DYSPAREUNIA: PHYSICAL THERAPY EVALUATION AND MANAGEMENT

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INTRODUCTION

- Dyspareunia (dis-puh-ROO-nuh) or painful vaginal/rectal intercourse is a common but neglected female health problem.
- Can happen to men, but more common in women.
- The underlying conditions are often difficult to diagnose and treat.
- The etiological factors are complex and poorly understood.
- Sexual pain disorders are often overlooked or badly managed, significantly exacerbating patient distress.

EPIDEMIOLOGY: INCIDENCE AND PREVALENCE

- The population prevalence is estimated to vary from 3 to 18% globally and lifetime estimates range from 10 to 28%.
- In the United States the prevalence of dyspareunia is approximately 10% to 20%, with the leading causes varying by age group.
- A comprehensive review has shown that vulvodynia has an estimated prevalence range of 10% to 28% in reproductive-aged women in the general population.
TERMINOLOGY AND CLASSIFICATION

- **Entry/superficial dyspareunia**: pain localized to the vulva or vaginal entrance, pain experienced with initial or attempted penetration of the vagina.
- **Deep dyspareunia**: pain perceived inside the vagina or lower pelvis and associated with deep vaginal penetration.
- **Primary dyspareunia**: occurs at initial intercourse.
- **Secondary dyspareunia**: occurs after some time of pain-free intercourse.

ENTRY/SUPERFICIAL DYSPAREUNIA CAUSES

- **Vulvodynia**: chronic pain and irritation around the vaginal opening.
- **Vulvar vestibulitis**: a subset of vulvodynia that involves pain and redness of the vulvar vestibule.
- **Vaginismus**: the superficial pelvic floor muscles around the vaginal opening involuntarily contract and make penetration difficult or impossible.
- **Previous injury such as episiotomy (cut made during childbirth to enlarge birth canal).**
- **Skin problem** in the genital area such as lichen planus or lichen sclerosis.

DEEP DYSPAREUNIA CAUSES

- **Endometriosis**
- **Pelvic Inflammatory disease**
- **Uterine fibroids**
- **Pelvic adhesions, as a result of previous surgery**
- **Retroverted uterus**
- **Vaginal dryness and vaginal infections can cause both entry and deep vaginal pain.**
DYSPAREUNIA VERSUS VULVODYNIA TERMINOLOGY

- Dyspareunia and vulvodynia are often used interchangeably, but the terms have different meanings.
- Dyspareunia is a descriptive term for the symptom of pelvic or vaginal pain associated with intercourse/describes pain that always occurs with provoking touch such as intercourse.
- Vulvodynia, however, may occur with or without provocation, i.e., spontaneously.
- Dyspareunia can occur at the entrance of the vagina, deep in the vaginal canal, or in the pelvis.
- Vulvodynia is localized to the vulva and vaginal introitus.
- Dyspareunia may be acute or chronic.
- Vulvodynia is a term used specifically for the classification of chronic pain/pain lasting longer than 3 months.
- Both terms can be used to describe pain that coexists with other comorbidities such as endometriosis, interstitial cystitis, pelvic floor myalgias, and vulvar dermatoses.

ETIOLOGY

- Dyspareunia is a specific pain disorder with interdependent psychological and biological etiologies.
- Like vulvodynia, superficial dyspareunia is associated with vaginitis, dermatosis, and vulvovaginitis.
- In contrast, deep dyspareunia results from visceral disorders such as interstitial cystitis, pelvic inflammatory disease, endometriosis, adhesions, pelvic congestion, and fibroids.
- Pain syndromes can overlap and be associated with dyspareunia and vulvodynia, including irritable bowel syndrome, fibromyalgia, and musculoskeletal dysfunction.

DYSPAREUNIA ETIOLOGY: COMMON CAUSES
**EPIDEMIOLOGY: RISK FACTORS**

- Inflammation
- Vulvar/vaginal infection
- Genetic factors
- Allergy
- Iatrogenic or hormonal deficiencies
- Poor vaginal lubrication
- Vaginal atrophy
- Childbirth
- Neurologic proliferation and sensitization
- Neoplasms
- Trauma
- Myofascial
- Neuropathic pain
- Pelvic floor muscle dysfunction
- Structural defects
- Psychological dysfunction, mental and sexual disorders

**RISK FACTORS FOR POSTPARTUM DYSPAREUNIA**

- Perineal or genital trauma
  - Episiotomy
  - Breastfeeding
  - Fatigue
  - Stress
  - Depression
DYSPAREUNIA CYCLES

