A Multidisciplinary Approach to the Treatment of Provoked Vestibulodynia
Workshop 19
Monday 23 August 2010, 14:00 – 17:00

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<tr>
<td>14:00</td>
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<td>Marie-Josee Lord</td>
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<td>14:05</td>
<td>Gyneacological evaluation and medical treatment approach</td>
<td>Samir Khalifé</td>
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<td>Sophie Bergeron</td>
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<tr>
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<td>Break</td>
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<td>16:00</td>
<td>Physical Therapy Evaluation and Treatment</td>
<td>Claudia Brown</td>
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<td>Marie-Josee Lord</td>
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Aims of course/workshop

In spite of its prevalence, Provoked Vestibulodynia (PVD) is underdiagnosed. Its symptoms are often classified within the realm of psychological disorders, partially due to its unclear physical aetiology and its lack of objective findings. In addition, very successful advances in the biopsychosocial management of this condition are not universally known, leaving many concerned practitioners with the belief that there are few available options for the treatment of this problem. This workshop will leave gynaecologists and general practitioners with a clearer understanding of the nature of provoked vestibulodynia and hopefully lead to a more expedient diagnosis. In addition, it will provide doctors and physiotherapists with a concrete outline for a successful strategy in the multidisciplinary treatment of this condition.

Educational Objectives

- To understand the common causes of dyspareunia, in particular Provoked Vestibulodynia (PVD), and the medical approach to treatment
- To understand the implications of the psychological aspect of PVD
- To learn about the detailed assessment of the pelvic floor musculature and related structures and relevant physiotherapy interventions
- To understand the importance of a multidisciplinary approach to the treatment of Provoked Vestibulodynia
Terminology and Classification of Vulvodynia

In 2003, the members of the International Society for the Study of Vulvovaginal Disease (ISSVD) proposed and accepted the following definitions and hoped that this terminology would now be used by practitioners involved in the management of patients with vulvar pain.

“Vulvodynia is defined as vulvar discomfort, most often described as burning pain, occurring in the absence of relevant visible findings or specific, clinically identifiable, neurological disorder.” (Moyal-Barracco & Lynch, 2004)

Vulvodynia is subdivided into 2 categories; generalized and localized.

1- **Generalized Vulvodynia** refers to the involvement of the whole vulva. Unprovoked Generalized Vulvodynia (GVD) refers to the discomfort occurring spontaneously without a physical trigger. This was formerly referred to as Essential or Dysesthetic Vulvodynia.

2- **Localized Vulvodynia** refers to the involvement of a portion of the vulva such as the vestibule (vestibulodynia), the clitoris (clitorodynia), etc. When the discomfort is triggered by physical contact it is called Provoked Localized vulvodynia or **Provoked Vestibulodynia (PVD)**.

“Vestibulitis has been eliminated from the IISVD terminology because the presence of inflammation, as implied by the suffix ‘itis’, has not so far been documented. The term vestibulitis is now replaced by provoked vestibulodynia, defined as discomfort on intromission (introital dyspareunia), clothing pressure, tampon insertion, cotton-tipped applicator pressure, fingertip pressure, etc.” (Moyal-Barracco & Lynch, 2004)
**SEXUAL PAIN DISORDERS**

- **Dyspareunia**: Persistent or recurrent pain with attempted or complete vaginal entry or penile–vaginal intercourse
- **Vaginismus**


**SEXUAL PAIN DISORDERS**

- **Vaginismus**: Persistent or recurrent difficulties in allowing vaginal entry of a penis, finger or any object, despite the woman’s expressed wish to do so. There is often (phobic) avoidance; anticipation, fear or experience of pain; and variable involuntary contraction of pelvic muscles. *Structural or other physical abnormalities must be ruled out or addressed.*


**Prevalence of dyspareunia**

- Prevalence in the general population: ~15%
- If you don’t ask about it, the majority of patients will not mention it

**SEXUAL PAIN DISORDERS**

- **Dyspareunia**: 15%
- **Vaginismus**: 1%

Gynaecological evaluation and medical treatment approach

**ISSVD Terminology and Classification of Vulvar Pain (2003)**

- **(A) Vulvar pain related to a specific disorder**
  - Infectious (e.g., candidiasis, herpes, etc.)
  - Inflammatory (e.g., lichen planus, immunobullous disorders)
  - Neoplastic (e.g., Paget disease, squamous cell carcinoma, etc.)
  - Neurologic (e.g., herpes neuralgia, spinal nerve compression, etc.)

