Chronic Pelvic Pain

The role of the pelvic floor and trigger points in causation

Martha Mills and Lynn Sweeney, ASOG

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In Accordance with the Dalhousie CME Accreditation

- We have no potential conflicts of interest to disclose

The Case

- H.Y. First seen by MM in 2003
- 37yo G2P2
- c/o pelvic pain, mostly cyclical associated with bloody D/C from umbilicus, superficial dyspareunia and PCB

The Case

History

- Previous C/S X 2, lower midline incisions
- Laparoscopy 1990 for pelvic pain—normal
- Seen 1993 for same—trial of GnRHa—improved
- Seen 2001 for pelvic pain and bloody D/C from umbilicus—Lap T/L, EMA, excision scar tissue below umbilicus—normal pelvis, no endo on path, adenomyosis on EM resection pieces

The Case

- Exam normal, no obvious endo
- Signs of localized vulvodynia
- Pelvic floor muscles not assessed

The Case

- Rx Danazol—D/C because of expense
- Rx GnRHa—compassionate release
- U/S—normal except EM 11mm. Cystic area at fundus—fibroid?
- Pain-free on GnRHa, opts for hyst
- 2005—TAH—normal pelvis—path shows no endometrium, no adenomyosis

The Case

- Referred again 2015 at age 49 for recurrent pelvic pain twice per month; feels like in labour; “knocks her to her feet”; radiates to LB. Failed NSAIDs
- U/S shows simple 3.6cm cyst L adnexa
- PMHx now shows HTN and FM. On amitriptyline
- Normal exam; LA not assessed
- Laparoscopy shows ovaries bilaterally retroperitonealized. ?superficial endo on bladder peritoneum

The Case

- Placed back on GnRHa and HT add-back
- Decreased pain after 3 months
- After 6 months, still improving but LBP like “back labour”
- Exam shows tenderness over bilateral LA and paraesthesia; repro pelvic pain
- Referred to pelvic floor physiotherapist
- Seen October 2016—”best she’s ever been”
- Continued GnRHa until July 2017 then D/C’ed

Definition

- Intermittent or constant pain in the lower abdomen or pelvis of a woman of at least 3-6 months in duration, not occurring exclusively with menstruation or intercourse and not associated with pregnancy
- A symptom, not a diagnosis

  - RCOG Green-Top Guideline, 2012

Prevalence

- As common as migraine and low back pain
- WHO—”Neglected reproductive health morbidity”
- Affects 6-25% of reproductive-age women
- Common referral to gynecology; often co-exists with other diagnoses
- Hospital costs estimated at 25 million/year

Causes

- Frequently more than one component
- Endometriosis, adenomyosis
- Chronic PID
- Entrapped or residual ovary syndrome
- Painful bladder syndrome; IBS
- Musculoskeletal
- Neuropathic
- Influences of other physical, psychological and social factors in pain experience

Causes
Central and Peripheral Nervous System

- Pain persists long after original tissue injury or exists in absence of tissue injury
- Major changes in afferent and efferent nerve pathways in CNS and PNS
  - TNF-alpha, chemokines
  - Persistent pain can alter/magnify original signals to CNS
  - Descending info from CNS can modify pain perception and visceral function
    - Visceral hyperalgesia; neuropathic pain

Causes
Musculoskeletal

- Direct pain from joints or abdominal wall/pelvic floor damage
- Trigger points
  - ?due to chronic contraction
  - ?stimulated by misalignment or endometriosis
  - May become self-perpetuating

Initial Assessment

- Takes time!
- Must be allowed to tell her story
- Often helpful to elicit patient's ideas as to cause
- What does the pain feel like
  - Sharp, shooting, "drop to the floor", often aggravated by certain activities
    - Trigger points
  - "Feels like labour", deep dyspareunia, aching, co-existent SUI, radiation to bowel and bladder
    - Pelvic floor pain ("myofascial pelvic pain")

Investigations

- Ultrasound, MRI
  - Endometriomas, adenomysosis
- Diagnosis often based on history and exam
- Laparoscopy
  - No longer the “gold standard”
    - Complication rates 1-2%
    - At least 55% of patients have recurrent pain
  - Probably should be reserved for patients with higher likelihood of positive findings or infertility

The Examination

- Systematic, interactive
- Abdominal exam
- Ask patient to show you
    - Localized versus general
    - Assess for allodynia
    - “Carnett’s sign”

