Interventional Treatments for Pelvic Pain

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Objectives

• Describe available interventional treatment options for patients with chronic pelvic pain

• Delineate which patients may benefit from interventional procedures (i.e. who to refer)

• Outline the existing, minimal literature to support these procedures for the treatment/diagnosis of chronic pain
A 34 year old female presents to your clinic with several year history of dyspareunia and chronic pelvic pain. Manual pelvic examination reveals asymmetric bulging of the right levator ani muscle with reproduction of the patient’s typical pain with palpation. Which of the following are evidence-based treatment options?

A. Trigger point injection  
B. Pudendal nerve block  
C. Botulinum toxin injection  
D. Superior hypogastric plexus block
Poll: Which of the following are evidence-based treatment options?
Trigger Point Injections

Trigger Point Injections for Chronic Pelvic Pain

• Superior to conventional management up to 12 weeks post-procedure (Level 1)$^{1,2}$

• 33% complete resolution of pain symptoms at 3 months (Level 2)$^2$

Trigger Point Injections for Chronic Pelvic Pain

- Addition of corticosteroid for TPIs not superior to LA alone (Level 1)$^1$

- Recent study: no difference in sexual function or pain at 1 month between levator ani TPI vs. PT alone (both groups improved – implication is TPI = PT) – Level 4$^2$

- Common muscles involved: levator ani, piriformis, obturator internus, glutei, and quadratus lumborum

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Evidence for Botulinum Toxin

• Serial injections in levator ani showed improvement at 6 weeks post-injection (58%); retrospective (Level 2)¹

• RCT: 80 units botulinum toxin vs. saline, 30 patients per arm. No differences between groups in dyspareunia, pelvic pressure, or pain but both groups improved in all 3 (p < 0.05). (Level 1)²

Case Series

Superior Hypogastric Plexus Combined with Ganglion Impar Neuromotoric Blocks for Pelvic and/or Perineal Cancer Pain Relief

Doaa G. Ahmed, MD, Mohamad F. Mohamad, MD, and Sahar Abd-Elbaky Mohamed, MD

Original Research Article

Efficacy of the Anterior Ultrasound-Guided Superior Hypogastric Plexus Neurolysis in Pelvic Cancer Pain in Advanced Gynecological Cancer Patients

The effects of early or late neurolytic on the management of abdomina

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A 28 year old female presents to your clinic with chronic pelvic pain due to endometriosis. She would like to get pregnant and her REI physician has asked you to perform interventional treatment options to alleviate her pain so that she does not require a hysterectomy. Which of the following is the best option?

A. Superior hypogastric plexus block
B. Ganglion impar block
C. Trigger point injections
D. Spinal cord stimulation
Poll: A 28 year old female presents to your clinic with chronic pelvic pain due to endometriosis. Which of the following is the best option?
Superior Hypogastric Plexus (SHP) Block

• The SHP provides visceral innervation to most pelvic structures, descending colon, rectum and internal genitalia except the ovaries and uterine tubes (and testes)

• Treats pain due to: endometriosis (level V), pelvic inflammatory disease (level V), postoperative adhesions (level V), and cancer unresponsive to more conservative measures (level II) \(^1,2\)

Ganglion Impar Block

- The bilateral paravertebral sympathetic chain terminates anteriorly as a midline single fused ganglion impar.

- Supply nociceptive and sympathetic fibers to the perineum, distal rectum, perianal region, distal urethra, vulva/scrotum and distal third of the vagina, as well as sympathetic innervation to the pelvic viscera.

- Treat visceral and sympathetic pelvic and perineal pain, both malignant and benign (Level 4) and coccydynia (Level 5)\(^1\)

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Ganglion Impar Block
A 31 year old male presents to your clinic with unilateral perineal pain as well as unilateral testicular pain that worsens with sitting. You suspect a neuralgia. Which of the following peripheral nerves is most likely irritated?

A. Pudendal  
B. Ilioinguinal  
C. Iliohypogastric  
D. Genitofemoral
Poll: Which of the following peripheral nerves is most likely irritated?
Pudendal Nerve Blocks

- Innervates the penis, clitoris, bulbospongiosus, ischiocavernosus, perineum and anus

- Neuralgia: intractable pelvic and perineal pain, hyperalgesia, genital numbness, sexual dysfunction and even abnormal urinary frequency; unilateral
  - the vulva, vagina, clitoris, perineum and rectum in females and to the glans penis, scrotum, perineum, and rectum in males

- Pulsed radiofrequency neuromodulation (Level 4)\(^1\)

Pudendal Nerve Blocks
Ilioinguinal/Iliohypogastric/Genitofemoral Nerve Block

• Historically used as perioperative anesthesia techniques during inguinal herniorrhaphy, orchidopexy, and hydrocelectomy

• They can be helpful diagnostically in the evaluation of groin pain to differentiate peripheral nerve entrapment from lumbar radiculopathy. The II and GF nerves have been known to become adhered after laparoscopy for endometriosis

• Successful pain relief after a diagnostic nerve block may indicate nerve entrapment; can help distinguish from upper lumbar radiculopathy

Genitofemoral Nerve Block

- Genital Branch of Genitofemoral Nerve
- Spermatic Cord
- External Iliac Artery

Image: Ultrasound scan showing the genitofemoral nerve, spermatic cord, and external iliac artery.
Other Options

• Pulsed radiofrequency neuromodulation?

• Traditional radiofrequency ablation?
  Cryoablation?

• Spinal cord stimulation?
Spinal Cord Stimulation

- T12?

- Sacral stimulation? Retrograde or caudal?

- Dorsal root ganglia stimulation?

- High frequency? Paresthesia? No paresthesia?

- Targeted pudendal stimulation?
Selectivity Nerve Root Stimulation (SNRS) for the Treatment of Intractable Pelvic Pain and Motor Dysfunction: A Case Report

Kenneth M. Aló, MD*, Esperanza Mckay, MD, BCIA-C

The Pain and Health Management Centers, Houston, Texas
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D. Spinal cord stimulation
Poll: Post-Which of the following is the best option?
A 31 year old male presents to your clinic with unilateral perineal pain as well as unilateral testicular pain that worsens with sitting. You suspect a neuralgia. Which of the following peripheral nerves is most likely irritated?

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D. Genitofemoral
Poll: Post-Which of the following peripheral nerves is most likely irritated?
Conclusions

• Interventional treatment options for chronic pelvic pain are available and have variable levels of evidence with well documented safety profiles.

• Understanding of pelvic anatomy is crucial to performing these procedures safely and appropriately.

• Interventional treatment is an adjunct treatment to the management of chronic pelvic pain.