Chronic Pelvic Pain and the Osteopathic Approach

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Objectives

• Be able to list the various causes of pelvic pain
• Understand the underlying etiology of conditions causing pelvic pain
• Describe an approach to diagnosis and treatment for GYN pain with an osteopathic approach to safely reduce costs and improve outcomes.
Acute vs Chronic Pelvic Pain

• Acute pain
  • Dysmenorrhea
  • Mittleschmertz
  • Infections/STI’s
  • Ovarian torsion
  • Ectopic pregnancy
  • Somatic dysfunction

• Chronic Pelvic Pain - more than 6 months duration
  • Significantly impacts activities of daily living and the patient’s quality of life
  • Reproductive and non-reproductive organ related pain
  • Primarily acyclic
    • Present all the time, may exacerbate with the menses
OMT in Acute Pain

• Determine whether the pain may indicate a life-threatening condition
  – OMT is not indicated in emergencies
  – Perform your usual pelvic exam
  – Note cervical position – Is it deviated?
  – Note uterus – Anteverted? Retroverted? Tender?
    • Is retroverted really normal?
      – More dysmenorrhea
      – More miscarriages
      – More risk of prolapse
  – Note adnexal tissue tension, tenderness and turgor
  – Note vaginal tissue tension, tenderness and turgor
  – Note pelvic floor tissues, symmetry, tenderness, tension
Structural Exam for the GYN Patient

– Look for asymmetry of the ASIS
– Check for tenderness of the pubic bone
– Look for vertical and AP shears
  • AP shears can cause significant pelvic pain and suprapubic tenderness
  • Suprapubic tenderness not related to somatic dysfunction may be interstitial cystitis
– Pelvic compression test for SI dysfunction
– “Structural exam” includes structure of the uterus and adnexa
– Check the psoas and abdominal wall for tenderness
– Treat abnormal findings and recheck the pelvic exam for changes
Pelvic Floor Dysfunction
OMT saves time and health care dollars

• If the problem resolves with OMT, further work up may not be needed
• If relief is short (returns within 24 hours) the problem may be viscerosomatic and require further work up
• After diagnostic laparoscopy, pain may improve for several months
  – May be due to paralyzing agents used in anesthesia induction
  – Deep relaxation and resetting of tissue tension may temporarily relieve pain from somatic dysfunction
Possible Origins of Chronic Pelvic Pain

• Gynecologic
• Somatic dysfunction (osteopathic diagnoses)
• Orthopedic
• Gastrointestinal
• Urologic
• Neurologic
• Psychosomatic
<table>
<thead>
<tr>
<th>Organ</th>
<th>Spinal Segments</th>
<th>Nerves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal wall</td>
<td>T12 - L1</td>
<td>Iliohypogastric</td>
</tr>
<tr>
<td></td>
<td>T12 - L1</td>
<td>Ilioinguinal</td>
</tr>
<tr>
<td></td>
<td>L1 - 2</td>
<td>Genitofemoral</td>
</tr>
<tr>
<td>Ovaries</td>
<td>T9 - 10</td>
<td>Sympathetics through renal and aortic plexus and celiac and mesenteric ganglia</td>
</tr>
<tr>
<td>Outer two thirds of fallopian tubes, upper ureter</td>
<td>T9 - 10</td>
<td>Sympathetics through aortic and superior mesenteric plexus</td>
</tr>
<tr>
<td>Uterine fundus, proximal fallopian tubes, upper bladder, cecum, appendix, terminal large bowel</td>
<td>T11 – 12, L1</td>
<td>Sympathetics through hypogastric plexus</td>
</tr>
<tr>
<td>Upper vagina, cervix, lower uterine segment, posterior urethra, bladder trigone, uterosacral and cardinal ligaments, rectosigmoid, lower ureters</td>
<td>S2 - 4</td>
<td>Pelvic parasympathetics</td>
</tr>
<tr>
<td>Perineum, vulva, lower vagina</td>
<td>S2 - 4</td>
<td>Pudendal, inguinal, genitofemoral, posterofemoral cutaneous</td>
</tr>
</tbody>
</table>
Viscerosomatic Convergence

- Phenomenon that causes pain to be diffusely experienced in the sensory cortex
  - Second order neurons receive both visceral and somatic input
  - Viscerosomatic neurons have larger receptive fields than the somatic ones
  - Pain is usually referred to the skin

- Genital tract sensitivity varies by location
  - Upper vagina is less sensitive than the lower vagina
  - Cervix is insensitive to small biopsies but sensitive to deep incision or dilations
  - Uterus is very sensitive
  - Ovaries are relatively insensitive except for rapid distension or compression
    - Ovarian torsion is very painful (ischemia with rapid capsular distension)
    - Ovarian cancer is not painful (slow distension)
Associated Symptoms - Gynecologic

- Dyspareunia
- Dysmenorrhea
- Abnormal bleeding
- Discharge
Associated Symptoms - Gastrointestinal

- Constipation
- Diarrhea
- Bloating
- Gas
- Rectal Bleeding

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Associated Symptoms - Genitourinary

- Urinary frequency
- Dysuria
- Urgency
- Incontinence

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Associated Symptoms - Neurologic

• Specific nerve distribution of pain

Associated Symptoms – Somatic Dysfunction

- Diffuse pelvic pain
- Low back pain
- Unilateral lower quadrant pain
  - (psoas spasm, psoas syndrome)
- Sciatica
- Lower extremity pain
- Dyspareunia
- Dysuria
Differential Diagnosis: Chronic Pelvic Pain In GYN

- Endometriosis
- Adenomyosis
- Uterine leiomyomas
- Pelvic congestion syndrome
- Pelvic inflammatory disease
- Ovarian/Retroperitoneal cysts
- Somatic dysfunction
  - Recognize then treat or refer
Endometriosis

- Endometrial implants throughout the pelvis and abdomen
- Tend to be found in most dependent areas
- Can also be found systemically
- Progressive
- Causes infertility
  - Decreased tubal mobility from adhesions
  - Inflammation toxic to ova and sperm
Adenomyosis (Endometriosis Interna)

- Endometrial implants within the myometrium
- Do not cycle with menses
- Cause chronic inflammation
- Progressive
Adenomyosis - Gross Pathology

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Uterine Leiomyomas (Fibroids)

OMT for symptomatic relief
Might early treatment be preventative?