CLINICAL MANIFESTATION

- Pain/discomfort: persistent or recurrent, acute or chronic
- Occurs with attempted or complete vaginal penetration
  - Entrance of vagina, deep in vaginal canal, or pelvis
- Pain with insertion of tampon, or digit, or with gynecological exam
- Patients express general disinterest in and dissatisfaction with intercourse

DIAGNOSTIC PHYSICAL THERAPY EVALUATION: SUBJECTIVE EXAMINATION

- Pain characteristics: location, duration, timing, quality, provoked or unprovoked, exacerbating factors
- Sexual
  - Frequency, desire, arousal, satisfaction, relationship
- Relationship distress lowering the QOL, relationship satisfaction, are pain symptoms present with other sexual partners
- Additional gynecologic and medical issues
  - Urologic
    - Urethral disorders, cystitis, interstitial cystitis
DIAGNOSTIC PHYSICAL THERAPY EVALUATION:
SUBJECTIVE EXAMINATION

• Gastrointestinal
  - Constipation, diarrhea, IBS, inflammatory bowel disease

• Musculoskeletal
  - Pelvic floor surgery, trauma, obstetrics

• Dermatologic
  - Vulvar dystrophies, lichen sclerosus, lichen planus, psoriasis, sensitivities to lotions or other topical agents
  - Vascular
    - Pelvic congestion (pelvic varicosities), peripheral atherosclerosis or anemia

• Cultural Factors
  - Cultural or religious attitudes towards sexuality

• Medication and OTC products
  - Can cause decreased arousal and inadequate lubrication

• Psychosocial impact
  - Low physical and emotional satisfaction, as well as decreased general happiness
  - Depression and phobic anxiety
  - More negative attitude toward sexuality, with more sexual function impairment and with lower levels of relationship adjustment
  - Marital discord has been suggested as a major cause of dyspareunia

PHYSICAL THERAPY EVALUATION:
PHYSICAL EXAMINATION

• Patient comfort
  - Patient education on examination and her anatomy
  - Common strategy used to minimize anxiety and discomfort is the interactive educational/ pelvic examination process which includes 1) explanations to the patient while performing the assessment 2) describing the specific actions during each step 3) using a mirror to enable the patient to visualize her anatomy and the examination
  - Physical examination may be deferred initially, providing the opportunity to establish rapport with the patient and allowing for a more focused examination later

• External genitalia
  - Mucosal surfaces inspected for erythema or discoloration indicate infection or dermatologic disease
    - Lichen sclerosis or lichen planus
    - Abrasions or other trauma indicates inadequate lubrication or forceful entry
    - Overall dryness of the vaginal mucosa suggests atrophy or chronic vaginal dryness
    - Abnormal discharge may suggest infection
    - Localized pain a cotton swab should be used to precisely identify the source of the pain
PHYSICAL THERAPY EVALUATION:
PHYSICAL EXAMINATION

• External genitalia
  - Visual examination is performed systematically by inspecting the
    external genitalia, perineum, perianal areas, and mons pubis, and
    assessing for the presence of infection, trauma, atrophy, fissure, and
    dermatosis
  - Carefully examine the vestibular area and Bartholin’s ducts, Skene’s
    ducts, urethra and meatus, using a moistened cotton-tipped
    applicator
  - Cotton swab test: can help determine the location of pain as well as
distinguish between mechanical allodynia and hyperalgesia
  - Cotton-tipped applicator technique to conduct a sensory exam of the
    vulva and the six anatomical sites on the vestibule

• Vaginal
  - Single digit internal examination performed to
    maximize the patient’s comfort
  - Using the index finger, the examiner can palpate the
    lateral, anterior, and posterior walls of the vagina,
    the urethra, and pelvic floor muscles (levator ani,
coccygeus, piriformis, and obturator internus)
  - Access the specific areas for tone, proprioception,
tenderness, or involuntary spasms of the muscles of
  the introitus and pelvic floor

• Vaginal
  - Squeeze or contract around the single digit to assess muscle strength
  - Muscular tightness, tenderness, or difficulty with voluntary contracting and relaxing
    suggests pelvic floor muscle dysfunction
  - Identify any scars from previous surgeries, episiotomy, or trauma
  - Physical Therapists do not perform the bimanual or speculum exam
PHYSICAL THERAPY EVALUATION:
PHYSICAL EXAMINATION

