Petra Pócza-Véger

Health Psychological Aspects of Pain. The Relationship Between Early Traumatic Experiences and Coping with Chronic Pain

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Pain is the most common complaint people would see a doctor about (Komoly & Palkovits, 2018). In order to understand the complex experience of pain, besides psychological theories, it is also important to understand what happens on the biological level when someone is experiencing pain. The book chapter attempts to integrate psychological theories and research findings that use imaging techniques to help this understanding. Based on these, we connect the experience of chronic pain to early, traumatic experiences, as the sensitivity of the nervous system can be suspected as the reason for both of them.

1. Literature Review

Pain information reaches the central nervous system via the following areas: the ascending pathways of the spinal cord first reach the brainstem, where they switch primarily in the rostral ventromedial part of the spinal cord, the parabrachial nuclei of the bridge, and the periaqueductal gray in the midbrain. The next important switch is in the thalamus, where pain information separates into two further pathways: the lateral tract travels to the somatosensory areas, where the intensity and localization of pain are realized and evaluated, while the medial tract includes the anterior cingulate cortex, the insula and the orbitofrontal cortex, which are responsible for the development of pain-related emotional, motivational and behavioral responses (Köteles, 2013).

Birbaumer and Flor (1995) demonstrated that people living with chronic back pain responded more intensely to the same pain stimulus than healthy control subjects. In their research, they examined brain activity related to painful stimuli with an EEG device. It is possible that those with chronic pain responded more intensely because frequently used neural networks fire more easily and more intensely (Bauer, 2011). In addition, we suspect difficulty in emotion regulation in chronic pain, the treatment of which is as important as the biological aspects of pain (Kökönyei, 2008). Chronic pain might be considered a condition that shakes self-identity (Chapman &

Nakamura, 1999), so for improvement, it is essential to understand and support that psychologically. According to Kökönyei (2008), chronic pain can be considered a traumatic experience in itself, as it is a phenomenon that continuously affects everyday activities, anticipating physical damage.

In case of a severe trauma or violent events, especially when they happen in childhood, dissociation can occur as a psychological and neurobiological defense mechanism designed to make the unbearable bearable, to turn off the physical and emotional pain experience. Psychologically, as a result of dissociation, the person also moves away from the present, from their own sensations and perceptions. The production of endorphins increases as we experience pain, and during dissociation (Zubieta et al., 2001), as the body helps to bear the unbearable. This mechanism can attenuate mostly the emotional part of pain as endorphin production increases the most in areas of the brain that process the emotional aspect of pain (gyrus cinguli and amygdala). Thus, dissociation also occurs at the biological level, with the registration of self-sensation and physical pain being separated (Bauer, 2011).

Porges (2004) believes that neuroception is the neural process by which a person unconsciously evaluates whether the environment is safe for them, or on the contrary, it is actually dangerous. From a health psychological perspective, this could be interpreted as the patient giving meaning to the environment and what help they may expect from it. In the clinical environment, it can often be observed that patients do not feel the environment distinctly safe. According to Porges (2004), a safe environment results in a physiological state (e.g., low heart rate, accelerated metabolism) that can help rebuild the body, facilitate relaxation and self-soothing, and besides, create social bonds. The latter is an important part of coping with illness and pain from a health psychological perspective. For this reason, when working bedside it is important to understand that the patient may even see the medical staff as a threat, especially in the case of comorbid psychiatric disorders.

2. Case Discussion

In this section, we describe a case that well illustrates the theoretical background presented above. The patient gave his consent to present our work with him in a scientific or educational environment. The young male patient (33) had already undergone surgery twice for lumbar spine problems (after which massive inflammatory problems also slowed the recovery) when he was admitted once again to the neurosurgery ward, scheduled for spinal surgery. After surgery, he was admitted to a sub-intensive care unit, when the nurses notified me, a health psychologist working in the ward, that they feel the patient might also need psychological support to make his recovery smoother.

The patient was literally wailing with pain and seemed to disturb the other patients in the room. Despite his pain he readily accepted the psychological help, his pain fluc-

tuated in my presence. Occasionally, his symptom-presentation made a theatrical impression, but in a couple of minutes his attention could be easily steered away, and as if the pain would subside significantly, his face got relaxed too. The patient was convinced that the severe post-surgical pain was caused by thrombosis, because his left leg was swollen, and he experienced a burning sensation (the meeting took place during the COVID-19 pandemic). At this point I could only connect to him through the pain, I hardly obtained any other information, almost as if only the pain existed. It was like even the quality of our connection was determined by the pain. When the pain got more severe, the connection felt distant, only when I succeeded to deter his attention from pain did I feel that I could truly connect with him.

