Physical Therapy Treatment of Genito-Pelvic Pain/Penetration disorder
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Outline

- Treatments to decrease sensitive nervous system
- Treatment to achieve sexual positions easily and relaxed
- Treatment for psychosocial aspects
- Treatment to decrease PFM tone
- Soft tissue mobilization / myofascial release (MFR)
- Treatment of women with severe anxiety of penetration
- Vaginal dilators

Treatment to decrease sensitive nervous system

Exercise and teaching

- Therapeutic Neuroscience Education (Louw 2014, Hilton 2011)
- Cognitive Behavioral Therapy (CBT)
- Affirmations and positive thinking, joy and laughter (Fowler 2010)
- Diaphragm Breathing - increases parasympathetic activation and overall relaxation
- Relaxation training (Carrico 2008)
  - Visualization
  - Imagery
  - Body scanning
- Yoga (Hatha)
- Aerobic exercise - release of endorphins (Goldsmith 2000, Hoffman 2004)

Manual therapy / modalities

- Massage for relaxation
  - RCT of women with Painful Bladder Syndrome – 26% reported moderate to marked improvement with general massage (FitzGerald 2012)
- Heat for persistent pain
  - Heated rice sock on coccyx / rectal area or warm bath
- Generalized relaxation biofeedback - EMG or thermal
- Transcutaneous electrical nerve stimulation (TENS)
  - RCT - Chronic Pelvic Pain (CPP) suprapubic TENS 100 Hz 5 days per week 4 weeks significant decreased pain (Sikiru 2008)
  - Chronic Pelvic Pain 48% had a positive result after 12 weeks of TENS (Schneider 2013)

Treatment to achieve sexual positions easily and relaxed

- Goal is to reduce hip and trunk pain and anxiety in sexual positions - making it more likely she will relax the PFM
- Soft tissue mobilization / myofascial release on trunk and leg muscles
- Joint mobilization to loosen hips
- Stretches to restore length and mobility of the pelvic girdle muscles - happy baby
Treatment for psychosocial aspects

- Mindful of terms, words, instructions
- Support groups, resources, individual or partner counseling
- Importance of development of desire and arousal (Berman 2001)

Treatments to decrease PFM tone

- Standard PT treatment of musculoskeletal dysfunction in the pelvis (sacroiliac, pubic symphysis, lumbar dysfunction, tightness of adductors, piriformis, obturator internus)
  - Persistent overactive PFM may be related to pelvic joint dysfunction – expert opinion (Doggweiler-Wiygul 2004, Lee 2011, Gurian 2012, Chaitow 2012, Tu 2005)
- EMG biofeedback relaxation training (with and without vaginal dilators) (McGuire 2009)
- Contract relax to decrease PFM tension (Naess 2013)
- Soft tissue mobilization / myofascial release (MFR)
- “Management of pelvic pain is most effective when a multidisciplinary team of physician, physical therapist, and psychologist is concurrently involved in patient treatment from the outset.” RCT (Peters 1991)
- Evidence to support the effect of multi-disciplinary interventions in the treatment of Chronic Pelvic Pain (Loving 2012)

Soft tissue mobilization / myofascial release (MFR)

Indications

- Manual stretching of adherent scars - surgical, obstetrical, or radiation
- Increased PFM tone in one area of the vaginal canal for example unilateral tension myalgia
- Increased tone in all areas of the PFM use MFR along with vaginal dilators or to facilitate advancement of dilator
- Improving normal circumferential length of PFM and fascia

Research on soft tissue massage

- Trigger point release is effective in treating muscle and referred pain, but there is no preferred method (grade 1a) European Association of Urologists guidelines for CPP (Engeler 2010)
- Manual therapy (including myofascial release) was found to be effective to improve sexual function in women with pelvic floor disorders (Rogers 2018)
- "Distension" of pelvic structures in women with CPP (Heyman 2006)
  - RCT of PFM stretching compared to counseling
  - Significant decreased pain intensity and pain during intercourse in the PFM stretching group.
- Self-internal rectal / vaginal massage of patients with CPP (Anderson 2011)
  - Curved tool used to massage internal PFM trigger points
  - 95% of patient felt wand was at least moderately effective in decreasing pain
MFR Techniques

- Still techniques are used for acute or severe pain
  - Ischemic pressure
    - Press parallel to the muscle
    - Slight discomfort not pain
    - Hold 1 to 2 minutes or until release is felt
    - Lessen pressure if tissue is not releasing
  - Contract relax
    - Ask the patient to contract the PFM then relax fully
    - During the relaxation, gently press into the muscle increasing the relaxation and inhibiting contraction
    - Ask the patient to partially contract again but do not allow the muscle to fully contract (keep pressure); with the second relaxation increase the pressure resulting in more relaxation

- Moving techniques are more aggressive
  - Thiele’s massage (Oyama 2004)
    - This is officially only performed in the rectum but can be modified for vaginal tissue
    - Firm sweep from 3 o’clock to 9 o’clock, Repeat 10 to 15 times
    - Amount of pressure determined by patient tolerance
    - Bearing down during massage may help relaxation
  - Friction massage/strumming
    - Apply pressure into the tissue
    - A back and forth scrubbing motion is used to break deep myofascial restrictions
    - Move a small distance right to left or in and out