• Postural assessment
  - Standing and sitting posture
  - Cervical, thoracic, pelvic and hip symmetries
• Gait Assessment
• Abdominal
  - Scar tissue assessment, vascular changes, respiratory patterns
  - Palpate for areas of masses, tension or pain
  - Distention or bloating
  - Additional sites
    - Adductors, hip flexors, gluteals, deep external rotators of the hip, hamstrings
• Pain mapping
  - Superficial pelvic floor muscles, perineum, and levator ani based on the pelvic clock
• Range of motion
  - Hips, back, lower extremities

PHYSICAL THERAPY EVALUATION:
PHYSICAL EXAMINATION

• Abdominal and pelvic musculature
  - Carnett's sign
  - Abdominal wall assessment: Diastasis Recti
• Soft tissue assessment
  - Myofascial restrictions
  - Connective tissue assessment
• Trigger points
  - Active or latent
• Peripheral nerves
  - Femoral, sciatic, pudendal, iliohypogastric, ilioinguinal

DIAGNOSTIC EVALUATION:
IMAGING STUDIES

• Usually related to pain location and symptoms and performed by the medical team
  - Imaging:
    - Ultrasound
    - Defecography
    - CT Scan
    - Pelvic MRI
• Surgical
  - Laparoscopic
  - Other
  - Surface EMG
COEXISTING PAIN SYNDROMES/ DIFFERENTIAL DIAGNOSIS

- Although the differential diagnosis of dyspareunia is large, several features of the history and physical examination can help narrow the possibilities (type of pain, patient age, additional testing)
- For example: vulvodynia is typically most painful with entry dyspareunia, vaginal atrophy typically occurs in postmenopausal women
- Pain that can be localized to the vagina and supporting structures may indicate vulvodynia or vaginitis
- Pain that localizes to the bladder, ovaries, or colon points to pathology within those structures which can refer pain to the pelvic floor muscles

DYSPAREUNIA MEDICAL DIFFERENTIAL DIAGNOSES

VULVAR PAIN SYNDROMES: VULVODYNIA

- Severe pain with vestibular touch or attempted vaginal penetration
- Tenderness in response to pressure within the vulvar vestibule
- Physical findings of erythema of varying degrees and confined to the vestibule may be present although erythema no longer seems to be a diagnostic criteria

- Treatment: Amitriptyline or lidocaine ointment, local surgical excision in refractory cases, pelvic floor physical therapy
VULVODYNIA CLASSIFICATION

- Generalized Vulvodynia (GVD)
  - Involves the entire vulva
  - Previously known as dysesthetic vulvodynia
  - May be provoked, unprovoked or mixed
  - **Provoked:** triggered by physical contact whether sexual, non-sexual or both
  - **Unprovoked:** occurs spontaneously without a specific trigger, always present
  - **Mixed:** provoked and unprovoked

- Localized Vulvodynia (LV)
  - Involves a portion of the vulva
  - Also known as vestibulodynia, clitorodynia, hemivulvodynia
  - May also be provoked, unprovoked or mixed
  - **Provoked:** triggered by physical contact whether sexual, non-sexual or both
  - **Unprovoked:** occurs spontaneously without a specific trigger, always present
  - **Mixed:** provoked and unprovoked vestibulodynia

LOCAL PROVOKED VESTIBULODYNIA (LPV)

- Previously known as vulvar vestibulitis
- Triggered by physical contact
- **SUB CLASSIFICATION OF LPV**
  - Primary vestibulodynia: pain experienced at first introital touch, whether tampon insertion or sexual
  - Secondary vestibulodynia: pain experienced after an interval of painless intercourse or tampon insertion
### PUDENDAL NEURALGIA
- Sharp shooting stabbing burning shocking pain that follows the path of the Pudendal nerve and is due to irritation or damage to the nerve.
- Symptoms begin in the 4th to 7th decade of life.
- Unknown prevalence affecting both men and women.
- Diagnosis often delayed or misdiagnosed.
- Pudendal Nerve Entrapment (PNE) is the most frequent etiology and is also established on the basis of elements of clinical suspicion.
- Pain experienced predominantly in sitting due to compression and relieved with sitting on the toilet.
- Treatment: pelvic floor physical therapy, lifestyle changes, medications.