- **(B) Vulvodynia**
  - Generalized
    - Provoked (sexual, nonsexual or both)
    - Unprovoked
    - Mixed (provoked and unprovoked)
  - Localized (vestibulodynia, clitorodynia, hemivulvodynia, etc.)
    - Provoked (sexual, nonsexual or both)
    - Unprovoked
    - Mixed (provoked and unprovoked)


**Clinical Approach for a Diagnostic Etiology**

- Where does it hurt
  - Superficial or introital dyspareunia
  - Deep dyspareunia
- When does it hurt
- What are the associated symptoms


**Deep dyspareunia**

- Endometriosis
- Pelvic inflammatory disease
- Levator ani myalgia
- Involution of the vagina and uterus in post menopause


**Provoked localized vulvodynia**

- Severe pain on vestibular touch or attempted vaginal entry
- Tenderness when pressure is localized within the vestibule
- Physical findings confined to vestibular erythema of various degrees


**Introital dyspareunia**

- Hormonal etiology
- Vulvovaginitis
- Vulvar dystrophy
- Iatrogenic factors
- Muscular factors
- Provoked localized vulvodynia
- Others:
  - Neurological (sensory nerve)
  - Autoimmune (Sjogren’s syndrome)
  - Genital trauma

**Gynaecological evaluation and medical treatment approach**

**Sexual history**
- Sexual activity (presence)?
- Types of relations
- Individual(s) involved
- Satisfaction? Orgasmic?
- Dyspareunia
- Sexual dysfunction
  - Patient
  - Partner

Stenchever MA: Comprehensive Gynecology, Mosby, 1997

**HISTORY TAKING FOR DYSPAREUNIA**
- Description
- Localization
- Relation with the menstrual cycle
- Complete chronology
- Previous treatments
- Long and free questionnaire

**DIFFERENT APPROACH**
- Do not hurt
- Proceed in a stepwise fashion, one visit at a time
- Do not touch the vestibule
- Do not insert a speculum first
- Insert a lubricated Q-tip
- Insert only one finger and then two

Khalifé S: personal communication

**LISTEN AND REACT TO MESSAGES**
- Tampons are painful to insert
- The smallest speculum please
- My previous doctor asked me to relax
- I always had a yeast infection that is impossible to treat

**THE TRADITIONAL GYNECOLOGICAL EXAMINATION**
- Inspection of the external genital organs and the introitus
- Palpation of the external genital organs and the introitus
- Speculum examination of the vagina and the cervix
- Digital vaginal and bimanual examination
- Rectovaginal examination
- Rectal examination

**GEL LUBRICANT**
- Kozakis L: Plastic specula: can we ease the passage? Sex. Transm. Inf. 2006;82;263-264
- Griffith WF: Vaginal speculum lubrication and its effects on cervical cytology and microbiology Contraception 72 (2005) 60-64
- Tavernier LA: Water versus gel lubricant for cervical cytology specimens. The Journal of Family Practice 2003 52;9;701-704
THE MYTH OF THE WATER BASED GEL LUBRICANT

• No difference in cervico-vaginal slide or liquid-based cytology

• No difference in the detection of chlamydia, gonorrhea, vaginal bacteriosis, candida…

The Q-tip test

The Q-tip test

Provoked localized vulvodynia

Provoked localized vulvodynia

GYNECOLOGICAL EXAMINATION

THE FORGOTTEN EXAMINATIONS

– The Q-tip test

– The examination of the pelvic floor musculature

PATIENT’S AND PARTNER PARTICIPATION

– The mirror

– Rating the pain on a scale of 1 to 10

GYNECOLOGICAL EXAMINATION

• The sequence of testing: the Q-tip test at the end

• Positive feedback: «it is a real physical pain»