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Uterine Leiomyomas (Fibroids)

• Treatment
  • No treatment if asymptomatic
  • Endometrial ablation - Microwave
  • Myomectomy
    • Hysteroscopic
    • Laparoscopic
    • Robotic
    • Open
  • Hysterectomy
    • Consider GnRH agonist treatment for three months to decrease bulk and reduce blood loss

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http://upload.wikimedia.org/wikipedia/commons/thumb/5/50/Myomenukleation.jpg/230px-Myomenukleation.jpgatment
Pelvic Inflammatory Disease

- Visceral techniques can be used to treat adhesions
- Adhesion stretching exercises
- Prevention is the best cure
Chronic Pelvic Inflammatory Disease

• Examination
  – Diffuse pelvic pain
  – May have an adnexal mass if hydrosalpinx or a tubo-ovarian abscess is present
  – Decreased mobility of pelvic organs secondary to adhesions

• Treatment
  – Diagnostic laparoscopy for adhesiolysis
  – Adhesions frequently return
  – Osteopathic visceral treatment to stretch adhesions
  – Prevention is the best cure!

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Pelvic Congestion Syndrome

- **Pathophysiology**
  - Increased pelvic varicosities
  - Increased congestion of pelvic organs
  - Pelvic organ mobility
  - Most women with pelvic varicosities are asymptomatic

- **History**
  - Usually multiparous
  - Often have a history of heavy lifting
  - May have associated menorrhagia and urinary frequency
  - Increased by fatigue, standing, and intercourse

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Pelvic Congestion Syndrome

• Examination
  • Diffuse pelvic pain
  • Hypermobile uterus, retroverted, soft, boggy mildly enlarged
  • Dilated veins may be noted on ultrasound and venographic studies

• Treatment
  • Osteopathic manipulative treatment can reduce congestion
  • Cyclic suppression with hormonal contraception may improve symptoms
  • Lifestyle measures – reduce heavy lifting, jobs requiring standing
  • Hysterectomy may improve symptoms
Retroperitoneal Cysts

• Ultrasound
  – Generally will be simple cysts
  – May be difficult to determine whether or not they are retroperitoneal

• Treatment
  – Treatment is surgical
  – When in the retroperitoneal space, great care needs to be used not to compromise the ureter and other important structures
Somatic Dysfunction

• Pathophysiology
  – Somatic dysfunction is defined by the presence of “TART” findings
    • Tenderness
    • Asymmetry
    • Restriction of motion
    • Tissue Texture changes

• History
  – History may include trauma
    • MVA, falls, fractures
  – Note obstetric history
    • Relaxin and stress of delivery predisposes to somatic dysfunction
  – Note activities that may cause repetitive trauma
    • Lifting, sports
  – Ask about traumatic sexual assault/abuse
    • Underlying tissue changes may be present
Somatic Dysfunction Structural Examination

- Pay attention to areas where pain is elicited and corresponding viscera
- Do a thorough examination of the pelvic floor
- Note the path of the psoas as a frequent contributor to pelvic pain
- Do a structural exam for asymmetry and correct identified somatic dysfunction
- Repeat the examination after osteopathic manipulative treatment
  - When pain is of visceral origin, OMT may give temporary relief then recurs within 24 hours
  - When pain is somatic, progressive improvement is noted with each treatment
  - Explain this to patient and if pain returns further work up is needed
Psoas

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Psychological Factors

- About 1/3 of patients will not receive a definitive diagnosis (under routine care—including osteopathic diagnoses will likely decrease undiagnosed cases)
- Psychological factors may be contributory to the pain, or may be secondary to it
- Patients with chronic pain have higher MMPI* scores in:
  - Anxiety
  - Hypochondriasis
  - Hysteria
- May have post-traumatic stress disorder from emotional, sexual or physical trauma

*Minnesota Multiphasic Personality Inventory
Multidisciplinary Approach

• Sympathy
• Physical therapy – with pelvic floor expertise
• Osteopathic manipulation with core exercises
  – Fascial distortion model
• Relaxation, cognitive and behavioral therapies
• Evaluation for nerve entrapment
Pharmacologic Management

- Ovulation suppression
- NSAIDs
- SSRI’s
- Tricyclic antidepressants
- GABA-ergic agents
- Local anesthetics (trigger point injections)
Surgical Management

- Could include hysterectomy, unilateral or bilateral salpingo-oophorectomy, adhesiolysis
- Complete psychological evaluation should be done before resorting to surgery without a diagnosis
- With diagnostic laparoscopy, some patients will have improved symptoms for 3-4 months without other intervention
  - Consider a musculoskeletal/osteopathic diagnosis in these cases
  - Paralyzing agents used in anesthesia induction may allow for temporary relaxation and resetting of painful tissues
- Consider a trial of osteopathic manipulation and exercise before surgical intervention
References


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