The Examination

- Pelvic exam
  - Palpation of pelvic floor and bladder base
    - Anterior and posterior levator ani complex
    - “cording”, tenderness, trigger points
  - Endometriosis nodules

Treatment

- Trigger points
  - Injection with local anaesthetic
  - Injection with botulinim toxin
  - Systemic neuromodulators
  - Refer to pelvic floor physiotherapy
- Allodynia
  - Topical gabentin cream 4% bid to tid
- Myofascial pain
  - Systemic neuromodulators
  - Refer to pelvic floor physiotherapy

Outcomes Supported in the Literature Resulting from the Integration of a Pelvic Floor Physiotherapist in the Treatment of CPP

- ↓ visits to the ER
- ↓ hospital interventions
- ↓ economic burden to the healthcare system
- ↓ hospital admissions
- ↓ surgical procedures
- ↓ consultations with multiple healthcare professionals
- ↓ diagnostic testing for evaluation and management of pain symptoms

Pelvic Floor Physiotherapy

- Central pain mechanisms
- Biopsychosocial
- Evidence-based

Pain Science

- A sensitized nervous system, caused by:

- Stress
- Anxiety
- Fear
- Catastrophization
- Weakened immune system
- Hormonal imbalance
- Poor diet
- Heightened sympathetic nervous system response (constant fight or flight)

Can also drive your pain in the absence of any tissue damage.

- Pain is contextual

Sensitized Nervous System

What is the driver of their pain?

Biological, psychological, social?

Identify and address threats to the system

Relationships, guilt, past abuse, career, attitudes/perceptions

Educate & develop a plan

Pelvic Floor Assessment Guidelines

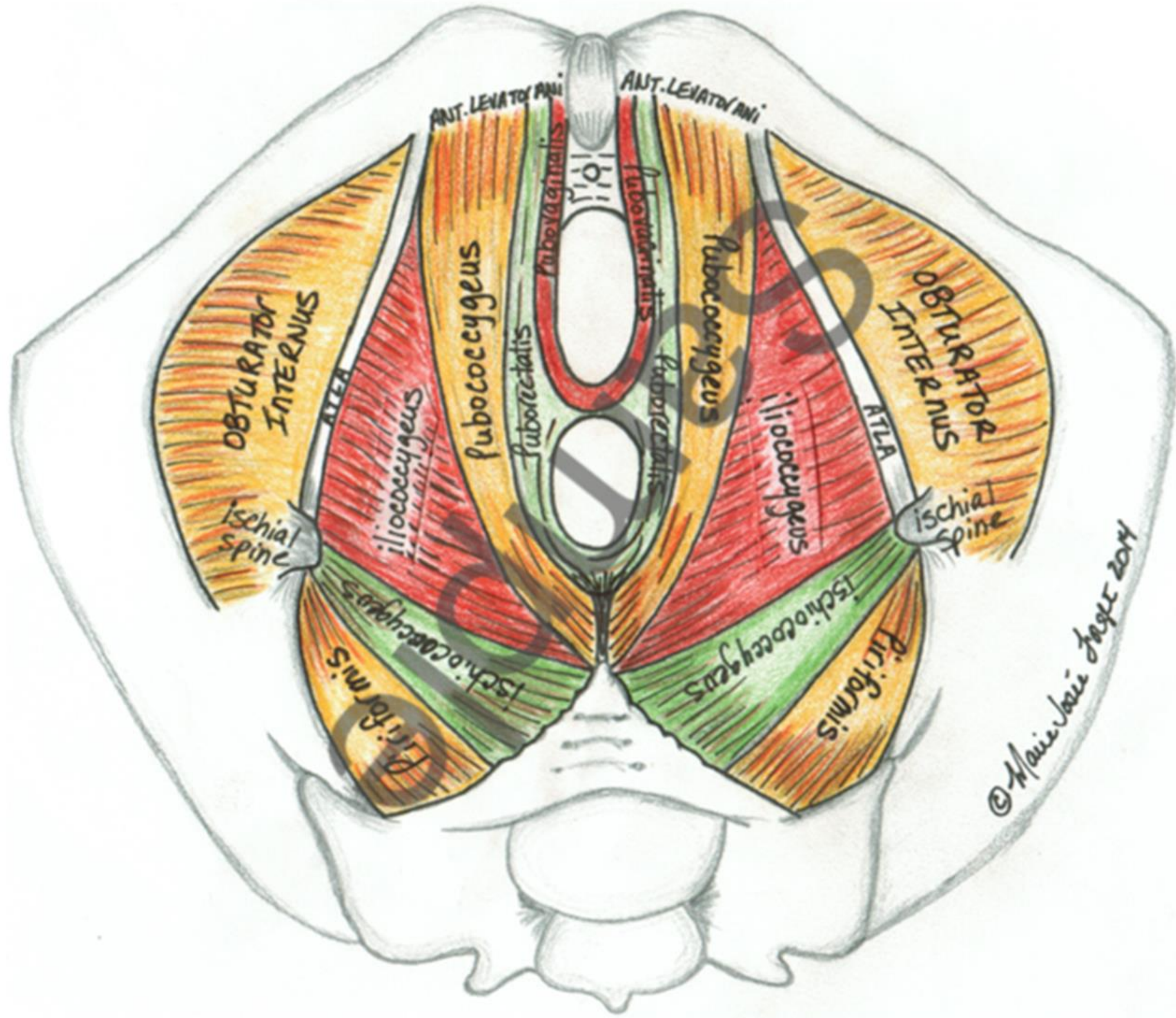
- Outcome measures
- Perineal Observation
- External palpation
- Reflexes
- Connective tissue
- Scar
- Internal and external trigger points
- Vaginal and rectal internal exam
- Global muscle tone