• The control visit

Treatment of vulvodynia

Treatment of vulvodynia

**Gynaecological evaluation and medical treatment approach**

Dr Samir Khalifé

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**Treatment of Provoked Vestibulodynia**

**Standard treatments**

- **Topical Preparations**
  - Estradiol may decrease symptom severity
  - Anesthetics
  - Topical compounded formulations with one or more active ingredients (e.g., anesthetic, antidepressant, anticonvulsant)

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**Experimental**

- Leukotriene Receptor Antagonist
- Topical Nitroglycerin
- Topical Capsaicin
- KTP-nd:YAG laser therapy
- Photodynamic Therapy
- Transectional Electrical Nerve Stimulation
- Sacral Neuromodulation

  [http://learnprovider.nva.org/index.htm](http://learnprovider.nva.org/index.htm)

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**Treatment of Provoked Vestibulodynia**

**Standard treatments**

- Oral “Pain-blocking” Medications
  - Tricyclic antidepressants (e.g., amitriptyline)
  - Anticonvulsants (e.g., gabapentin, pregabalin, lamotrigine)
  - SSNRI medications (e.g., duloxetine, venlafaxine)

  [http://learnprovider.nva.org/index.htm](http://learnprovider.nva.org/index.htm)

**Efficacy uncertain and debated**

- Topical Steroids
- Interferon injections
- Topical Cromolyn
- Subcutaneous Steroid/Anesthetic Injections
- Diet Modification
- Botox Injections

  [http://learnprovider.nva.org/index.htm](http://learnprovider.nva.org/index.htm)

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**PRIMUM NON NOCERE**

- First step:
  - Psychotherapy
  - Pelvic Floor Therapy
- Second step:
  - Xylocaine ointment 5%
  - Elavil
- Last resort: vestibulectomy

Khalifé S: personal communication
Gynaecological evaluation and medical treatment approach

Dr Samir Khalifé

**RCT**

<table>
<thead>
<tr>
<th>Therapy</th>
<th>VEST</th>
<th>VEST Biofeedback</th>
<th>Vestibulectomy</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEST pain units</td>
<td>20</td>
<td>21</td>
<td>34</td>
</tr>
<tr>
<td>VEST pain intensity</td>
<td>2.1</td>
<td>2.1</td>
<td>3.1</td>
</tr>
<tr>
<td>VEST somatic units</td>
<td>11</td>
<td>15</td>
<td>17</td>
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</table>

As compared with pretreatment, study completers of all treatment groups reported statistically significant reductions on pain measures at post treatment and 6-month follow-up, although the vestibulotomy group was significantly more successful than the two other groups.

Treatment gains were maintained at the 2.5-year follow-up.

**How to Sell the Product**

Simple, down to earth explanations

- Women with VVS demonstrated significantly more vaginal hypertonicity, lack of vaginal muscle strength, and restriction of the vaginal opening, compared to women with no pain with intercourse.
- Anal palpation could not confirm generalized hypertonicity of the pelvic floor.

**How to Sell the Product**

Simple, down to earth explanations

- Set of 20 Von Frey hairs


**Traditional approach**

- **Medicine**
  - Physical pathology (treat the pathology)
  - OR
  - “It is in the head” (refer to psychology)

- **Psychology**
  - Conflict or sexual abuse (treat)
  - OR
  - Physical pathology (refer to gynecology)

**Biopsychosocial approach**

- **Non simplistic**
- Simultaneous psychological & physical approach for
  - Diagnosis
  - Etiology
  - Treatment
- Inspired by the contemporary research on pain (Melzack)

SEXUAL PAIN DISORDERS

**Conclusion**

- Reliable diagnosis
- Available treatments
- Family physicians and gynecologists: first line
  - Ask questions concerning dyspareunia
  - Ask questions concerning sexual dysfunctions
- If you don’t ask about it, the majority of patients will not mention it

