of patients presenting to the ED may prevent many contributions to a patient's suffering from being readily appreciated by clinicians.

To relieve suffering demands far more than merely providing analgesia. Although we must continually strive to rapidly provide effective analgesia for those in pain, we must also strive to quickly provide appropriate remedies for the nauseous, pruritic, dyspnoeic, cold or thirsty. Of even greater importance, we must appreciate that suffering is the product of the symptoms themselves and their interpretation and significance by their bearers. Effective communication, a sympathetic approach and an understanding of the biopsychosocial nature of suffering are, therefore, essential tools of the clinician, which ought not to be neglected in the noble drive to address nociception through provision of pharmacological analgesia.

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REFERENCES

1. **Karwowski-Soulie F**, Lessenot-Tcherny S, Lamarche-Vadel A, *et al*. Pain in an emergency department: an audit. *Eur J Emerg Med* 2006;**13**:218–24.
2. **Knox K**, Ducharme J, Choiniere M, *et al*. Pain in the emergency department: results of the pain and emergency medicine initiative (PEMI) multicenter study. *J Pain* 2007;**8**:460–6.
3. **Hwang U**, Richardson LD, Sonuyi TO, *et al*. The effect of emergency department crowding on the management of pain in the older adults with hip fracture. *J Am Geriatr Soc* 2006;**54**:270–5.
4. **Kuan SC**, Collins NC, Ryan JM, *et al*. Treating pain in the emergency department. *Eur J Emerg Med* 2010;**17**:52–5.
5. **Veterans Health Administration**. Pain as the 5th Vital Sign Toolkit. <http://www1.va.gov/painmanagement/docs/toolkit.pdf> (accessed 8 Dec 2010).

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6. **Manchester Triage Group.** *Emergency Triage*. 2nd edn. Oxford: Blackwell BMJ Books, 2005.
7. **American College of Emergency Physicians, American Pain Society, American Society for Pain Management Nursing et al.** Optimizing the treatment of pain in patients with acute presentations. <http://www.acep.org/content.aspx?id=48089> (accessed 23 Dec 2010).
8. **Clinical Effectiveness Committee.** The UK College of Emergency Medicine Clinical Guidelines. <http://www.collemergencymed.ac.uk/Shop-Floor/Clinical%20Guidelines/Clinical%20Guidelines/default.asp> (accessed 24 Dec 2010).
9. **Mularski RA, White-Chu F, Overbay D, et al.** Measuring pain as the 5th vital sign does not improve quality of pain management. *J Gen Intern Med* 2006;**21**:607–12.
10. **International Association for the Study of Pain Task Force on Taxonomy.** Part III: pain terms, a current list with definitions and notes on usage. In: Merskey H, Bogduk N, eds. *Classification of Chronic Pain*. Seattle: IASP Press, 1994:209–14.
11. **Marchi A, Vellucci R, Mamei S, et al.** Pain biomarkers. *Clin Drug Investig* 2009;**29** (Suppl 1):41–6.
12. **Steen H, Giannitsis E, Futterer S, et al.** Cardiac Troponin T at 96 Hours After Acute Myocardial Infarction Correlates With Infarct Size and Cardiac Function. *J Am Coll Cardiol* 2006;**48**:2192–4.
13. **Melzack R, Wall P.** Pain mechanisms: a new theory. *Science* 1965;**150**:971–9.
14. **Saadah E, Melzack R.** Phantom limb experiences in congenital limb-deficient adults. *Cortex* 1994;**30**:479–85.
15. **Wall P.** *Pain: The Science of Suffering*. London: Weidenfeld & Nicolson, 1999.
16. **Melzack R, Wall PD.** *The Challenge of Pain*. 2nd edn. London: Penguin Books Ltd, 2008.
17. **Baggini J.** *The pig that wants to be eaten and 99 other thought experiments*. London: Granta Publications, 2005.
18. **Katon W, Ciechanowski P.** Impact of major depression on chronic illness. *J Psychosom Res* 2002;**53**:859–63.
19. **Bujlevac D, Hop W, Reedecker W, et al.** Self reported stressful life events and exacerbations in multiple sclerosis: prospective study. *BMJ* 2003;**327**:646.
20. **Sumner LW.** *Welfare, Happiness and Ethics*. New York: Oxford University Press, 1996.
21. **Chou F, Avant K, Kuo S, et al.** Relationships between nausea and vomiting, perceived stress, social support, pregnancy planning, and psychosocial adaptation in a sample of mothers: a questionnaire survey. *Int J Nurs Stud* 2008;**45**:1185–91.
22. **Carel H.** *Illness (Art of Living)*. Durham: Acumen Publishing, 2008.
23. **Cassell EJ.** *The Nature of Suffering and the Goals of Medicine*. New York: Oxford University Press, 1991.
24. **MEDLINE.** <http://ovidsp.uk.ovid.com/> (accessed 13 Dec 2010).
25. **Freud S.** *Civilization and Its Discontents*. New York: WW Norton & Company, 1969.
26. **Kleinman A.** *The Illness Narratives: Suffering, Healing & The Human Condition*. New York: Basic Books, 1988.

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