IPPS Pre-Conference Session

Clinical Foundations:
An Integrated Approach to the Evaluation and Treatment of Chronic Pelvic Pain

Wednesday October 11, 2017
7:30 a.m. – 5:30 p.m.

Location: Renaissance Washington DC Hotel | Penn Quarter (2nd Floor)

Disclosures

• None
Ask yourself:

- Do I have a handle on central factors and peripheral factors involved?
- What interventions are going to start the ball rolling?
- Do I have a provocation sign/symptom that can test/retest?
- Have I assisted in defining a clear personal graded function based goal?
- What is the highest evidence intervention for this impairment?
- What is the patient-eficacious self care recommendation?
### What is the irritability of the pain experience:

<table>
<thead>
<tr>
<th>Constant</th>
<th>Look at global treatment strategies to improve neuroimmune condition of neuromyofascial structures. Evaluate for adequate rest for the tissues.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intermittent Unpredictable</td>
<td>Look at global treatments for reducing the reactive response. Change routine to see if pattern emerges based on triggers.</td>
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<tr>
<td>Specific Functional</td>
<td>Look at structural and dynamic requirements of the task. Use interventions that support optimum function of the area in the activity. Use graded exposure if needed.</td>
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### Classification of Pelvic Pain

- **NOCICEPTIVE PAIN**
  - Local tenderness
  - Symptoms related to the area of injury
  - Predictable response to treatment
  - Responds predictably to aggravating and relieving factors
  - Preference in direction of movement or positioning

- **PERIPHERAL NEUROPATHIC PAIN**
  - Subacute Pain
  - Peripheral sensitization
  - Neuropathic Pain
  - Plateau of response to initial treatment

- **PERSISTENT PAIN CENTRALIZED SENSITIZATION**
  - Alloodynia
  - Diffuse bilateral and non-mechanical responses
  - Multiple symptom involvement
  - Homeostatic processes impaired
Mulitmodal

- The diversity of clinical symptoms and physical findings found in patients with CPP emphasizes the necessity of multimodal approaches for the management of this patient population (FitzGerald & Kotarinos 2003, Fox 2009).
- Treatment should be directed at both biomechanical and neurophysiological issues (Samraj et al. 2005).

You are not driving

Create a treatment map with the patient
Clarify their goals
Explain you are resource
Help them understand that each section will have its challenges
- They may not recognize the area
  - But at some points will look familiar

- HEALTH
Why start with PNE?

- Unaddressed Pain beliefs and behaviors can influence response after pelvic surgeries (Pinto 2015)

  - PNE increase pain threshold during physical tasks
  - PNE improved outcomes of other approaches such as exercise
  - NE reduces MSK disability

- Education about Pelvic Pain conditions can be integrated with treatment of peripheral factors affecting CPP (Morin et al 2016, Rosenbaum 2010)
  - Multimodal PT for PVD
  - Dethreatening Pain Ed for PGAD

The right tool for the job

- Interventions for addressing central influences on patients pain and disability
- Mindfulness reduces catastrophizing and anxiety
- Graded exposure, GMI and Cognitive Functional Therapy can reduce fear avoidance
Relationship between MSK impairments and Pelvic Pain

- Chronic Pelvic Pain patients with confirmed PFM dysfunction consistently demonstrated abnormal findings on typical PG exam items (Neville et al 2011)

Pelvic Girdle Dysfunction:

Pelvic Pain can persist with lack of joint congruity or impaired motor control response to the demands
Progressive motor control PF, agonists and global muscles

Research for Non-specific PGP Intervention (Verstraete et al, 2013)