REFERENCE

http://www.nva.org/
Behavioral and Psychological Treatment of Provoked Vestibulodynia

Sophie Bergeron, Ph.D.
Université de Montréal
McGill University Health Centre
Montréal, Canada

Outline of Presentation
- Psychosocial characteristics of provoked vestibulodynia
- Biopsychosocial model of sexual pain
- Treatment options
  - Cognitive-behavioral therapy
  - Exposure
  - Multimodal, interdisciplinary approach

Psychosocial Characteristics of Provoked Vestibulodynia
- Lower intercourse frequency, lower levels of desire and arousal, more avoidant of sexual activities, and less orgasmic success (Meana et al., 1997; van Lankveld et al., 1996)
- More anxiety and negative feelings toward sexuality (Meana et al., 1997; Granot et al., 2002)
- Less childhood family support, more physical and sexual abuse as a child (Harlow & Stewart, 2005)
- More erotophobic (Meana et al., 1997)
- More negative sexual self-schema (Gates & Galask, 2001; Reed et al., 2003)

Dyspareunia in Adolescents
- Community sample of 1,425 girls aged 12-19-year-olds
- 20% of sexually active girls reported having regular pain during intercourse for at least 6 months
- 67% = primary form
- Experiencing severe pain at first tampon insertion was linked to a 4-fold risk of reporting chronic dyspareunia

Dyspareunia in Adolescents (cont’d)
- More likely to experience pain during gynecological examinations and to use feminine hygiene products (douches, etc.) than normal controls (Landry & Bergeron, 2009)
- More likely to have been abused physically or sexually, to have a fear of abuse, to be anxious, and to lack social support than normal controls (Landry & Bergeron, 2009)

Behavioral and Psychological Treatment of Provoked Vestibulodynia

Sophie Bergeron, Ph.D.

Pelvic Floor Hypertonicity
- Provoked Vestibulodynia > Controls (Reissing et al., 2003)
- Provoked Vestibulodynia > Controls (White, Jantos & Glazer, 1997)
- Provoked Vestibulodynia: more vaginal hypertonicity, lack of vaginal muscle strength, and restriction of the vaginal opening than controls (Reissing et al., 2005)

Cognitive/Affective Correlates of Provoked Vestibulodynia
\[ \Delta R^2 = .15 \]
\[ F = 4.18 \]
\[ p = .004 \]
- Hypervigilance
- Fear of pain
- Self-efficacy
- Anxiety
- Avoidance

Cognitive/Affective Correlates of Sexual Function
\[ \Delta R^2 = .22 \]
\[ F = 7.85 \]
\[ p = .000 \]
- Avoidance
- Anxiety

Biopsychosocial Model of Pain

Consequently...

- The treatment of provoked vestibulodynia must focus not only on underlying pathophysiological mechanisms, but on all the elements that maintain and exacerbate pain and associated sexual dysfunction.

Where is the Empirical Evidence?

- Current algorithms are largely based on retrospective case reports and lack sound empirical foundation.
- Cognitive-behavioral and physical therapy do not figure prominently in these algorithms—often viewed as adjuncts to medical treatment.
- Trial and error basis; hodge-podge of interventions.

Treatment Options

- Cognitive behavioral sex therapy/pain relief therapy
- Therapist-aided exposure

Behavioral and Psychological Treatment Options

- Cognitive behavioral sex therapy/pain relief
- Therapist-aided exposure

Why Cognitive-Behavioral Therapy?

- Only treatment that targets negative sexual and relationship sequelae directly.
- Important source of psychological support.
- CBT strategies are effective in reducing pain intensity in other pain conditions (Friedman, 1994).
- CBT shown to be efficacious in relieving vulvodynia and associated sexual difficulties (Masheb et al., 2009).
- Long-term follow-up: CBT = vestibulectomy.
Behavioral and Psychological Treatment of Provoked Vestibulodynia

Sophie Bergeron, Ph.D.

