The Perfect Storm in Chronic Pelvic Pain: Central Sensitization Driven by Fowler's Syndrome, Trauma, Endometriosis

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INTRODUCTION

This complex chronic pelvic pain case highlights how overlapping urologic and gynecologic pathologies can drive central sensitization of pain (1). In reproductive-age women, persistent neuro-inflammatory and neuropathic signaling from endometriosis, combined with aberrant urethral afferents in Fowler's Syndrome, can cause severe chronic pelvic pain and refractory urinary retention (2,3). Psychosocial trauma further heightens central nervous system responsiveness, necessitating a multidisciplinary, trauma-informed treatment approach that integrates sacral neuromodulation with therapies targeting widespread central pain amplification.

CASE PRESENTATION

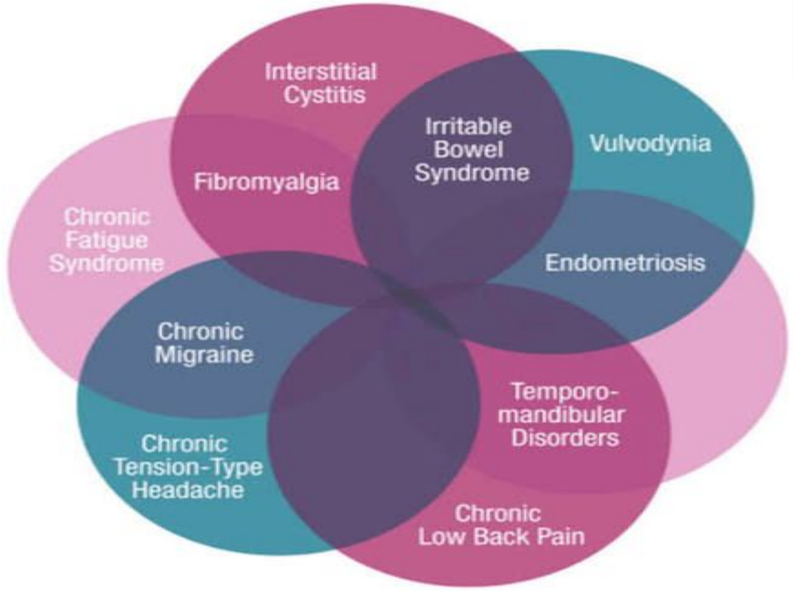
A 34-year-old female with deep infiltrating endometriosis, Fowler's Syndrome, and significant trauma including childhood abuse and sexual assault, presented with a decade of complex chronic pelvic pain (CPP) and refractory urinary retention. Following an assault and subsequent genital herpes (HSV-2) outbreak, her retention became absolute, requiring urethral catheterization. Despite surgical endometriotic excision and sacral nerve stimulator placement, retention persisted, necessitating a suprapubic catheter.

While interventional treatments failed to fully restore voiding, she demonstrated positive responses to myofascial trigger point injections and a right-sided transversus abdominis plane (TAP) block, highlighting a distinct abdominal wall somatic pain driver. Her refractory urinary retention, widespread myofascial guarding, and severe psychiatric history, including alcohol use disorder, powerfully illustrate a central sensitization model. Persistent visceral nociception combined with acute psychological trauma drives pathological neuromuscular signaling and centralized hyperalgesia.

Moving forward, her multidisciplinary care emphasizes a trauma-informed, non-opioid approach targeting central sensitization. The regimen features Low-Dose Naltrexone (LDN) to modulate neuro-inflammation, specialized pelvic floor physical therapy to address myofascial guarding, and localized interventional pain procedures (4). This case underscores that conquering complex CPP requires shifting from peripheral structural targets toward centralized, multi-modal neurological stabilization.

METHOD

- As the case report is devoid of patient identifiable information, it is exempt from IRB review requirements as per NYU policy.
- Patient informed consent was obtained for submission of a case report.
- All patient protected health information has been de-identified
- This is a scientific abstract with no patient protected health information.



DISCUSSION

Chronic pelvic pain in young women often stems from overlapping gynecologic, urologic, and psychosocial factors. While surgery and neuromodulation target peripheral pathology, they are frequently insufficient alone due to central sensitization. Effective management demands a comprehensive, trauma-informed, multimodal pain approach that addresses both physical and psychological contributors. Future research must explore the mechanistic interplay between urogynecologic pathology and central pain pathways to guide evidence-based, integrative clinical practice.

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