### GENITOURINARY SYNDROME OF MENOPAUSE (GSM)
- Previously known as atrophic vaginitis or vulvovaginal atrophy.
- Affects more than half of postmenopausal women.
- Caused by low estrogen levels after menopause.
- Results in bothersome symptoms including vaginal dryness, itching, dyspareunia, urinary urgency and increased frequency, and urinary tract infections.
- Even though women with GSM can have sexual dysfunction that interferes with partner relationships, women are often embarrassed to seek treatment.
- Health care professionals do not always actively screen for GSM.
- As a result, GSM remains undiagnosed and undertreated.
- Treatment: hormonal local and systemic, non hormonal: moisturizers and lubricants, lifestyle changes.
### HYPOESTROGENIC STATE

- Vaginal atrophy results from the menopause-associated hypoestrogenic state and causes anatomic and physiologic changes in the genitourinary tract.
- Symptoms include vaginal or vulvar dryness, discharge, itching, and dyspareunia.
- Hypoestrogenism influences skeletal and cardiovascular systems as well as fertility and mental health.
- Lower levels of estrogen are typical and physiological in postmenopausal women.

#### THE ENDOCRINE CHANGES OF BREASTFEEDING

- Postpartum generally is a hypoestrogenic state resulting in changes to the vaginal epithelium, vaginal lubrication, and delay healing from childbirth.
- The treatment of breastfeeding-related postpartum dyspareunia is similar to that used in postmenopausal women experiencing atrophy-related dyspareunia with vaginal lubricators, moisturizers, and local estrogen replacement.

#### HYPOESTROGENIC STATE

- In young women hypoestrogenism is related to pathological causes:
  1. Endocrine factors such as gonadal, adrenal, and pituitary hormones are responsible for regulation of estrogen levels: postpartum, breastfeeding.
  3. Ovarian failure (gonadal dysgenesis, premature ovarian failure).
  4. Type 1 Diabetes Mellitus.
  5. Iatrogenic treatment (surgery, chemotherapy, radiotherapy).
VAGINISMUS

- Sexual dysfunction/sexual pain disorder\textsuperscript{26}
- Recurrent or persistent involuntary spasm of the outer third of the vagina that interferes with intercourse
- Causes marked distress of interpersonal difficulty
- Restricted or impossible vaginal penetration
- Associated clinical features include pain, anticipation of pain, fear, general anxiety, phobic avoidance, and defensive/protective behaviors

Dyspareunia and vaginismus are separate entities even though they have many clinical overlapping characteristics\textsuperscript{19}

- Significant comorbidity with LPV as well as behavioral avoidance, distress, dermatologic and musculoskeletal dysfunctions\textsuperscript{19,21}
- Classification: Total Vaginismus (TV) and Partial Vaginismus (PaV), primary versus secondary PaV\textsuperscript{19,23,24}
- Overlap of clinical diagnoses and terminology with LPV
- Treatment: treat any underlying disorder, pelvic floor physical therapy, cognitive therapy
- Psychophysiological problem: multidisciplinary approach is necessary\textsuperscript{19,24}

URINARY TRACT DISEASE:
PAINFUL BLADDER SYNDROME/INTERSTITIAL CYSTITIS

- Definition by International Continence Society: Complaint of suprapubic pain related to bladder filling, and accompanied by other symptoms, such as increased daytime and nighttime frequency, in the absence of proven urinary infection or other obvious pathology
- Pathogenesis: Genetic component\textsuperscript{24}
- Prolonged inflammatory or noxious stimuli resulting in a self-perpetuating chronic pain syndrome\textsuperscript{24}
- The glycosaminoglycan (GAG) layer is defective and bladder transitional epithelium/urothelium is abnormally permeable
- Mast cell involvement can stimulate inflammation\textsuperscript{24}
- Autoimmunity deficiency can cause inflammation\textsuperscript{24}
PAINFUL BLADDER SYNDROME/INTERSTITIAL CYSTITIS (IC) PATHOGENESIS

• All of the pelvic organs and the pelvic floor muscles share a common innervation and the same neurologic reflexes. Dysfunction of one pelvic organ may affect others through the reflex mechanism.

• Viscero-muscular reflex: pathologic reflex results in muscular instability and overactive pelvic floor muscles:
  1. Decrease in muscle function: atypical urine loss, voiding dysfunction
  2. Development of myofascial trigger points, myofascial pain

• Overactive pelvic floor muscles function and myofascial pain are present in 85% of patients with IC.

PAINFUL BLADDER SYNDROME/INTERSTITIAL CYSTITIS PATHOGENESIS

• Viscero-visceral hyperalgesia: “cross-talk” of pelvic viscera with shared innervation, explains the association of one chronic pelvic pain syndrome with another pain syndrome (IC and Irritable Bowel Syndrome (IBS), endometriosis and IBS, endometriosis and IC).

