Chronic pain: Why your organ-focused treatment may fail patients

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> Chronic pain, particularly conditions like chronic pelvic pain (CPP), frequently defies resolution through repeated organ-directed evaluations and treatments. This persistence highlights a fundamental disconnect in traditional care models, which often overlook the complex relationship of pain mechanisms and psychosocial burdens. A shift towards mechanism-based, multidisciplinary care offers a more clinically useful framework for explaining symptom persistence and selecting appropriate interventions.1

KEY TAKEAWAYS

- The Pivot: Chronic pain management must move beyond organ-specific diagnoses to integrate pain-mechanism phenotyping and psychosocial assessment.
- The Data: Multidisciplinary approaches, including physical therapy, psychological support, and pharmacotherapy, are essential for addressing central sensitization in chronic pain.1
- The Action: Clinicians should consider referring patients with persistent chronic pain to multidisciplinary pain clinics that offer integrated care.

Chronic pelvic pain (CPP) in women exemplifies the limitations of a purely organ-focused approach to persistent pain. Many patients endure ongoing symptoms despite numerous evaluations and treatments targeting specific pelvic organs, such as the bladder, uterus, or bowel. This clinical reality shows that the pain often originates not solely from peripheral pathology, but from broader, systemic mechanisms.1

Yael Sela, a researcher at the Sheba Medical Center, and colleagues, proposed that integrating disease-specific diagnosis with pain-mechanism phenotyping provides a more effective framework. Their work, published in International Urogynecology Journal, argues that understanding the underlying pain mechanisms, such as central sensitization, alongside the psychosocial burden, is essential for explaining symptom persistence and guiding treatment selection.1

Understanding Central Sensitization in Chronic Pain

Central sensitization is a key mechanism driving chronic pain, particularly when symptoms persist beyond the resolution of initial tissue injury or inflammation. This phenomenon involves an amplification of neural signaling within the central nervous system, leading to hypersensitivity to pain and other stimuli. It manifests as allodynia (pain from non-painful stimuli) and hyperalgesia (increased pain from painful stimuli), often extending beyond the original site of injury.1

The concept of central sensitization helps explain why patients with CPP, for instance, continue to experience severe pain even when gynecological or urological examinations reveal no clear peripheral cause. The brain and spinal cord have essentially learned to be in pain, creating a self-perpetuating cycle. Recognizing this mechanism is fundamental to

moving beyond a purely structural or inflammatory view of chronic pain.1

But central sensitization is not an isolated phenomenon. It interacts significantly with psychosocial factors, including stress, anxiety, depression, and trauma history. These factors can both contribute to the development and maintenance of central sensitization and amplify the patient's perception of pain. Addressing these psychological components is therefore not merely supportive care, but a direct intervention on the pain mechanism itself.1

This integrated understanding means that effective treatment for chronic pain must target both the peripheral drivers (if present) and the central nervous system changes, alongside the patient's psychological state. Ignoring any of these components often leads to incomplete relief and persistent suffering. The complexity demands a broader clinical toolkit than a single specialty can typically offer.

The Multidisciplinary Approach: More Than Just Referrals

A multidisciplinary approach to chronic pain is not simply a collection of individual specialist referrals; it is a coordinated, integrated strategy that addresses the various dimensions of pain simultaneously. This model typically involves a team of healthcare professionals, including pain physicians, physical therapists, psychologists, occupational therapists, and sometimes dietitians or social workers. Each member contributes expertise to a holistic treatment plan.1

For conditions like CPP, this means combining traditional gynecological or urological care with interventions specifically designed to modulate central sensitization and manage psychosocial factors. Physical therapy, for example, might focus on pelvic floor muscle dysfunction, but also incorporate techniques to desensitize the nervous system. Psychological interventions, such as cognitive behavioral therapy (CBT) or mindfulness, directly address pain perception, coping strategies, and emotional distress.1

Perioperative pain management also benefits from a multidisciplinary perspective, particularly for neuropathic pain. A study on perioperative treatment of neuropathic pain, Nerve SPACE 2025, highlighted the need for a comprehensive approach to manage nerve-related pain around surgical procedures.3 This includes careful preoperative assessment, tailored analgesic regimens, and postoperative rehabilitation that considers the neuropathic component, not just incisional pain.3

The goal is to break the cycle of chronic pain by targeting multiple points in the pain pathway. This often involves pharmacotherapy, but also non-pharmacological interventions that empower patients to manage their condition. For instance, cyclobenzaprine has shown promise in fibromyalgia by improving sleep, indirectly impacting pain perception. Similarly, melatonin has been explored as an adjunctive, non-opioid option for chronic musculoskeletal pain. These examples show the diverse strategies needed.

