
NOCIOPLASTIC PAIN: CAVE CANEM

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The human body is capable of incredible resilience however in some circumstances it may develop conditions that remain enigmatic (1). Among these complexities is nociplastic pain—a relatively newly introduced concept in pain science that sheds light on conditions where pain is not directly linked to tissue damage or inflammation but arises from altered nervous system processing (2). Its connection with the ancient phrase **cave canem**, Latin for “beware of the dog,” provides an intriguing lens through which we should use this definition cautiously and in a more targeted use. If it is commonly accepted that a wound is associated with pain, more difficult is to understand why some form of pain becomes chronic. Even less understandable is a pain where like modern Saint Thomas we are looking for a wound without being able to find anything visible or “touchable”; as to say when a clinical examination doesn’t reveal any positive or negative objective signs for a lesion.

Nociplastic pain is a term introduced to describe pain that is neither nociceptive, which is caused by actual or threatened tissue damage, nor neuropathic, which results from nerve damage. Instead, it is characterized by the heightened sensitivity of the nervous system, leading to pain perception even in the absence of physical damage. Conditions such as fibromyalgia, chronic headaches, and some cases of irritable bowel syndrome are examples where nociplastic pain is a key feature. This type of pain often confounds both patients and practitioners because conventional diagnostic tools may fail to reveal clear causes. Yet, for those who suffer, the pain is very real—disrupting daily life, sleep, and mental health. The phrase **cave canem** famously appeared in ancient Roman mosaics as a warning to visitors to beware of guard dogs. Beyond its literal meaning, it can be metaphorically applied to our understanding of acute pain as a sentinel—a signal warning us of potential danger.

However, in the case of nociplastic pain, the guard dog may be barking at shadows, signaling external danger where none exists. This misfiring of the nervous system’s protective mechanisms calls for a new approach to understanding pain. It challenges us to distinguish the mechanisms underlying acute pain, whether traumatic or inflammatory, from unnecessary alarms found in chronic pain, including nociplastic pain. At its core, nociplastic pain involves a process called central sensitization. In this phenomenon, the brain and spinal cord amplify pain signals, even in the absence of a clear injury. Maladaptive neuroplastic changes—essentially, the brain’s ability to rewire itself—play a critical role in this dysfunction (3).

Factors like stress, trauma, or prolonged pain exposure can “train” the nervous system to remain in a heightened state of alertness, interpreting even benign stimuli as painful. Traditional treatments, such as anti-inflammatory medications, may prove ineffective as they target physical damage while drugs usually used for neuropathic pain may have unpredictable efficacy and huge side effects. Rehabilitation methods that

incorporate physical therapy, cognitive behavioral therapy, and lifestyle changes like stress management and mindfulness have shown promise in reversing maladaptive central nervous system plasticity. Nociceptive pain challenges rehabilitation providers and patients alike to move beyond conventional paradigms and embrace a broader understanding of pain's multifaceted nature.

References

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