Treatment of women with sever anxiety of penetration (Rosenbaum 2011)

- At each step the patient is asked to rate their anxiety on a scale of 0 (none) to 5 (sever).
- Then she is asked what needs to happen to get her anxiety to a 0 or 1 (possibly reverting to an earlier stage or using “anxiety lowering” tools such as breathing).
- She can always go back to a stage where she feels safe. Progress when anxiety is 0 to 1.
- Progression
  - Step one – lying on the table with cloths on covered with a sheet
  - Step two – as above with legs bent and knees apart
  - Step three – as above without sheet
  - Step four – as above with shorts on first with sheet and then without sheet
  - Step five – as above with underwear only, with and without sheet
  - Step six – as above without underwear, with and without sheet
- Progress in a similar manor to self touch – legs, groin, genitals, vulvar vestibule, vaginal finger insertion
- Graduated dilator use – also can be called “trainers” to decrease fear
  - Self insertion of dilator
  - Self insertions with partner also holding dilator
  - Partner inserting dilator with patient’s hand also on dilator
- Goal is for the female to be both physically and emotionally present during the examination and treatment.
- Patients should be encouraged to perceive the exact moment that she begins to feel anxiety.
- To pay attention to her feeling (and her thoughts).
- And to be aware of when she can feel relaxation.

**Indications for use of vaginal dilators**
- Increased tension of PFM in all quadrants – firm, tight tissue, small vaginal canal
  - Tension in just one area is better treated with manual stretching / MFR
- Paradoxical contraction in response to vaginal penetration
- Sensitive skin that is painful on sliding
- Patient expresses fear or anxiety about possible negative experience during penetration – gives women a chance to “practice” intercourse

**Common Diagnosis**
- Primary dyspareunia - pain on first attempt at intercourse
- Secondary dyspareunia / pelvic pain
- During and after vaginal radiation (Matos 2019 Sao Paulo)
- Age related vaginal atrophy (Kagan 2019)

**Purpose**
- Stretch the contractile and non contractile vaginal tissue - spits
- Learn pelvic muscle relaxation during insertion
- Desensitize sensitive skin - hot sand
- Practice intercourse without (or with minimal) pain
- Increasing confidence and decreasing the activation of the pain symphony in centralized conditions

**Patient position**
- Patient in the hooklying position, knees slightly apart
- At home
  - Recline in a tub of warm water with both knees bent and legs supported
  - Reclined on the bed with knees bent

**Method of vaginal dilator training with EMG biofeedback**
- External EMG sensors are placed at 3:00 and 9:00 on peri-anal external anal sphincter tissue
- Record resting base line - practice relaxing PFM
- Patient chooses the dilator she feels she can insert without pain - want her to have success first
- Place a sufficient amount of non irritating water-soluble lubricant on the tip and sides of the dilator
- Patient separates the labia with one hand and insert the dilator with the other
  - Do not let a part of the labia fold in on the dilator (this is for intercourse also)
• Angle of the dilator
  o Slightly down toward the table
  o Angled up with significant PFM tension
  o Try angles to the side - use the opposite hand
  o Therapist may need to hold the dilator and assist the patient but never force.
• “Invite the dilator in”
• Keep the PFM relaxed and slowly insert the dilator – watch EMG screen. Remember movement artifact may cause signal to increase during movement of dilator.
• Pause if there is significant pain or resistance; allow the muscle time to relax
• Continue to insert until the dilator has passed the deep PFM
• If the patient are unable to insert the dilator fully, hold it at the depth she is able to tolerate with slight to moderate pain
• Allow the dilator to stay in place for up to 10 minutes; remove before if pain increases
• Keep the PFM relaxed
• It may also be helpful to perform sub maximal PFM contractions to enhance relaxation
• Removing the dilator by slightly turning it while sliding out slowly

Advancing dilators
• In the first session you may be able to advance several sizes
• In subsequent weeks the patient may advance one size per week or slower
• The patient is in control

Moving trainers
• Movement can also be introduced; hold onto the end of the dilator and move it slowly and gently in and out
• Usually done with a size the patient can insert easily
• Desensitizing hyper sensitive vaginal skin, increases tolerance of skin to rubbing

Partner involvement
• Suggest patient and partner work on increasing desire at the start of therapy
• The patient may also visualize partner and intercourse during dilator use
• Withs good communication and a feeling of safety, the partner insert dilator or help her insert
• It is often helpful to use dilator before intercourse

Restarting sexual intercourse
• Ask the patient to estimate the circumference of her partner and encourage her to work toward insertion of that size (or slightly bigger)
• Some women find they can have intercourse on insertion of the second largest dilators because desire and arousal enhance insertion
• The patient will know when she is ready
• In some cases the patient can insert the largest dilator but still have emotional or relationship issues limiting intercourse - in this case make sure she continues to use the dilators on her own to keep the vaginal canal open while she is working with councilor.
• Consider starting with lidocane jell
• Usually begin intercourse with a “female in control” position
Sexual positioning education