• Neurogenic inflammation: nerves secrete inflammatory mediators with resultant local inflammation/hyperalgesia. (Gr 11)
  - Central sensitization/chronic pain

PAINFUL BLADDER SYNDROME/INTERSTITIAL CYSTITIS PATHOGENESIS

• All of the pelvic muscles are regulated via the S2–4 nerves.
  - The parasympathetic motor nuclei in S3 and S4 provide the principal motor input to the bladder, which is modulated by inputs from other dorsal roots and descending supraspinal pathways.
  - Chronic pelvic floor dysfunction is often combined with lower urinary tract dysfunction.
  - Both can end up being maintained by up-regulated sacral reflex arcs.

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PAINFUL BLADDER SYNDROME/INTERSTITIAL CYSTITIS: CLINICAL PRESENTATION

- Progressive disorder
- Episodic exacerbations/"flares" with physical activity, consumption of acidic foods or during luteal phase of the menstrual cycle
- Pain worsens when bladder is full and improves with voiding
- Bladder pain experienced suprapubically, in the urethra, vulva, vagina, and rectum
- Bladder or urethral spasm, awakening at night with pain
- Bladder urgency, frequency, dysuria
- Pelvic pain, pressure aggravated by menstruation and dyspareunia that persists for many days after intercourse
- Treatment: antispasmodics, bladder installation, immune modulators, tricyclic antidepressants, pelvic floor physical therapy

URINARY TRACT DISEASE: CYSTITIS

- Common lower urinary tract infection caused by a bacterial infection
- Refers specifically to an inflammation of the bladder wall
- More common among females than males because women have shorter urethras
- Symptoms include:
  1. Traces of blood in the urine
  2. Dark, cloudy, or strong-smelling urine
  3. Pain just above the pubic bone, in the lower back, or in the abdomen
  4. Burning sensation when urinating
  5. Urinating frequently or feeling the need to urinate frequently
- Treatment: antibiotics

VULVOVAGINITIS

- Most common gynecological problem in premenarchal girls
- Several factors contribute to inflammation of the genital area including:
  - Relatively less protective covering of the introitus by the labia majora
  - Low estrogen concentrations leave the vaginal mucosa susceptible to irritation and infection
  - Exposure to irritants (bubble bath)
  - Poor hygiene
  - Infection by specific pathogens
- Treatment: antifungal, antibiotic and hormonal medications
VULVOVAGINITIS: VULVOVAGINAL CANDIDIASIS

- The main symptom is intense vulvar pruritus/itching
- A vaginal discharge (thick “curd-like”) is often present
- The vulva may be erythematous, edematous, and contain satellite lesions
- Burning, particularly with urination, is a common symptom
- Concomitant vaginal candidiasis
- Treatment: antifungal medications

VULVOVAGINAL CANDIDIASIS

- Pregnant women are at high risk for vulvovaginal candidiasis, especially during the third trimester
- The increased hormone levels affect the glycogen content and normal flora of the vagina, thus making the environment more conducive to yeast growth
- Vulvovaginitis has several possible causes; the typical presenting symptoms are similar regardless of the cause: itching, burning, and vaginal discharge
- Physical examination often reveals atrophy, redness, excoriations, and fissures in the vulvovaginal and perianal areas

RECURRENT VULVOVAGINAL CANDIDIASIS: PREDISPOSING FACTORS

- Uncontrolled diabetes mellitus
- Steroid use
- Tight-fitting clothing
- Synthetic underwear
- Antibiotic use
- Increased frequency of coitus
- Intrauterine device use
- Immune system alterations such as AIDS
- Chronic systemic illness (lupus, diabetes, and thyroid dysfunction)
HYPERTONICITY OF LOCAL PELVIC FLOOR MUSCULATURE

- The pelvic floor consists of bones, muscles, and connective tissues.
- Together, these structures provide support to the pelvic organs, spine, and pelvic girdle and assist with urinary, defecatory, and sexual function.
- The above functions require relaxation and coordination of pelvic floor muscles, urinary and anal sphincters.
- The impaired relaxation or paradoxical contraction can result in various symptoms such as impaired voiding or defecation, pelvic pain, and sexual dysfunction.

