A New Approach to the Physical Therapy Management of Chronic Pelvic Pain

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Traditional Physical Therapy for Pelvic Floor Dysfunction

- Indicated for pelvic floor dysfunction
  - Ex. urinary and fecal incontinence, urinary frequency and/or urgency
- Pelvic floor strengthening
  - Kegel exercises, biofeedback
- Stretching
- Correction of biomechanical/structural deformities
Physical Therapy and Chronic Pelvic Pain

- Last 15-20 yrs physical therapy began addressing pelvic pain conditions
- Commonly treated diagnoses
  - Interstitial cystitis or painful bladder syndrome, vulvodynia, vulvar vestibulitis, chronic non-bacterial prostatitis, coccygodynia, pudendal neuralgia, persistent post-operative pain following pudendal nerve decompression
‘New Approach’ Physical Therapy Treatment for Pelvic Pain

- Connective Tissue Manipulation (CTM)
- Myofascial trigger point release
- Neural mobilization
- Lengthening of the shortened pelvic floor muscles
- Correction structural/biomechanical deformities
Connective Tissue

- Continuous web of tissue that surrounds muscles, membranes, fibers and all systems including the nervous and musculoskeletal system
- Gives our body shape and support
Connective Tissue and Pelvic Pain

- Virtually all patients with pelvic pain present with connective tissue restrictions
  - abdomen, thighs, gluteals, and along bony pelvis
- Termed Subcutaneous Panniculosis
  - Def: increased texture thickness with acute tenderness upon pinch-rolling in the subcutaneous tissue
Subcutaneous Panniculosis

- Tissue has tenderness, hyperalgesia, trophic changes, and thickening of skin with underlying muscle atrophy
- Causes localized pain and inflammation of distant organs as described by the cutaneous-visceral reflex
Why do these restrictions occur?

- As a result of
  - Visceral referred pain
  - An inflamed peripheral nerve
  - Myofascial trigger points
  - Joint restrictions

- Last 20 yrs of basic science research has proven the interaction between muscle, skin, internal organs and the central and peripheral nervous systems
1893: Sir Henry Head
- cutaneous representation of visceral pain known as ‘Head’s Zones’

1917: Visceral-Somatic Reflex described by James MacKenzie
- Changes in muscle tone of groups which had the same segmental root supply as the diseased organ

1955: Cutaneous-Visceral Reflex described by Max Kibler
- Treated functional disturbances of internal organs by application of heat and massage to Head’s Zones

1987: Visceral-Cutaneous Reflex demonstrated by McMahon and Abel
- Showed bladder inflammation causes skin hypersensitivity in the tail, perineum, and caudal abdomen of rats

1997: Visceral-Cutaneous reflex further demonstrated by Ursala Wesselman
- Proved 3 mechanisms of referred visceral pain
Connective Tissue Manipulation (CTM)

- Developed by Elizabeth Dicke, MD in 1929
  - Suffered from endoteritis obliterans
  - Noticed stroking motion on her back caused cutting sensation and severe hypersensitivity in areas with thickened tissue
  - Avoided LE amputation with self tissue manipulation
Common Sites of Connective Tissue Restrictions
Goals of CTM

- Improved circulation
- Restore tissue integrity
- Decrease ischemia
- Reduce chemical irritants
- Eliminate adverse reactions in viscera
- Decrease adverse neural tension of peripheral nerve branches
Unresolved CT Restrictions

- Cause further muscle hypertonus
- Perpetuate trophic changes
- Contribute to visceral irritability
- Restrict and compress neural pathways
How to perform CTM

- Utilized in each treatment until tissue mobility has normalized
- Use all 10 fingers
- Minimal lubrication
- Slide tips of thumbs parallel to skin while pulling tissue towards thumbs with tips of other 8 fingers
Clinical Response

- Gradual increase in connective tissue mobility
- Decreased tissue hypersensitivity
- Decreased trophic changes/improved tissue integrity
- Decrease in pelvic pain
- Decrease in urinary/bowel/sexual dysfunction
- Increase in function
  - Increased sitting tolerance, increased exercise tolerance
Patient Response

- Initially very painful
- Initially bruising and redness typically occurs
- Less pain and bruising as tissue mobility improves
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2003 Kotarinos and Fitzgerald showed that the inability to contract the pelvic floor in patients with pelvic pain was due to pelvic floor hypertonicity rather than weakness.

Shifted focus of treatment of pelvic floor muscles from strengthening to lengthening.
Physical Therapy Manual
Techniques for the PFM

- Contract-relax
  - Contract treating muscle 5 seconds, then passively stretch muscle

- Reciprocal inhibition
  - Contract treating muscle in opposite direction, then passively stretch muscle

- Strumming
  - Stroke muscle parallel to fibers

- Cross-friction
  - Stroke muscle perpendicular to fibers
Pelvic Floor Muscles

- Levator Ani
- External Anal Sphincter
- Coccygeus
- Piriformis
- Obturator Internus
- Bulbospongiosus
- Ischiocavernosus
Home Exercise Program

- PNF D2 “pelvic floor drop”
  - Isometric contraction of hip flexors, hip ext rotators and hip abductors reciprocally inhibits pelvic floor muscles
- Squat
Questions??

Thank You!