

EDITORIAL

Defining pain

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Pain and pain therapy have met with increasing interest over the last decades. Although pain must always have been a crucial feature in life, it seems as if it remained unnoticed in medicinal science until the development of substances able to reduce pain. Nowadays, pain is a major issue in medical care, and its influence and societal aspects have been well recognized, up to the point where pain is considered one of the “vital signs” in some European countries, and is used as a marker for the quality of hospital care.

There have been significant developments in pain research, which have provided benefits in their increasing understanding of this important evolutionary mechanism, but have posed problems in the complex picture that arises from its increasing body of evidence. The neurological, physiological, emotional, psychological, environmental and cultural aspects of pain, appreciated by scientists and therapists alike, have depicted pain as a multimodal, multidimensional phenomenon.

At the same time, paradoxically, pain does not seem to need any further explanation in everyday conversation. People instantly understand the meaning of the word pain in its personal sense, but may, on the other hand, never fully comprehend the impact it has on another person’s life. It is therefore both surprising and unsurprising that so many one-dimensional instruments are being used to describe pain. The Visual Analogue Scale, for instance, as any other single indicator for pain, appears to provide a circumscriptive value of pain intensity, but what does it really tell us? Does it tell us something about the physical sensation; about the disabling character; or about the emotional aspect of the sensation described by a person experiencing it? And what does “intolerable pain” mean? Has every person being asked that question experienced it?

The value given on the VAS is more likely to be an expression of a complex philosophical construct, which may at best provide an indication of the concept to be measured. The philosophical challenge of pain therefore lies within the ability to define pain, taking into account its complex variety and multi-dimensional character. Pain can have various origins, and different types can be distinguished. Different pain syndromes have been characterized, and mechanisms influencing the course of pain have been discovered. The task of clinicians and scientists should be to adequately characterize the type of pain and to determine the prognostic factors that could attribute to its development.

Proof gathered in concept studies evaluating the effect of interventions targeted at a single mechanism could be the key methods to learn more about mechanisms involved in specific painful complaints. Initiatives such as the IMMEDIATE guidelines [1] for assessing the effectiveness of pain treatment may help address these issues. These guidelines comprise the assessment of pain (intensity, quality and temporal aspects of pain as well as registration of concomitant and rescue analgesics), physical and emotional functioning, health-related quality of life, and patient global rating and satisfaction, thereby providing a complete overview of domains that may or may not be affected by pain and its target intervention.

This special issue deals with defining pain in its broadest sense. Three narrative reviews address the subject of definition and categorization of pain. Vissers’ article deals with the distinction between different types of pain, with a focus on neuropathic pain. Differentiating between pain types is of major importance for adequate therapy, can be of diagnostic value in determining the underlying mechanism, and may serve as a sign of a specific complaint. Neuropathic pain has, maybe more so than other pain types,

the potential to become chronic because of its unpleasant character and intractable nature. The answer according to the author may lie in early identification of this type of pain, providing the opportunity for early intervention.

The article by Marinus and Van Hilten compares three pain syndromes with a comparable conceptual problem: Complex Regional Pain Syndrome, Fibromyalgia and Repetitive Strain Injury. These syndromes are comparable in the sense that they lack a discriminative diagnostic test (gold standard) to distinguish these illnesses from other similar illnesses, and no uniform pathophysiological mechanism has been established explaining the full spectrum of appearances of these syndromes. But the similarities do not end there. Marinus and Van Hilten describe resemblances with regard to the clinical manifestations, disease course, risk factors and demographic characteristics of these complaints. These may be indicators of a common underlying mechanism. In theory, a person could therefore develop any of these complaints depending upon the circumstances. This view corresponds with a recently posed hypothesis about a single pain pathway, according to which all pain syndromes have a single underlying mechanism. What the single pathological base for this common pathway might be (genetic, immunological, psychological?) has yet to be established, but this theory could provide an explanation for the clinical observation that different pain patients and pain syndromes have so many features in common.

Geertzen et al. also describe similarities in pain profiles between patients with complex Regional Pain Syndrome and Low Back Pain patients. According to the authors, both groups could be regarded as chronic pain patients. At the same time, the authors recognize the difficulty in trying to define chronic pain. In what way does it differ from acute pain? Only in duration? In the characteristics of the patients? Or can mechanisms such as central sensitization explain the development of chronic pain? For instance, Geertzen et al. mention the lack of correspondence between pain manifestation and anatomical localization as one of the characteristics of chronic pain. But is this observation a characteristic of chronic pain, or is it an indication of another phenomenon, which facilitates pain to become chronic?

The subsequent original article, a prospective community-based epidemiological study by Tamer and Zeev, describes differences between localized low back pain and generalized back pain patients. According to the authors, the latter group is more likely to be involved in physical occupational activities and less involved in sports activities. Hard labour and fewer leisure activities, and possible signs of a less healthy life style, might have a longer duration of pain as a consequence according to the authors. Preven-

tion of generalized and/or chronic pain might therefore lie in a more active and diverse lifestyle.

Interestingly, while Tamer and Zeev found physical occupational activities to coincide with a less healthy lifestyle, the study by Kuijjer et al. describes a multidimensional relationship between work status and chronic low back pain, whereby patients with a low educational level, a low self-reported physical or mental health were more likely to be non-working. Equally interesting is their finding that self-reported limitations and physical and mental health seem to be more important in explaining work status than objective measurements of performance. This could mean two things; either the patient is capable of higher level of physical performance than their work status indicates, or the measurement instrument used is not sensitive enough in itself to distinguish between working and non-working pain patients. Perhaps, however, it is good to realize that complex concepts such as "work", "performance" and, of course, "pain" are not easily translated into a single measurement instrument.

The work by Tamer and Zeev and Kuijjer et al. provides good examples of these complexities, and the difficulty of relating one complex concept to another. This brings us (back) to the importance of the choice of adequate measurement instruments for evaluating pain and its consequences for everyday life. As stated in the IMMPACT recommendations, pain patients should be measured on different levels of observation. Disease specific measurement instruments such as the Shoulder Q developed by Turner-Stokes and Jackson are of the utmost importance in evaluating pain in a group of patients with cognitive and communicative impairments. The Shoulder Q is a simple questionnaire to assess shoulder pain using verbal and visual graphic rating scale questions, to suit the patient's strengths. The instrument appears to be a reliable and sensitive measure of shoulder pain, which is responsive to change in pain perception in patients with hemiplegic shoulder pain. Also, their initiative to use a pre-screening questionnaire (the Ability Q) in order to establish an individual's ability to respond to verbal and VGRS questions, and to determine the type of assistance needed to complete a questionnaire, deserves following.

The article by Sato et al. addresses the cultural aspects of pain research, in the sense that (translated versions of) a questionnaire might not always yield the same psychometric properties as in the population for which it was originally designed. The Japanese-language version of the Physical Performance Test, however, revealed to be a reliable and valid measurement instrument, and provided a glimpse of the responsiveness to treatment in a group of 82 patients with chronic pain in the limbs or trunk. Whether this test holds up to its expectations

in experimental trials evaluating the effect of treatment will have to be revealed in future studies.

Will the questions raised in this introduction be answered in this special pain issue? Probably not, and that was not the intention of this issue. The contributions will more likely be raising more questions than answers, but at least they are addressing the right questions, and will therefore contribute to the general understanding of pain, now, or in the near future.

Reference

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