It was sensible that receiving attention and care relieved his tension, and in turn this eased his pain. Him being continuously on infusion (receiving painkillers, antibiotics) gave me an opportunity to facilitate pain relief with the use of positive suggestions. By addressing his worries about the thrombosis (I notified the staff, and a doctor also examined him), the patient also gained a sense of control over the situation, which helped alleviate the pain, at least temporarily.

The patient has an office job and lives with his wife and three children, whom he has not been able to see because hospitals banned visits due to the epidemic situation. This made things difficult for him, keeping in touch on the phone only. He has been missing his family. It was clear, and the patient told me so, that his family provided one of the most important resources for him, giving a purpose to even these difficult times.

By the second session, he was back in his room, his condition did not require strict medical supervision. However, the post-surgical MRI scan revealed that one of the screws was not in the right position, thus corrective surgery would be needed. This explained the patient's severe pain after the surgery. The patient received the news with a bit of resignation. “It does not matter, just make the pain go away” he said laconically. His pain, compared to the post-surgical pain, was milder, more bearable, but he also received strong painkillers. At this session, without me specifically asking, he shared that he was a child, only 4 years old when he had lost his mother, by homicide. (It is hard to decide in situations like this, whether it is worth exploring the trauma, especially in this phase of somatic healing in a 5-bed hospital room.) The information was overwhelming, as it was stated so abruptly, unexpectedly, probably facilitated by the regressive state of the patient (because of pain, he was mostly lying in bed). I did not go into the details of his trauma, I thought that at this phase the emotional burden of this very significant life-event would not support the somatic healing process. But I did ask why it became suddenly important. Why did it come into his mind? So that I would see how hard his life had been, he answered. It seemed that this traumatic life event had also become identity-forming to him. In this session, several things can be demonstrated that were discussed in the theoretic part. We are seeing a passive attitude to pain, a lack of agency, which could be condensed in the patient's life, especially the

early, traumatic loss of his mother, and its circumstances. Just as he could not do anything to save his mother as a child, the pain was also something just to endure, to bear, just hoping it would pass. As if his freezing, his emotional numbness has become a coping mechanism at a neurological level, and in the clinical environment the pain and the regressive state have brought it back.

The third session was mostly about the patient getting ready for the corrective surgery the following day. His thoughts were focused on that, so I also tried to prepare him psychologically, although he was not visibly anxious about the surgery. Rather, he had a positive attitude towards it, expecting it to end his pain. He trusted his doctor all along, the enthusiasm and respect he showed for him seemed almost exaggerated. The doctor might have appeared as a good, reliable, safe father figure that, as it turned out later, such a figure was missing completely from the patient's life. This process of positive transference might also have been supported by the doctor's age.

The fourth session happened after surgery, the patient was seeing me relieved and in less pain. His tone was more informal, and he constantly included his roommates into the conversation. Now that the pain became bearable, he visibly struggled to inhibit his impulses, although his difficulty of inhibition was familiar from previous instances of pain. He told me how disturbing other patients were in the sub-intensive unit (without realizing he could also be of disturbance to others), and if he could have left the bed, he would have hit one of his roommates for being so annoying. When I further inquired about this, I learned that he already had a confrontation with the law. I had the feeling that he did not sense the weight of it, as if he would only show off. The intention behind this behavior probably was to influence the other male patients in the room, and the unconscious goal to impress me as well. I felt aggression is present in his connection to his environment, even if only implicitly, at the level of fantasies. This aggression must have been there in his life from early childhood, as he lost his mother to an aggressive act. In a sense, the surgery can be seen as such a process, where the patient's body becomes vulnerable as well.

At this point, it is worth to recall Bauer's (2011) idea from the introduction that dissociation can take the form of freezing and that of impulsive acts. Here, in some respect, both could be observed on the patient. He froze when the pain was intense, passively trying to endure, to bear it. However, when he got better, the more aggressive impulses appeared, both verbally and at the level of fantasy.

At the fifth session, it was much easier to steer his thoughts a bit towards the future and talk about how he planned the period after the discharge and his recovery. As it turned out that previously, following his surgeries he did not take time to rest, we took more time to talk this through, that it was worth changing his strategy, as it was not helping his recovery process. I felt that after four surgeries he understands it better, but his acceptance may have been also motivated by a desire to meet my expectations. In any case, he was planning a gradual return to work, which his workplace could proba-

bly support. At this meeting, he told me that his uncle had died recently, to whom he looked up greatly like one does at one's father. Sadness, however, did not appear on his face.