Pain during Intercourse

Co-Investigators

Samir Khalifé, M.D., Jewish General Hospital, Montréal

Marie-Josée Dupuis, M.D., Centre Hospitalier de l’Université de Montréal, Montréal

Timeline

- Pre-Treatment Assessment
- Random Assignment
- 3-Month Treatment Period
- Post-Treatment Assessment
- 6-Month Follow-up Assessment

Treatment Arms

Group cognitive-behavioral therapy (GCBT)
- Conducted by three psychologists specialized in sex and couple therapy
- Cognitive-behavioral sex therapy and pain management
- 10 two-hour group sessions spread over 3 months
- Adherence to a treatment manual
- Weekly supervision of therapists
- Videotapes of sessions
Treatment Arms

Topical treatment
- 1% Hydrocortisone cream (Cortate 1%)
- Two applications per day for 13 weeks
- Discontinued after 8 weeks if no improvement
- Prescribed by two gynecologists
- Education about vestibulodynia and its day to day management (e.g. avoid tight clothing, use mild soap, etc.)
- Water-based lubricant recommended for intercourse

Pain Catastrophizing

McGill Pain Questionnaire

Female Sexual Function Index

Treatment Expectancies

Treatment Satisfaction
Behavioral and Psychological Treatment of Provoked Vestibulodynia

Sophie Bergeron, Ph.D.

Global Assessment - Pain

Predictors of Outcome for Topical Tx

- Regressions “Residual score method”

<table>
<thead>
<tr>
<th>Predictor</th>
<th>β</th>
<th>ΔR²</th>
<th>F</th>
<th>p</th>
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<tr>
<td>Pain</td>
<td>-.34**</td>
<td>.29</td>
<td>5.39</td>
<td>.004</td>
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<tr>
<td>Catastrophizing</td>
<td>.38*</td>
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<td></td>
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<td>Avoidance</td>
<td>-.57**</td>
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ΔR² = .29 F = 5.39 p = .004

* Regressions “Residual score method”

Predictors of Outcome for CBT Tx

- Regressions “Residual score method”

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<thead>
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<th>ΔR²</th>
<th>F</th>
<th>p</th>
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<tr>
<td>Pain</td>
<td>-.31*</td>
<td>.35</td>
<td>23.32</td>
<td>.000</td>
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<tr>
<td>Catastrophizing</td>
<td>.26</td>
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ΔR² = .35 F = 23.32 p = .000

* Regressions “Residual score method”

Global Assessment - Sex

Why Therapist-Aided Exposure?

- RCT of CBT for vaginismus → 21% can engage in intercourse at one-year follow-up (van Lankveld et al., 2006)
- Change mediated by reduced fear of coitus and reduced avoidance behavior (van Lankveld et al., 2007)
- Congruent with findings from Desrochers et al. (2010) study whereby successful outcome is predicted by reduced catastrophizing and avoidance, as well as increased self-efficacy

Treatment Options

- Cognitive behavioral sex therapy/pain relief therapy
- Therapist-aided exposure

Behavioral and Psychological Treatment of Provoked Vestibulodynia

Sophie Bergeron, Ph.D.

Therapist-Aided Exposure

- N=10 women with vaginismus, 4 of which were also diagnosed with provoked vestibulodynia by gynecologist (ter Kuile et al., 2009)
- 3 two-hour sessions in one week
- Gynecologist and psychologist
- Woman and partner

Therapist-Aided Exposure (cont’d)

- 9/10 participants reported engaging in successful intercourse after one-week treatment
- Gains maintained at one-year follow-up
- Significant decreases in fear and negative penetration beliefs
- No measure of pain

Cognitive-Behavioral Therapy in Real Life

- 10-session group intervention
- Individual therapy → 6 months to a year
  - Trauma
  - Other developmental issues
- Couple therapy → 6 months to a year
  - Attachment and intimacy issues
  - Significant relationship conflict

Behavioral Treatment Strategies

- Self-exploration
- Breathing (or other type of relaxation)
- Mindfulness
- Kegel exercises
- Vaginal dilatation
- Pain diary
- Expanding sexual repertoire
- Assertiveness training