Several terms such as pelvic floor tension myalgia, piriformis syndrome, and levator ani syndrome have been used to describe this entity.
- The term nonrelaxing pelvic floor dysfunction may be preferable because it will help the clinician identify a recognizable pattern of symptoms.
- Symptoms vary and often are not attributed to the pelvic floor, making these disorders less widely recognized.
- Treatment: multidisciplinary approach, pelvic floor physical therapy including downtraining, biofeedback, manual therapy.

POSTPARTUM

- Common and underreported.
- Vaginal deliveries: 41% at 3 months and 22% at 6 months.
- Causes:
  - Perineal stretching and lacerations.
  - Operative vaginal delivery and episiotomy resulting in sclerotic healing.
  - Decrease in circulating estrogen leading to vaginal dryness.
  - Psychosocial issues of postpartum lead to decreased arousal and lubrication.
- Pain location: entry or deep dyspareunia.
- Treatment: vaginal lubricants, scar tissue massage, revision perineoplasty for severe cases.
ENDOMETRIOSIS

- Presents as deep pain\textsuperscript{4,5}
- Cyclic pain with menses\textsuperscript{6,8}
- Complaint of “something being bumped into” with deep thrusting\textsuperscript{4,8}
- Masses or nodularity of pelvic structures may be found\textsuperscript{6}
- Treatment: oral contraceptives, IUD, surgical cautery or excision\textsuperscript{32}

PELVIC ORGAN PROLAPSE

- Responsible for some degree of dyspareunia\textsuperscript{32}
- Can cause decreased lubrication, sensation or arousal\textsuperscript{32}
- Dominant clinical symptom: loss of urinary control rather than discomfort during sex\textsuperscript{32}
- Surgical correction for pelvic support can cause new or increased dyspareunia\textsuperscript{32}

POSTOPERATIVE DYSPAREUNIA

- Occurs after abdominal or genitourinary surgery\textsuperscript{7}
- Pain from vulvar and vaginal surgery, and total hysterectomy\textsuperscript{12}
- Causes post surgical changes:\textsuperscript{9}
  - Vaginal stricture or shortening
  - Trauma to structures
  - Healing involves scar formation that may cause pain\textsuperscript{32}
PELVIC ADHESIONS

• Deep dyspareunia
• History of pelvic surgery or pelvic infection
• Lack of mobility of pelvic structures may be noted on examination findings
• Treatment: surgical lysis of adhesions may be considered

PSYCHOGENIC DYSPAREUNIA

• Anxiety and marital adjustment shown to be independent predictors of dyspareunia
• Marital distress is higher in women without organic pathology of dyspareunia
• Weak association of sexual abuse with dyspareunia and pelvic pain
• Treatment: cognitive behavioral therapy shown to be effective in reducing the anxiety and fear related to dyspareunia
  • Focuses on patterns of thinking and helps identify behaviors associated with negative thoughts and feelings

LICHEN PLANUS

• Presents with white irregular lines and deep red areas of painful erosions
• Disorder of the mucous membranes that may affect the gingiva and vagina
  • 3 varieties: erosive, papulosquamous, and hypertrophic
  • Erosive variety is the most disabling affecting the vagina
  • Marked by diffused inflammation and shedding of vaginal epithelium
• Treatment: vaginal steroids, use of vaginal dilators and internal soft tissue massage
LICHEN SCLEROSIS\textsuperscript{32,34}

- Whitening of the vulvar epithelium with loss of vulvar architecture
- Atrophy of labia minora and loss of elasticity
- Itching is the predominant symptom
- Scarring
- Fragile skin that tears and bruises easily if rubbed
- Clitoral phimosis: abnormal adherence of the clitoral prepuce or hood onto the glans
- Very mild lichen sclerosus appears as faint white spots and may cause pain

Treatment: high potency steroid, vaginal dilators, internal soft tissue massage

DYSPAREUNIA OUTCOME TOOLS

- Validated Self-Report Questionnaires
- Female Sexual Function Index
- McGill Pain Questionnaire
- Patient Reported Outcomes Measurement Information System (PROMIS)

DIAGNOSTIC EVALUATION

- LABORATORY EVALUATION
PHYSICAL THERAPY TREATMENT OF DYSPAREUNIA: EVIDENCE

- Exercise
- Connective tissue manipulation
- Vaginal dilation
- Trigger point injections

PHYSICAL THERAPY TREATMENT OF DYSPAREUNIA

- CONTRIBUTING FACTOR: Lack of awareness of pelvic floor muscles
  - Assess the patient’s ability to connect with their pelvic floor muscles through their ability to correctly contract and relax their pelvic floor muscles
  - If the patient is unable to correctly recruit these muscles, whether it be due to lack of strength or neuromotor connection, this should be addressed

