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The Role of Physical Therapy in the Treatment of Pudendal Neuralgia

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(Part 1 of a Two-Part Series)

Physical therapists provide services to patients who have impairments, functional limitations, disabilities, or changes in physical function and health status resulting from injury or disease.¹

The following chart depicts the impairments, functional limitations, and disabilities that patients with pudendal neuralgia encounter.

Impairments	Functional Limitations	Disabilities*
Pelvic Floor Dysfunction	Decreased sitting tolerance	Inability to work
Connective Tissue Restrictions	Urinary urgency and frequency	Inability to attend school
Myofascial Trigger Points	Pain during or after voiding; slow, hesitant or interrupted urinary stream	Inability to maintain relationships
Muscle Hypertonicity	Pain before, during, or after bowel movements	Inability to care for self
Adverse Neural Tension	Constipation and difficulty evacuating	Inability to meet financial responsibilities
Structural/Biomechanical Abnormalities	Difficulty with ADLs (cooking, cleaning, driving)	Inability to care for dependents
Depression and Anxiety	Decreased tolerance for exercise	Inability to engage in intercourse
Central Sensitization	Sexual dysfunction	

In order for a patient to return to a functional status from a disabled state, all impairments must be minimized or eradicated. To do this, a multidisciplinary approach must be implemented. This paper will describe the role physical therapists play in treating pudendal neuralgia.

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PHYSICAL THERAPY EVALUATION AND TREATMENT

Based on the results of examining and treating hundreds of patients with pudendal neuralgia, the following impairments are most commonly found during the physical evaluation.²

Connective Tissue Dysfunction

In patients with pudendal neuralgia, connective tissue restrictions (termed *subcutaneous panniculosis*) are present and contribute to pelvic pain. Upon examination, the tissue presents with tenderness and trophic changes. These changes include abnormal skin texture and structure, reduced blood flow/tissue ischemia, thickening of the subcutaneous tissue, and underlying muscle atrophy. Functionally, ischemic tissues are hypersensitive to touch (i.e., clothing causes irritation), may cause pain upon compression (i.e., when sitting) or if the ischemia is severe, the tissues will be painful without compression (i.e., pain when standing).

The tissues undergo trophic changes both by local and referred mechanisms. Increased sympathetic activity from painful stimuli (pudendal nerve, pelvic floor, myofascial trigger points) will cause local vasoconstriction and the release of inflammatory agents into CT with resultant tenderness and restriction. The visceral-cutaneous reflex causes tissue changes in locations distant to the involved organ or nerve (for example, an inflamed bladder or the pudendal nerve can cause panniculosis in the trunk or lower extremities).^{3,4}

In patients with pudendal neuralgia, subcutaneous panniculosis is identified in the connective tissues medial to the ischial tuberosities, superficial to the ST/SS ligaments, in the gluteal crease, vulvar region, perineum, and superficial to the tailbone. Patients may also present with connective tissue changes in other referral zones specific to pelvic pain: the abdomen, buttocks, and lower extremities.⁵ During a physical therapy evaluation, it is essential to examine the connective tissue on the anterior and posterior trunk, lower extremities, and all areas in and around the pelvis. This technique is termed *connective tissue manipulation* (CTM) and is performed with minimal pressure as the therapist pushes through the subcutaneous tissue. When the tissues are restricted the patient will report severe pain, burning, and stabbing sensations. This may be surprising to the patient if he or she does not typically experience pain in these areas. A physical therapist continues to manipulate the tissues until mobility is restored. When left untreated, connective tissue restrictions can initiate a vicious cycle of muscle hypertonicity in response to the painful stimuli, continued trophic changes, somatic-viscero symptoms, and narrowing and compression of the pudendal nerve pathway.

The goal of connective tissue manipulation is to restore connective tissue integrity, improve circulation, and decrease general water retention, thereby altering PH and decreasing chemical sources of pain, and per the cutaneous-visceral reflex, cause positive reactions in distant organs (i.e., CTM in the suprapubic region will contribute to decreased urinary urgency and frequency).⁶

As the tissue normalizes, patients will experience improved sitting tolerance, less hypersensitivity, less pelvic pain, decreased itching and burning, and improved urinary, bowel, and sexual functioning.

(Note: Part 2 of this article, which will appear in the Summer issue of *Vision* (Volume 15, No. 2), will further discuss the various impairments commonly involved in the evaluation and treatment of pudendal neuralgia.)

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The President's Perspective

Alfredo Nieves, MD



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Pudendal neuralgia is a very enigmatic condition and usually is accompanied by other painful conditions. The clinician should have a heightened level of suspicion in order to consider this condition in the differential diagnosis. Obtaining a detailed history about the common complaint of dyspareunia will trigger an investigation most of the time, and the physical exam should confirm the diagnosis. Pain distribution

along S-2-S-3 (i.e., the vulva, the perineum, the clitoris, and the buttocks) with or without allodynia is a classical presentation. Invariably these patients will have extreme shortening (i.e., "violin strings") of the levator, and, most important, the coccygeus muscle. Because the coccygeus is closest to the ischial spine and in close proximity to the pudendal nerve, special attention should be paid to this structure.

The involvement of the physical therapist is of utmost importance. I have been very fortunate to collaborate with Melissa Kubic, one of the brightest and most caring physical therapists in the U.S. Because of Ms. Kubic's marvelous work, the pain scores of patients with pudendal neuralgia have been seen to decrease by 50% within 6-8 weeks after they enter the pelvic rehabilitation program. We have used this protocol for about 10 years, and owing to Ms. Kubic's work, I have seen a decreased need for blocks, botox, or TPI for the pelvic floor. One subset of patients that benefits from not only preoperative but postoperative physical therapy (PT) are the pudendal nerve