Cognitive Treatment Strategies

- Education concerning a multidimensional view of pain
- Education concerning their type of vulvo-vaginal pain
- Cognitive restructuring focusing on pain catastrophizing, attributions, etc.
- Coping self-statements
- Sexual fantasies
- Focusing on pleasurable sensations

Insertion Techniques

- Accommodators/dilators

Cognitive Treatment Strategies

- Education concerning a multidimensional view of pain
- Education concerning their type of vulvo-vaginal pain
- Cognitive restructuring focusing on pain catastrophizing, attributions, etc.
- Coping self-statements
- Sexual fantasies
- Focusing on pleasurable sensations
Desire and Arousal Issues

- Education re: how pain impacts on desire and arousal and how low desire and arousal may contribute to maintain pain
- Identification of sexual needs and preferences
- Identification of factors that facilitate the experience of sexual desire
- Communication re: sexual matters
- Fostering emotional intimacy between partners

Multimodal Treatment Approach

- Core principles
  - Provide education concerning specific sexual pain problem
  - Provide education concerning a multifactorial view of pain
  - Know what other health professionals are doing and develop a collaborative alliance
  - Do not take ‘personally’ patients’ anger/frustration

Show patient that:
- Her pain is real
- You know something about it
- You are competent to alleviate it to some degree
- There is hope for improvement

Conclusions

- It is difficult to improve sexual functioning without reducing pain and difficult to reduce pain without improving sexual functioning
- A concurrent multimodal treatment paradigm may prove more beneficial to patients than the more common sequential approach
- The alliance between health professional and patient is key in the treatment of provoked vestibulodynia: work as multidisciplinary collaborative team
PHYSIOTHERAPY for PROVOKED VESTIBULODYNIA

1. Evaluation
   - History
     - PMH
     - Pain cycle
     - Sexuality
   - Physical
     - External examination
       - Tissue compliance, protective reactions
     - Internal examination
       - Vaginal
         - Tone, elasticity, restriction at entrance
         - Contractility, post-contractile relaxation
         - Pain (site, type, intensity, pattern)
         - Cervix
       - Anal
         - Tone, contractility, post-contractile relaxation
         - Coccyx

Notes:
2. PROBLEM LIST:

Determined according to evaluation findings.

Typically, a pain cycle has been established and is self-perpetuated:

- Pain
- Anxiety/Fear
- Increased pressure at introitus during penetration
- Muscle tension
- Decreased vaginal opening

Notes:

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________
3. GOALS OF TREATMENT

Determined according to problem list. Typically:

To improve sexual function
To decrease pain
To decrease fear and anxiety
To decrease muscle tension
To improve active relaxation and proprioception
To increase diameter of comfortable vaginal opening
To desensitize vaginal vestibule

Notes:

_________________________________________________________________

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_________________________________________________________________

4. TREATMENT PLAN

Use a combination of following modalities:

A. Education
B. Exercises
C. Manual techniques
D. Biofeedback
E. Electrical stimulation
F. Insertion techniques
A. EDUCATION
   Dedramatization
   Role of pelvic floor musculature in pain cycle
   Functional applications

B. EXERCISES
   Identification
   Control, relaxation
   Stretches, insertion techniques

C. MANUAL TECHNIQUES
   Desensitization
   Stretch
   Myofascial release
   Trigger point pressures

D. BIOFEEDBACK
   Identification
   Control, relaxation

E. ELECTRICAL STIMULATION
   Identification
   Desensitization

F. INSERTION TECHNIQUES
   Exposure
   Accommodation

Notes:

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________

___________________________________________________________________________
MUSCLE TONE

- Natural resting tension within a muscle
- Compliance on palpatory compression
- Resistance to passive stretch or distension
- State of readiness for physical activity
- Related to the static role of the pelvic floor
- Influenced by state of activation

TONESCALE (C.Brown, M-J.Lord): Resistance to passive stretch or distension

-3          0          +3
hypotonic    normal    hypertonic
References:


[http://learnprovider.nva.org/index.htm](http://learnprovider.nva.org/index.htm)