<table>
<thead>
<tr>
<th>Treatment Options</th>
<th>What</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>General principles</td>
<td>Balance between rest and activity, minimizing activities which</td>
<td>Stuge et al, 2004; Bastaiaenen et al. 2006; Stuge et al. 2006;</td>
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<tr>
<td></td>
<td>exacerbate pain, information, education, stabilizing exercises</td>
<td>O’Sullivan and Beales 2007; Vleeming et al. 2008; Vermani et al. 2009;</td>
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<tr>
<td></td>
<td>(lumbopelvic &amp; spinal), pain relief drug therapy</td>
<td>Katonis et al. 2011</td>
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<tr>
<td>Reduced force closure</td>
<td>Pelvic belt: just below the anterior superior iliac spine with a</td>
<td>Damen et al. 2002a; Mens et al. 2006a; O’Sullivan and Beales 2007;</td>
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<tr>
<td></td>
<td>tension of 50N</td>
<td>Lee et al. 2008; Beales et al. 2010; Arumugam et al. 2012</td>
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<td></td>
<td>Physical exercise: based on specific lumbopelvic motor control deficit</td>
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<td></td>
<td>Relaxation of thoraco-pelvic muscles</td>
<td></td>
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<tr>
<td>Excessive force closure</td>
<td>Breathing techniques, hydrotherapy, relaxation, enhancing passive or</td>
<td>O’Sullivan and Beales 2007</td>
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<tr>
<td></td>
<td>relaxing spinal postures, cardiovascular exercise, ceasing stabilizing</td>
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<tr>
<td></td>
<td>exercises and pacing strategies</td>
<td></td>
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<tr>
<td>Low evidence</td>
<td>Massage, manual therapy, local cold/hot application, transcutaneous</td>
<td>Vleeming et al. 2008; Vermani et al. 2009; Kanakaris et al. 2011;</td>
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<tr>
<td></td>
<td>electrical nerve stimulation (TENS)</td>
<td>Katonis et al. 2011</td>
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</table>
Coccyx dysfunction

- Support of dynamics
- Load and unload
- Orthopedic screen of lumbar spine and SI Joint, hip joint
- Ergonomic assessment of daily demands
- Screen for Neuro symptoms
- Assessment of Position and mobility
- Contractile Soft tissue spasm, tenderness, activation, elongation

Neural Tolerance

- Mobile relationship among bony, visceral and myofascial neighbors (Shacklock 2005)
- Independent
- Transition to function
Connective tissue mobility

Scars

Specific manual therapies CTM applied to bladder pain population to evaluate its efficacy one of the first to apply specific technique to specific population
Fitzgerald et al 2009

Superficial Restrictions

Treatments to address functional restrictions of viscerofascial connections to improve mobility or system demands are immersing
McSweeney and Johnson 2012

Viscerofascial restrictions

Pelvic floor overactivity

Indirect

• Addressing the context
• Addressing the supportive mechanics

Direct

• Manual therapies for soft tissue dysfunction
Referred pain intensity and tenderness with sympathetic hyperactivity at muscle TrPs, suggesting a sympathetic contribution to the mechanisms responsible for the generation of referred pain. (Zhang et al. 2009, Ge et al. 2006)

Addressing the system threats regarding the organisms' homeostasis and reducing them is the goal of returning the patient to a sustainable condition of wellness.
Addressing the mechanical system

- Relationship between CPP and pelvic girdle pain (PGP) indicates addressing how the mechanical system (Vleeming et al. 2008)
- Balance of support and flexibility