Integrating Physical and Psychological Therapies

Physical therapy plays an important role in multidisciplinary pain management, extending beyond simple exercise. For CPP, specialized pelvic floor physical therapy can address muscle hypertonicity, trigger points, and nerve entrapment, which often contribute to pain. But the therapist also educates patients on pain neuroscience, helping them understand central sensitization and reducing fear-avoidance behaviors.1

Psychological therapies are equally vital. CBT helps patients identify and change negative thought patterns and behaviors related to pain, improving coping skills and reducing pain catastrophizing. Mindfulness-based stress reduction teaches patients to observe pain without judgment, fostering a sense of control and reducing emotional reactivity. These therapies

are not about dismissing the pain as 'all in the head,' but about retraining the brain's response to pain signals.1

The integration of these therapies is where the true power of the multidisciplinary approach lies. A patient might receive medication for neuropathic pain, engage in physical therapy to restore function and reduce peripheral drivers, and participate in CBT to manage the psychological impact of chronic pain. This coordinated effort ensures that all contributing factors are addressed in a synergistic manner.1

Still, access to comprehensive multidisciplinary pain clinics remains a challenge in many regions. The resources required, including a diverse team of specialists and dedicated coordination, are substantial. But for patients with complex, persistent pain, this integrated model offers the best chance for meaningful improvement in function and quality of life. The Oxford Handbook of Clinical Medicine provides a concise overview of such integrated care principles relevant to general practice.

The Role of Mechanism-Based Phenotyping

Mechanism-based phenotyping involves classifying a patient's pain based on the underlying neurobiological and psychosocial mechanisms, rather than solely on anatomical location or presumed tissue damage. This approach moves beyond a simple diagnosis of 'chronic pelvic pain' to identify whether central sensitization, neuropathic pain, inflammatory pain, or a combination of these is predominant.1

For example, a patient with CPP might be phenotyped as having significant central sensitization, alongside a neuropathic component due to nerve entrapment. This phenotyping then guides the selection of specific treatments. If central sensitization is prominent, therapies aimed at modulating the central nervous system, such as certain antidepressants or anticonvulsants, or specific psychological interventions, become more relevant.1

This contrasts sharply with a trial that, for example, compared water-based versus land-based rehabilitation in COPD. While valuable for its specific context, such a study highlights how interventions are often tailored to a single disease or organ system.2 Chronic pain, however, demands a broader lens. The Nerve SPACE 2025 study, while focused on perioperative neuropathic pain, similarly emphasized the need to understand the specific nerve pain mechanisms to optimize treatment.3

The open-label nature of many pain studies is an obvious caveat, as subjective pain reporting can be influenced by patient expectations. But the consistent benefit seen across various multidisciplinary programs, even with this limitation, shows their clinical utility. The challenge lies in developing standardized, validated tools for mechanism-based phenotyping that can be easily implemented in clinical practice. This would allow for more precise, individualized treatment plans, moving away from a trial-and-error approach. Multidisciplinary approaches have also shown benefit in autoimmune interstitial lung disease, further demonstrating their broad applicability.

What This Means for Clinical Practice

For general practitioners and specialists, the message is clear: chronic pain is a complex disease requiring more than a single-specialty focus. When patients present with persistent pain despite initial targeted treatments, clinicians should consider the possibility of central sensitization and significant psychosocial contributions. This necessitates a shift in diagnostic thinking and treatment planning.1

Referral to a multidisciplinary pain clinic, where available, should be a primary consideration for patients whose pain is refractory to conventional care. These clinics are equipped to conduct comprehensive assessments that phenotype pain

mechanisms and address the full spectrum of contributing factors. They offer a coordinated approach that individual referrals often cannot replicate.1

But even without direct access to a specialized clinic, clinicians can begin to integrate elements of this approach. This includes screening for psychological distress, educating patients about central sensitization, and coordinating care between different specialists (e.g., physical therapy and mental health services). The goal is to validate the patient's experience of pain while simultaneously broadening the therapeutic strategy.1

The evidence consistently points to the need for a more integrated, patient-centered approach to chronic pain. The next step for the field is to develop more accessible and scalable models of multidisciplinary care, ensuring that all patients who need it can benefit from this comprehensive strategy. Pain's enduring role in functional decline for cancer survivors also highlights the need for such comprehensive care in diverse patient populations.

CLINICAL IMPLICATIONS

The persistent failure of single-organ treatments for chronic pain should be a clear signal to clinicians that the problem is often not where they are looking. Chronic pain is a disease of the nervous system, amplified by psychological factors, not merely a symptom of peripheral damage. Expecting a gynecologist or a urologist to resolve chronic pelvic pain when central sensitization is driving it is a fundamental misunderstanding of the pathology.

For patients, this means validating their experience. Their pain is real, even if imaging and biopsies are unremarkable. But it also means clinicians must manage expectations about quick fixes. True resolution often requires a sustained commitment to therapies that retrain the brain and body, not just a new pill or procedure.

The industry needs to recognize that the market for chronic pain extends beyond single-target analgesics. Investment in integrated care models, digital therapeutics for psychological support, and novel non-pharmacological interventions is overdue. A pill for every ill simply does not work for chronic pain, and the evidence has been clear on that for years.

EDITORIAL & AI STANDARDS

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