

EDITORIAL

New Insights in Chronic Pelvic Pain

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INTRODUCTION

Chronic pelvic pain (CPP) is most commonly defined as continuous or intermittent pain that occurs in pelvis, anterior abdominal wall at or below the umbilicus, lumbosacral back, or buttocks, with a duration for 6 or more months, sufficient to cause functional disability to seek medical care.¹ Chronic pelvic pain is more prevalent in females, with an estimated worldwide prevalence of 2.1 to 24%.² Two-thirds of patients with CPP do not carry a definitive diagnosis.^{3,4}

The etiology of CPP is multifactorial and its pathophysiology is complex and incompletely understood.³ Chronic pelvic pain can arise from a multitude of causes in various organ systems, including gastrointestinal [e.g., inflammatory bowel disease and irritable bowel syndrome (IBS)], neurologic (nerve entrapment and disk herniation), gynecologic (e.g., endometriosis and pelvic inflammatory disease), urologic (e.g., bladder pain syndrome and prostatitis), and musculoskeletal system (e.g., sacroiliac joint dysfunction and symphysis pubis dysfunction).⁴ Chronic pelvic pain itself is not a disease but is the manifestations of CPP disorders among which IBS, interstitial cystitis, vulvodynia, endometriosis, and chronic prostatitis are the commonest presentations. Pelvic pain is chronic when it persists for more than 3 months.⁵ Diagnosis of CPP is based on symptoms reported by the patient. Most of these symptoms have a functional component related to an organ causing pain.⁵

Irritable bowel syndrome affects functioning of colon associated with pain in lower abdomen, which is relieved after defecation. This is probably the commonest type of CPP syndrome affecting females. Interstitial

cystitis is a common pelvic pain disorder affecting mostly female population, associated with frequent urination. Vulvodynia and chronic prostatitis cause burning pelvic pain. Other widespread functional disorders like fibromyalgia and migraine may be associated with this CPP supporting its functional origin. Psychiatric disorder like depression, panic disorder, and anxiety may be associated with it. Stress in early life may be an important factor producing this disorder.

Most of these pelvic pain disorders are functional without any associated pathology. Diagnosis of this disorder is very challenging to find out the exact cause, i.e., producing pain. It is widely accepted that the abnormal communication between immune system and nervous system is responsible for this pain.⁶ Pathophysiologic theories suggest that CPP may be a result of abnormal central nervous system responses that maintain the perception of pain in the absence of acute injury.⁶ There have been significant new findings related to genetic and epigenetic mechanisms associated with the development of abdominal or pelvic pain. There may be a genetic basis for CPP.⁷ Patients' underlying genetics are modified by epigenetic mechanisms that turn different genes on or off within an individual's deoxyribonucleic acid resulting in gene modulation that may alter pain sensitivity or responses to therapies.⁷ Drugs that alter epigenetic mechanisms, such as histone deacetylase inhibitors, have been demonstrated to reduce hyperalgesia associated with experimental endometriosis and prostatitis.⁷ Despite significant efforts, there remains no definitive etiology or treatment of the spectrum of pelvic symptoms reported by these patients.

The treatment of CPP in both females and males is a challenge for pain clinicians. Standard therapies are multimodal in nature with use of behavioral, medical, and procedural therapeutics. "UPOINT" offers six domains (urinary, psychosocial, organ-specific, infectious, neurological, and systemic and related to muscle tension) and can guide treatment according to the phenotype expressed by the patient. The therapeutic approach is based on the first use of antibiotics with or without alpha-blockers. Depending on clinical response, supportive treatment should be considered. The role of psychological support remains essential.^{8,9} Medical management also plays a vital role. Opiates, muscle relaxants, antidepressants, and anticonvulsants have all been used with varying efficacy.¹⁰ Newer medications like tricyclic antidepressants, alpha-adrenergic blockers, gabapentin,

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and pregabalin are now used in the treatment of this disorder with promising results. Cyclooxygenase inhibitor helps in managing the inflammatory component of pain. Corticosteroid and N-methyl-D-aspartate receptor antagonists have been used successfully to treat CPP, but there is lack of randomized control trial proving its superiority.¹¹ A monoclonal antibody directed against the nerve growth factor (tanezumab) is currently being investigated for use in this pain syndrome. Antitumor necrosis factor-alpha medications, aromatase inhibitors, thiazolidinediones, and N-palmitoylethanolamine and transpolydatin are the anti-inflammatory and antinociceptive drugs with emerging trends in the medical management of endometriosis. Surgical therapies like diagnostic laparoscopy, lysis of adhesions, and exploratory laparotomy are the commonest procedures performed in this population of patients.¹⁰

In recent years, interventional techniques are commonly used for the management of CPP avoiding invasive surgical exploration to a minimally invasive and percutaneous procedure. Local anesthetic and depot steroid injections at neuraxial and peripheral sites have been commonly employed. The successful use of neuromodulation (including spinal cord and posterior tibial nerve stimulators) and radiofrequency thermocoagulation is also well documented.¹¹⁻¹⁴ Physical therapy, dietary therapy, and complementary and alternative medicines are useful adjuvants to traditional therapies. Physical therapy utilizing myofascial release techniques, yoga, acupuncture, and pelvic floor muscle exercises are regularly used in multimodal treatment plans.^{15,16}

So CPP should be considered as a complex disorder with poor understanding of etiology and pathophysiology. Its management needs multidisciplinary approach on a trial-and-error basis to have best results.

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