By the sixth appointment, we were able to leave the room and we had a conversation while walking outside the ward, stopping whenever the patient's physical condition made it necessary. We did not sit down, however, because after spinal surgery it is not medically recommended for the patient to sit for a longer time. As it gave us a chance to talk alone, I asked him about his mother's death. With no roommates around, the sadness on his face was much more apparent, and he said in a childish way that he has been missing her very much. After the death of his mother, his father started to drink, "went on a spree", he said, so he could not rely on him either, there was no one to learn the rules and customs from. This is how his uncle, who was reliable, had become a father-substitute for him, and became an important presence in his life. He told me he was glad that I came to see him over and over because he felt that "something was not quite right in his head", but when I asked him about it, he could not give me any exact details on what he meant. He was happy about the improvement of his condition, although he was still walking with an aid. As he was to be discharged the following day, we said our goodbyes, ending our work together.

The lack of a father seemed to be somewhat mitigated by his relationship with the uncle, and a secure, supportive connection was able to develop with him in the patient's childhood. The role of the older, protective male has also appeared in his relationship with the doctor, it became idealized, and this was matched with the fantasy that the doctor would save him from suffering as the uncle had done in his childhood.

Lessons learnt from this case

First of all, that personal presence is a vast, supportive power in bedside work in health psychology. Often, during supportive conversations in the hospital rooms, very deep losses and pains emerge, which cannot be resolved or explored in the given setting. Often it is only possible to substitute the missing, reassuring, safety-giving self object, the internalization of which had not happened due to early traumatization/injury. In such cases, it is important to contain the (physical and emotional) pain that may not be bearable for the patient alone.

3. Discussion

By writing this chapter, I have tried to bring together those clinical experiences, aspects, research and scientific findings that allow a better understanding of the phenomenon of pain. I also found it important to integrate knowledge from different disci-

plines, which could be useful for the better treatment of patients with chronic pain. The topic of pain in clinical practice is still often viewed in a dualistic way: if there is an underlying organic reason for the pain, it is considered a medical issue, if it is missing or difficult to verify, it is treated as a psychological/psychiatric problem. The results and experiences discussed above, as well as the brief presentation of the case, show that this dichotomy does not help patients to heal, to improve their condition since the experience of pain is a complex phenomenon and both its over-biologicalisation and its over-psychologicalisation are likely to distance us from true understanding.

Perhaps the most helpful approach to treating pain is to provide the patient with the knowledge of several co-disciplines with opportunities offered by teamwork.

In the daily routine of a neurosurgery department, this is accomplished by involving a nurse, physiotherapist, pharmacist and health psychologist in the healing process alongside the work of the doctor, and in this way, it is possible to integrate different perspectives that may not be apparent to a single specialist.

In understanding chronic pain and the possibilities of positively coping with it, we find cognitive neuroscience research to be of great importance, as it allows us to better understand why certain patients react to pain passively and helplessly, while others are more able to help their own recovery by active coping. As we have seen at the case presentation, at the beginning the patient was only able to passively suffer from his pain, which could have been activated by the early traumatization experience stored at the neurological level. To help his impaired self-regulation we tried to support him from outside, to control the pain and impulses (painkillers, positive suggestion, containment) which from the inside was impossible or very hard for the patient alone. Giving meaning collectively advanced the process of coping with the pain. The patient surrendered to the pain, as helplessly as he had surrendered to the childhood loss, and initially felt he had no control over the pain.

The importance of the early relationships is also notable, because patients who suffered an early psychological trauma present their pain in a harder-to-understand way to the people around them, often elicit reactions of negative countertransference from their surroundings, which correspond to the traumatizing early environment, thus the trauma may also be repeated. By his behavior and metacommunication, the patient may make the members of the medical staff react similarly to someone from the past (Gabbard & Lester, 1995).

It's important to help patients with what they need, not trying to convince them that their coping mechanisms are failing. Often, psychoeducation can be useful and supportive for the patients, however, explaining why they might find it difficult to experience pain does not always help because in the case of childhood trauma, experiencing pain is damaged at the neurological level and embedded within a relationship. Thus only through the relationship, by altering the implicit representations can we achieve long-term success. Sadly, mostly only the outpatient care provides the opportunity and

the appropriate, safe framework for this. As health psychologists, the most important thing we can help patients with is to provide a safe space and background for their recovery.

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