PHYSICAL THERAPY TREATMENT OF DYSPAREUNIA

- CONTRIBUTING FACTOR: Hypertonic pelvic floor muscles
  - Relaxation exercises/down training for the pelvic floor muscles: Yoga positions, such as a supported extended child’s, happy baby pose or Garland pose
  - Diaphragmatic breathing techniques: used to draw awareness to tension held in the pelvic floor muscles and actively allowing the tension to decrease
  - Vaginal dilators: teach the patient to move the dilator or insert past the entrance of the vaginal canal in conjunction with relaxing/down training the pelvic floor muscles and releasing the trigger points
  - Manual therapy: trigger point and myofascial release external and internal pelvic floor muscles
  - sEMG Biofeedback: in conjunction with diaphragmatic breathing and imagery for PFM relaxation

https://mirandacasianoblog.wordpress.com/2016/09/12/the-importance-of-diaphragmatic-breathing/

https://www.soulsource.com/
PHYSICAL THERAPY TREATMENT OF DYSPAREUNIA

• CONTRIBUTING FACTOR:
  - Pain centralization
  
  • If has been a chronic issue, addressing principles of centralized pain and explaining this to the patient can be helpful and informative
  
  • Pain at the entrance or through the vaginal canal can elicit a spasm or hypertonic response by the pelvic floor muscles

PHYSICAL THERAPY TREATMENT OF DYSPAREUNIA

Contributing factor:

• Postural Dysfunction

• Pelvic, ribs cage, cranial asymmetry resulting in increasing pelvic floor muscle tension

• Physical Therapy Treatment: Manual Therapy, postural retraining

DYSPAREUNIA MANAGEMENT: MULTIDISCIPLINARY APPROACH

• The use of a multidisciplinary approach with the inclusion of a physician and a counseling therapist could be beneficial, depending on the reason for experiencing dyspareunia

• Issues such as fatigue, depression/anxiety, stress or history of abuse can contribute to the tension of the pelvic floor muscles, and this may be addressed through counseling

• Ensure that the patient has been screened by a physician to rule out any differential diagnoses or address co-existing diagnoses that are out of the physiotherapy scope of practice

• Ob/gyn and Uro/gyn to perform trigger point injection or dry needling in areas of overactive pelvic floor muscles
WHEN TO REFER

- Interstitial Cystitis
- Endometriosis
- Gastrointestinal distress
- Idiopathic
- Neurologic history or findings

PATIENT RESOURCES

- American Physical Therapy Association (APTA)- Section on Women’s Health
- The National Vulvodynia Association (NVA)
- International Pelvic Pain Society (IPPS)
- Endometriosis Association - International Member Association (EA-IMA)
- Interstitial Cystitis Association (ICA)

RESOURCES: PATIENT SUPPORT GROUPS

Your presence is the best gift you can give a friend who is in pain. Don’t fix; just be there.
— Anne Kelman
PHYSICAL THERAPY FOR DYSPAREUNIA: RESEARCH EVIDENCE STUDIES


METHOD/DESIGN: Female subjects, all surgically diagnosed with endometriosis, were enrolled in each of the studies post-informed consent. Each subject underwent 20 hours of site-specific manual physical therapy designed to address adhesions and restrictions in soft tissue mobility in the abdomen and the pelvic floor. Post-test was completed 6 weeks after treatment.

OUTCOME MEASURES: Female Sexual Function Index (FSFI) for analyzing the effect on dyspareunia and sexual function (n=14) and quantitative differences in ratings of average pain during menstrual cycle and intercourse based on the Mankoski Pain Scale for analyzing the effect on dysmenorrhea and dyspareunia (n=18).

RESULTS: FSFI Full Scale score showed overall statistically significant improvements (P=.001) for all domains of sexual function, inclusive of dyspareunia (P<.001) in the retrospective analyses. Mankoski Pain Scale exhibited statistically significant improvements in menstrual cycle (P=.014), dysmenorrhea (P=.008) and dyspareunia (P=.001) in the prospective analyses.

CONCLUSION: Site-specific manual physiotherapy offers a non-pharmacological and non-surgical alternative in the treatment of dyspareunia and dysmenorrhea in endometriosis patients.


