Interdisciplinary Management Of Complex Pelvic Pain and Pudendal Neuralgia
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Disclosures
● Scientific Advisory Board for Materna Medical

Objectives
  1. Evolution of PN
  2. Diagnosing PN
  3. Differential diagnosis of PN vs PNE
  4. Biopsychosocial Physical Therapy Protocol
  5. Case Study
  6. Interdisciplinary Treatment Algorithm

Pudendal Neuralgia: Then
  1988: Alcock’s Canal Syndrome and Perineal Neuralgia
    • Compression of the PN, canal syndrome
    • Tinel’s sign of increased pain with sitting
    • Cyclist’s Syndrome

Diagnosis of PN by PNE

Then: tunnel syndrome due to ligamentous entrapment of the PN:

- (+) Tinel’s Sign
- "Muscular dysfunction" of the external pelvic girdle muscles
- Pelvic floor muscle examination not included

Further Examination:
- Diagnostic Pudendal Nerve Block
- Pudendal Nerve Terminal Motor Latency Test
- Sacral Reflex Latency testing
- EMG: bulbocavemosus and external anal sphincter, comparative analysis

Then: Pudendal Neuralgia/Pudendal Nerve Entrapment

- Treatment
  - 3 Pudendal nerve infiltrations: 4ml of 1% lidocaine and 40 mg methylprednisolone acetate
  - Functional restoration physical therapy optional: muscle stretches and biofeedback/relaxation
  - Surgical decompression

Decompression and Transposition of the Pudendal Nerve in Pudendal Neuralgia: A Randomized Controlled Trial and Long-Term Evaluation

Methods: sequential, randomized controlled trial to compare decompression of the PN with nonsurgical treatment
Patients 18-70, perineal pain, (+) temporary response to block

Surgical Group
• N= 16
• Surgical decompression and transposition
• Medical management: anticonvulsants and antidepressants
• PNBs
• Relaxation Therapy

Nonsurgical Group
• N= 16
• Medical management: anticonvulsants and antidepressants
• PNBs
• Relaxation Therapy


Results
Table 3. Primary endpoint, 3 months.

Table 4. Results at 12 months.

Conclusions
“This prospective, randomized study demonstrates PN surgical decompression/transposition is a safe and effective treatment for patients with intractable PN”.

“This pain may be due to a tunnel syndrome previously misdiagnosed or abusively qualified as ‘idiopathic’.”
As the pelvis turns…

Lefaucheur et al. What is the place of ENMG studies in the Dx and Management of PN related to entrapment syndrome?
Neurophysiologie Clinque/Clinical Neurophysiology (2007) 37, 223 -228

"Entrapment of the pudendal nerve may be at the origin of chronic perineal pain. This syndrome must be diagnosed because this can result in the indication of surgical decompression of the entrapped nerve for pain relief."

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Diagnostic Criteria for Pudendal Neuralgia by Pudendal Nerve Entrapment (Nantes Criteria)

- Pain in the territory of the PN
- Pain predominantly while sitting
- Pain does not wake patient at night
- Pain with no sensory impairment
- Pain relieved by diagnostic PNB


ENMG limitations

- Employed techniques correlate to demyelination or axonal loss vs pathophysiological mechanisms of pain
- Tests only consider direct or reflex motor function, sensory nerve conduction studies need to be more sensitive to detect nerve compression
- Cannot differentiate entrapment from other nerve issues
- ENMG limited sensitivity and specificity about pain mechanisms

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Diagnostic Criteria for Pudendal Neuralgia by Pudendal Nerve Entrapment (Nantes Criteria)

- absence of pathognomic imaging, laboratory and electrophysiologic criteria, remains primarily clinical
- "In fact, only the operative finding of nerve entrapment and post-operative pain relief can formally confirm the diagnosis of PN due to PNE, except for a possible placebo effect of surgery".

Pudendal Neuralgia Diagnosis Now

- Neuromuscular and/or Neuropathic Pain Syndrome
- Mechanical
  - Compression
  - Tension
  - Entrapment

Pudendal Neuralgia Now: Neuromuscular Pain Syndrome

- Neuromuscular Peripheral/nociceptive impairments
- Mechanical causes of neural issues
  - compression
  - tension
  - entrapment
- Pain Component: CNS alterations
  - sensory processing disorders of the spinal cord and brain
  - pain is an output expression of the brain
  - Nociception is neither necessary nor sufficient for the production of pain

Pudendal Neuralgia Now

- Biopsychosocial Treatment Model
  - Pelvic Floor Physical therapy is considered first line therapy most pain conditions, including Pudendal Neuralgia
  - Nociception and pain are not the same and must be independently evaluated and addressed

Physical Therapy Evaluation: History
- etiology of chief complaints
- evidence of central sensitization
- evidence of fear-avoidance/catastrophization
- pain, anxiety, depression
- medical professionals actively involved in their care
- failed treatments/interventions/medications

Physical Therapy Evaluation: Physical Examination
- Pelvic floor and girdle muscles
  - length, strength, motor control, MTrPs
- Connective tissue
  - mobility, integrity
- Joint integrity
  - static and dynamic
- Neurodynamic function
  - elongate, glide, slide, irritability
- Movement patterns

Physical Therapy Management: Assessment
- Etiology, symptoms, impairments
- Identification of nociceptive local tissue dysfunction, mobility dysfunction, strength/stability and functional limitations
- Identify central nervous system impairments

Physical Therapy Treatment Plan
- Patient education: pain education
- Neutralize fear
- Manual therapy
- Home exercise program and temporary lifestyle modification
- Coordination of care and provider communication
Treatment Plan
• Physical therapy: 1-2 xs/week
  • patient education
  • manual therapy
  • home exercise program

Treatment Plan
• Coordination of care
  • Interventional Pain Management: hold until 4-6 PT visits

What to Expect from your Physical Therapist
1. Explanation of cause of symptoms
2. Frequency of your treatment plan
3. Duration of your treatment plan
4. Communication with your other providers
Treatment Plan Troubleshooting

- Cannot tolerate physical therapy
- Not responding to physical therapy
- Noncompliant with physical therapy plan
- No access to physical therapy

Troubleshooting: Cannot tolerate physical therapy

- Manual therapy techniques incorrect
- Manual therapy techniques correct but pain is unmanaged
- Exercises to benefit one impairment aggravate another, not appropriate
- Technique or exercise not indicated because of other comorbidities (ex: vulvar tissue integrity)

Troubleshooting: cannot tolerate physical therapy

- Unmanaged pain: allodynia/hyperalgesia
- Central vs Peripheral nervous system dominance
- Manual therapy, exercise, lifestyle
- True nerve entrapment: surgical insult, anatomic abnormalities

Not responding to physical therapy

- Treatment technique efficacy
- Relevance of impairment targeted
- Touch everything, change nothing
- CNS dominant pain
- Entrapment
- Unidentified comorbidities
Non-Compliance with physical therapy

- Lack of belief in provider
- Lack of understanding of syndrome
- Unmanaged pain and/or anxiety and/or psychiatric comorbidities

Non-Compliance with physical therapy

- Cost
- Time intensive
- Convinced it is PNE

“If I cannot help you now let me help you find someone who can”