<table>
<thead>
<tr>
<th>Technique</th>
<th>Muscle Position</th>
<th>Degree of Compression</th>
<th>Time of Pressure</th>
<th>Duration of technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strain/Counterstrain</td>
<td>Neurologically Silent</td>
<td>Reduction of pain by 70%</td>
<td>Constant</td>
<td>90 sec</td>
</tr>
<tr>
<td>Jones 1981</td>
<td></td>
<td></td>
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<tr>
<td>Ischemic Compression</td>
<td>Fully Lengthened</td>
<td>Sufficient to Maintain Pain between 5-7 where 10 is max</td>
<td>Until pain eases by 50%-75%</td>
<td>Up to 90 sec</td>
</tr>
<tr>
<td>Travell &amp; Simons 1983</td>
<td></td>
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<tr>
<td>Pulsed Ischemic Compression</td>
<td>At first sign of “resistance barrier” no lengthening.</td>
<td>Initial palpation to induce 7, then 2 seconds no pressure repeated until change</td>
<td>5 sec pressure on 2 seconds off, repeat</td>
<td>Up 90 sec or more</td>
</tr>
<tr>
<td>Chaitow 1994</td>
<td></td>
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<tr>
<td>TrP Pressure Release</td>
<td>Partially Lengthened</td>
<td>Painless first perception pain barrier</td>
<td>Until therapists feels taut band release</td>
<td>Up to 90 sec</td>
</tr>
<tr>
<td>Simons et al 1999</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Positional Release</td>
<td>Positions consistent with greatest reduction of palpable tautness</td>
<td>Therapist feels reduced tone</td>
<td>Initial to monitor or for the duration</td>
<td>Up to 90 sec</td>
</tr>
<tr>
<td>Chaitow 2007</td>
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### Effectiveness of Soft tissue techniques

Systematic reviews have investigated the effectiveness of soft tissue manual intervention for inactivating TrPs (Fernández-de-las-Peñas et al. 2005, Rickards 2006, Vernon & Schneider 2009)

These reviews found moderate to strong evidence supporting the use of static compression for immediate pain relief of TrP but limited evidence for long-term pain relief.

Selection of any technique should include consideration of TrP irritability and the degree of sensitization of the central nervous system of the patient with CPP.

Clinicians are encouraged to develop their own techniques based on a clinical reasoning process.

### PNF principles and Muscle Energy Techniques

- Increased stretch tolerance may result from a decrease in pain perception (hypoalgesia) through the activation of muscle and joint mechanoreceptors, peripheral and central (activation of descending inhibitory pain systems) mechanisms (Fryer & Fossum 2009).

- Functional use and introducing loading to tolerance is key in rehabilitating contractile tissue.
Conditioning is key

Coordination Training

Pharm Adjuncts to mechanical rehabilitation

- Inflammation
- Irritability
- Hyperactivity
Dry Needling/Acupuncture for PP

- DN and pain, limited studies re: pain and long term
- In PF concern is US guided to avoid puncture in ligaments/tendons
- Acupuncture Still controversial method of action
- Mainly visceral/organ based dysfunction
- A few population specific larger trials but limited efficacy
  - Non-Bacterial Prostatitis IIIB (Lee et al 2008, Tugcu et al 2010)
  - Noctura enuresis (Yeung et al 2002)

Modalities

**TENS**
- Limited efficacy for transition to painfree function and long term benefit
- Option for pain control vs Opioid (Sharma et al 2017)
- Cannot replace mechanical demands needed
- Passive

**Low Light Laser (IF Red)**
- Randomized single blind study
- Scar formation/keloid thickness lower pain after Ilioinguinal hernia
- (Carvalho et al 2010)
# Home Program Principles

- Evaluate the knowledge, attribution theories, tolerance, motivation
- Educate them to be experts
- Refer back to the treatment map
- Create open communication channels
- Check in about personal goals and expectations frequently
- Be clear about outcomes expected and unexpected
- ID barriers and challenges and solidify support systems
- Review flare up checklist

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[Image: Adaptive, Palliative, Rehabilitative, Curative]
Central Interventions

Pain Neuroscience Education

Body Mapping, SMI

Parasympathetic Stimulation/Sympathetic Downtraining (Modulation)

Guided Relaxation

Global Peripheral Interventions

Optimize circulation and respiration

Increase variability & robustness of MSK system with novel activities and challenges
Local Peripheral Interventions

Soft tissue Techniques addressing the system

Looking at more than one assessment of the PF

Restoring mobility & conditioning

Co-morbidities, Overlapping Conditions, Chronic Illnesses have many common denominators that can be addressed with changes in life hygiene

Restorative Agents

Exercise/Movement Pleasure Nutrition Meditation Sleep Physical Touch
“In the treatment setting we are two human beings in a shared space”

• Bronnie Thompson, Pain Researcher, New Zealand