METHOD/DESIGN: Randomized controlled trial performed in Urogynecology clinic for 2.5 years on 90 patients aged from 25-55 years with previous delivery, positive history of sexual dysfunction with stage 3 of pelvic organ prolapse and divided in two groups: Group A (n=45) received standard rectocele repair and perineorrhaphy, Group B (n=45) received physiotherapy for eight weeks twice a week (electrical stimulation, Kegel exercises).

OUTCOME MEASURES: The female sexual function index (FSFI) used to evaluate the sexual function in cases before and after intervention. Frequency of variable scores (libido, orgasm, dyspareunia) included without disorder, frequently good, sometimes good, very much and extreme were compared between two groups.

RESULTS: Libido and arousal were improved in both groups (p=0.007, p=0.001 respectively). Orgasm and dyspareunia were improved in group B (p=0.001). Dyspareunia was more painful in group A. There was significant difference between two groups (improvement of orgasm and dyspareunia in group B) (p=0.001).

CONCLUSION: Physiotherapy is an appropriate method for treatment of sexual disorder in pelvic floor disorder.


METHOD/DESIGN: A systematic literature search using PubMed, Scopus, CINAHL, and PEDro was conducted until October 2016 evaluating the effect of isolated or combined physical therapy modalities in women with PVD.

OUTCOME MEASURES: Pain during intercourse, sexual function, and patient's perceived improvement.

RESULTS: The literature search resulted in 43 eligible studies including 7 randomized controlled trials, 20 prospective studies, 8 retrospective studies, 6 case reports, and 6 study protocols. The vast majority of studies showed that physical therapy modalities such as biofeedback, dilators, electrical stimulation, education, multidisciplinary physical therapy, and multidisciplinary approaches were effective for decreasing pain during intercourse and improving sexual function. Most studies had a high risk of bias mainly associated with the lack of a comparison group. Another common bias was related to insufficient sample size, non-validated outcomes, non-standardized intervention, and use of other ongoing treatment.

CONCLUSION: The positive findings for the effectiveness of physical therapy modalities in women with PVD should be investigated further in well-designed randomized controlled trials.

**METHODS:** In a clinical trial, 20 women with provoked vestibulodynia were randomly assigned to receive CBT or comprehensive PT. Participants were assessed before treatment, after treatment, and at 6-month follow-up by gynecologic examination, structured interviews, and standardized questionnaires measuring pain, psychological, and sexual variables.

**OUTCOME MEASURES:** Primary outcome was change in intercourse pain intensity. Secondary outcomes included pain during the cotton swab test, pain with various sexual and non-sexual activities, and sexual functioning and negative pain cognitions.

**RESULTS:** The 2 treatment groups demonstrated significant decreases in vulvar pain during sexual intercourse, with 70% and 80% of participants in the CBT and PT groups demonstrating a moderate clinically important decrease in pain (≥30%) after treatment. Participants in the two groups also had significant improvements in pain during the gynecologic examination, the percentage of painful intercourse attempts, the percentage of activities resulting in pain, and the ability to continue intercourse without stopping because of pain. Psychological outcomes, including pain catastrophizing and perceived control over pain, also showed improvement in both groups. Significant improvements in sexual functioning were observed only in participants who completed CBT. Few between-group differences were identified other than the PT group showing earlier improvements in some outcomes. Almost all improvements were maintained at the 6-month follow-up.

**CONCLUSION:** CBT and PT can lead to clinically meaningful improvements in pain and areas of psychosocial functioning.


**Methods:** January 2007 to January 2009, 45 women presenting with postpartum dyspareunia related to perineal trauma after a vaginal delivery were educated on the importance of the pelvic floor and its part in continuing dyspareunia. The treatment consisted of weekly applications of intravaginal TENS in an outpatient setting and daily home therapy with myofascial stretching and exercises of the pelvic floor musculature.

**Outcome Measures:** The cotton swab test, the Marinoff Dyspareunia Scale, and the Visual Analog Scale, and the anovulvar distance was assessed prior to and at the end of the treatment period.

**Results:** Of the women included in the study, 84.5% reported an improvement of dyspareunia after only five applications of TENS, with a total remission of symptoms (in 95% of patients) at the end of the protocol. At follow-up, 8 months after the end of treatment, all patients were pain free.

**Conclusions:** Therapy with intravaginal transcutaneous nerve stimulation and pelvic floor relaxation exercises is safe and effective in the improvement of vulvar pain and dyspareunia in women with postpartum perineal trauma due to episiotomy, after spontaneous delivery.

**QUESTIONS, COMMENTS, DISCUSSION**
REFERENCES

REFERENCES