Home Exercise Program

- Wand
- Dilators/accommodators
- Yoga/Qi gong
- Acuball
- Deep breathing
- Meditation
- Guided Relaxation (app)
- Internal trigger point release self treatment
- Connective tissue mobilization
- Sleep hygiene
- Nutrition
- Vulvar skin health

Pelvic Floor Physiotherapy Treatment Guidelines

- Pain Education
  -identify and address threats
  -the power to change pain
- Scar care
- Connective Tissue Mobilization
- External & Internal Trigger Point Release
- Manual therapy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Trigger Points

- Trigger points are defined as hyper-irritable spots in skeletal muscles that are associated with palpable nodules in taut bands of muscle fibers that can refer pain along typical patterns.

- In certain CPP conditions, up to 80% have identifiable trigger points.

- Up to a 70% success rate for decreasing pelvic pain symptoms in patients with CPP by treating the myofascial dysfunction.

Please refer to your handout

	Superficial Transverse Perineal	External anal sphincter	Puborectalis	Iliococcygeus	Ischiococcygeus	Piriformis
Lateral vaginal wall	x (vagina)			x		
Perineum	x			x		
Anal sphincter		x (anus)		x		
Constipation		x BM	x feels like bowel is always full		x BM	

	Pubovaginalis	Ant levator ani	Obturator Internus	Adductor magnus	Iliopsoas	Bulbospongiosis
Lateral vaginal wall	x		x			x (vagina)
Perineum	x	x	x	x		x
Clitoris						x
Anal sphincter	x					
Anterior levators	x					
Bladder	x	x		x		
Urethra	x	x				
Urinary urgency		x			x	
Urinary frequency					x	
Hip			x			
Whole pelvic floor			x dull achy	x		
Golf ball in the rectum			x	x		
Coccyx			x			
Hamstrings			x			
Posterior thigh			x			
Deep groin				x	x	
Pubic bone				x		
Shooting up in pelvis				x		
Low back					x	
Ant thigh					x	
Constipation		x defecation	x feeling of fullness		x passage of stool	
Menstrual/cramping		x cramping			x	

Case Study

- Subjective:
- Pelvic pain daily X 20 years

- Pain is comparable to being in labour

- Intense cramping
- Shooting pain in the pelvis
- Labour type low back pain

Case Study

<u>Objective</u>:

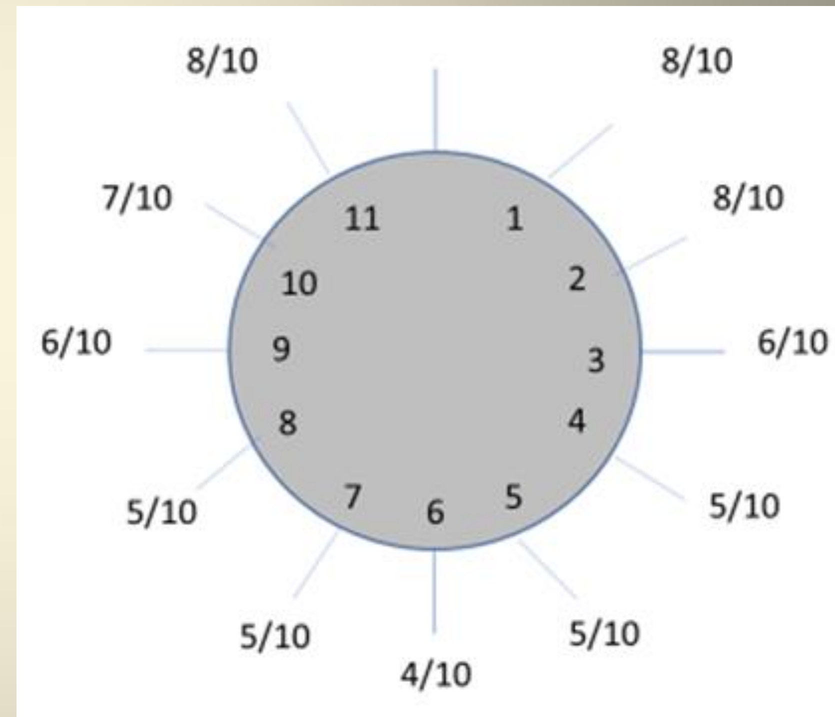
- DASS outcome measure scored 24, “moderate” for stress

- Scars from previous surgeries
  -lower midline incisions

- External trigger point findings:
  -Iliopsoas L>R
  -Upper RA L>R
  -Adductor magnus L<R
  -Bulbocavernosus L>R
  -Ischiocavernosus L>R

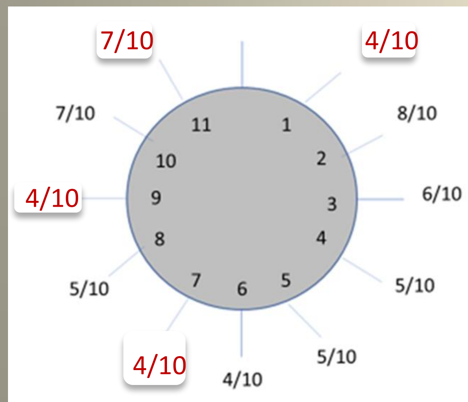
Case Study

- Internal vaginal TP findings
  - R pubovaginalis
  - OI L>R
  - Ant levator ani L,R
- Internal rectal TP findings
  -OI L, R
  -Pubococcygeus L,R



Treatment 1 May 26

A) Extensive scar tissue release (5 techniques)
B) Deep breathing
C) App Stop, Breathe & Think
D) Pain education handout and video



Treatment 2 June 28

A) Connective tissue work along the abdomen, adductors
B) Butterfly stretch
C) External TP release
D) Discussed planning, pacing, prioritizing, stress management

- All trigger points down to 2-4/10 discomfort (4/10 pain occurring on the R)
- Cramping happening 75% less
- Low back pain improved by 50%

Treatment 3 July 26

A) Internal TP release
B) Ball for external TP release

- Pain no longer waking her at night
- Using heat to independently manage her symptoms
- Would call symptoms “mild” compared to before

Treatment 4 August 9

-Discussed plan to independently manage at home and steps to take in order to achieve this (from a biopsychosocial approach)
-Educated re: expect increased tone/TP in pelvic floor during times of increased stress

- Most trigger points have resolved, maximum of 1/10 discomfort
- Feels 80% better since beginning Rx

Discharge

- Assessment: May 3, 2016
- Discharge: September 27, 2016
- 21 weeks/7 treatments from assessment to discharge

Discharge

<u>Subjective:</u>

- Identified stress as a trigger. Now uses meditation, deep breathing, and pacing to manage her stress.
- Feeling 97% better since beginning Rx, “The best I’ve ever been.”
- For the first time in 20 years she feels like she is not walking around in labour

<u>Objective:</u>

-Reports being under a considerable amount of stress at work lately but no increased tone or TP were noted in the pelvic floor

-No findings

Recommended Reading

- Musculoskeletal Causes of Chronic Pelvic Pain: What a Gynecologist Should Know.

  Gyang et al. Obstetrics & Gynecology: March 2013, Volume 121 - Issue 3 - p 645–650

Questions?