- Learn which positions decrease strain on painful pelvic joints and muscles
- "Female in control" positions
  - He is still and she moves
  - Female on top
  - Hands and knees (if she is moving into him)
- Less penetrative positions
  - Deep pain and/or short vaginal canal
  - Side lying with man in back
  - Female on top with a pillow on the partner’s thighs
  - Penile spacer

Retraining sensory awareness (Harish 2012)

- Use mirror to visualize the perineum to increase awareness and ownership of the area
- Self palpation inside and outside perineum restore tactile awareness and ownership

Points to remember

- The patient is in control of the dilator
- Let the patient go at her own pace when she is ready
- Use adequate lubrication, may need to try different lubrication if sensitive
- Experiment with different leg and trunk positions as well as angles of insertion to find the best combination
- Slow movement is usually best
- Home practice is necessary – patient should buy a set of dilators
- Also consider use of lidocaine with dilators for very painful conditions (10 minutes before)
- Excessive lubrication after several dilator insertions may bridge electrodes making EMG signal unreliable

Qualitative interview study on women experience of vaginal dilator treatment (Macey 2015)

- Lack of knowledge – professional’s and patient’s
- Invalidation of suffering by professionals – impersonal procedure, "allow the dilator in"
- Difficult journey – asking for help, tolerating procedures, and negotiating the system
- Making the journey easier – partner support, network, support groups for patients, communication
Research in the use of vaginal dilators
Vaginal dilators. McCullagh WMH, April 23, 1949 BMJ, pg 723.
- Describes new metal vaginal dilator with small groove for urethra and handles.
- References previously used glass dilators.

Therapy of vaginismus by hypnotic desensitization. (Fuchs 1980)
- Avoidance of anxiety producing situation
- Start – insertion of patient’s finger – end intercourse in the female superior position
- 71 women (no control) 18 = hypnosis, 54 = dilators
- “good results” 88% in hypnosis group, 98% of dilator group
- Follow up 2 to 5 years with no relapse reported

Vaginal dilator therapy-an outpatient gynecological option in the management of dyspareunia. (Idama 2000).
- 18 women received instruction with glass dilators
- 77.8% “successful”
- 16.7% (3 women) required additional treatment – psychotherapy or surgery

- No single treatment is right for all and it may take many months to determine correct treatment
- 15 patients used vaginal dilators by specific protocol (http://www.vaginismus.com)
- Dyspareunia scale of 0-3 – initial 2.2, end 1.1, statically significant decrease
- FSFI – initial 16.3, end 25.3 statically significant improvement (26.5 cut off for differentiating sexual dysfunction)

Treatments rated as most helpful (Reissing 2011)
- Educational gynecological examination
- Talking about the meaning of the penetration problem
- Vaginal dilation
- Sex education
- Gynecologist was rated as helpful and PT was rated as most helpful (although few patients have seen a PT)

PT for lifelong vaginismus (Reissing 2013)
- Internal manual techniques were found most helpful
- Followed by - patient education, dilation, "home exercises"
- Average of 29 sessions
- Continued - sexual dysfunction on outcome measure

Multimodal treatment of vaginismus including Botox (Pacik 2014)
Internet based treatment for “vaginal penetration difficulties” (Zarski 2017)

- Randomized controlled pilot
- 10 sessions of psychoeducation, relaxation, sensate focus, gradual exposure to dilators
- No statically significant difference in intercourse occurrence
- Better non-intercourse penetration (finger, dilator)
- Less fear and better coping, overall satisfaction with treatment


- Treatment approaches
  - Systemic desensitization – Imagined / hypnosis and / or graded dilators
  - Sex therapy – couple and individual
  - Cognitive therapy
  - Education
  - Relaxation therapy
  - Flooding – pt watches in mirror as therapist inserts a finger into vagina, then repeated as the patient inserts her finger and watches
  - Pharmacotherapy – benzodiazepines
  - Botox injection

- Successful outcome = ability to complete sexual intercourse and have a speculum examination

- 3 studies “eligible”
  - One with no published data
  - One not randomized – success 89.7% (desensitization) and 100% (hypnosis)
  - One compared doctor inserted dilator to verbal instruction only
    - No statistical difference
    - Therapy every 2 weeks
    - Home program – 10 to 15 minutes of dilator use 5 times per week
    - No intercourse till end of program

- Conclusion – not enough data
- Melnik 2012 Cochrane systematic review - 5 studies still not enough data to draw any conclusions

Papers that review PT treatment of dyspareunia, painful penetration disorders and CPP

- Frawley 2007
- Gentilcore-Saulnier 2010
- Hilton 2011
- Holland 2003
- Jarrell 2005
- Loving 2012
- Vandyken 2012
- Yunker 2012

"Without deviation from the norm, progress is not possible" Frank Zappa
References


McCullagh WMH, Vaginal dilators. April 23, 1949 BMJ, pg 723.


Reissing ED. Consultation and treatment history and causal attributions in an online sample of women with lifelong and acquired vaginismus. J Sex Med Article first published online: 24 OCT 2011


