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Undiagnosed Neurological Conditions in Chronic Pelvic Pain: More Common Than We Think

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Introduction

- **Chronic pelvic pain** (CPP): Pain perceived to originate from pelvic structures typically lasting 3-6 months and frequently associated with visceral, neurological, musculoskeletal, and psychological symptoms.[1–3]
- We previously demonstrated a high prevalence of small fiber neuropathy (SFN) in patients with complex CPP.[4]
- We screened **CPP patients** within our Urology/Urogynecology/Neurology specialty referral pain clinic for **neurologic symptoms** and, if present, conducted a combined evaluation for objective neurologic diagnosis with a neurologic pain specialist in a multidisciplinary clinic approach.

Methods

- 188 CPP patients were referred to our multidisciplinary Neurology/Urogynecology CPP clinic between February 2022 and January 2024. A retrospective review of prospectively collected data was conducted.
- Study criteria included patients over the age of 18 with **CPP who screened + for neurological symptoms or signs** and underwent a combined workup with a urologist board-certified in urogynecology and reconstructive pelvic surgery (URPS) and a neurologist fellowship-trained in pain management.
- **The Screen:** A comprehensive systematic neurological evaluation was conducted by the neurologist if screening was + for **any of the following**:
  - Pain radiating from the spine
  - Combination bladder, bowel, sexual, or pain symptoms referable to lumbosacral spine pathology (e.g. herniated disc)
  - Pain within a dermatome referable to a specific nerve root or peripheral nerve distribution
  - Balance or gait alteration
  - Abnormal reflexes, sensation, or weakness on cursory neurological examination
  - Upper motor neuron findings (e.g. neurogenic detrusor overactivity/DESD) or unexplained hypotonia on urodynamics
  - Evidence of autonomic dysfunction - bladder (e.g. IC/painful bladder syndrome), bowel (e.g. IBS), sexual dysfunction (e.g. ED, persistent genital arousal disorder), arrythmia, and/or chronic overlapping pain syndromes (e.g. migraine, fibromyalgia)
  - Pelvic pain refractory to musculoskeletal and organ-based interventions

Results & Interpretation

188 patients initiated combined evaluation and 126 (67%) completed recommended testing.

Neurological exam (N = 126)
- 51 (27%) patients had upper motor neuron findings
- 17 (9%) patients had lower motor neuron findings
- 105 (58%) patients had a nonfocal examination

Of 126 CPP patients who screened + for neurological symptoms or signs and completed neurological evaluation, 92 (73%) had objective evidence of a neurological disorder, 77 (84%) of which were a de novo finding.

Table 1: Neurologic Evaluation Outcomes

Confirmed Neurologic Diagnoses in Patients with Completed Evaluation	**Number of Patients, n (%) of** 126
Small Fiber Neuropathy (SFN)	29 (23%)
Large Fiber Neuropathy (LFN)	21 (17%)
Lumbosacral Radiculopathy	18 (14%)
Severe Spinal Stenosis	14 (11%)
Tarlov Cyst Deemed Clinically Significant	7 (6%)
Herniated Disc deemed Clinically Significant	6 (5%)
Vitamin B12 Deficiency	6 (5%)
Ankylosing Spondylitis	6 (5%)
MTHFR Mutation	5 (4%)
Chiari Malformation	2 (2%)
Multiple Sclerosis	2 (2%)
Cauda Equina Syndrome	1 (1%)
Testing Results in CPP Patients Screening + for Neurologic Disease	**Number + / Performed (%)**
Non-focal Exam	105/188 (56%)
Physical Exam + for Upper Motor Neuron Findings	51/188 (27%)
Physical Exam + for Lower Motor Neuron Findings	17/188 (9%)
Physical Exam + for Diminished Sensation on Pinprick	4/188 (2%)
Physical Exam + for Ataxic Gait	4/188 (2%)
Physical Exam + for Proximal Muscle Weakness	2/188 (1%)
Physical Exam + for Hyperesthesia	2/188 (1%)
Physical Exam + for Referred Pain to the Groin	2/188 (1%)
Physical Exam + for Pain with Palpation of SI Joint	1/188 (1%)
Skin biopsy + for Small Fiber Neuropathy	29/48 (60%)
Abnormal EMG	21/82 (26%)
Relevant Laboratory Findings (e.g.Lyme, B12, ANA, HgbA1C)	29/100 (29%)
Significant MRI Findings	37/111 (33%)
Ongoing Workup	55/188 (29%)
Declined Additional Workup	7/188 (4%)

Conclusions

- **Objective neurologic disease was prevalent (73%) in CPP patients who screened + for neurologic symptoms and signs.**
- The majority of the diagnoses were de novo and many patients had experienced diagnostic delay.
- Screening for neurologic symptoms and utilization of multidisciplinary neurologic/pain management expertise is recommended in patients with CPP in order to facilitate optimal diagnosis, management, and symptom outcome.

References

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