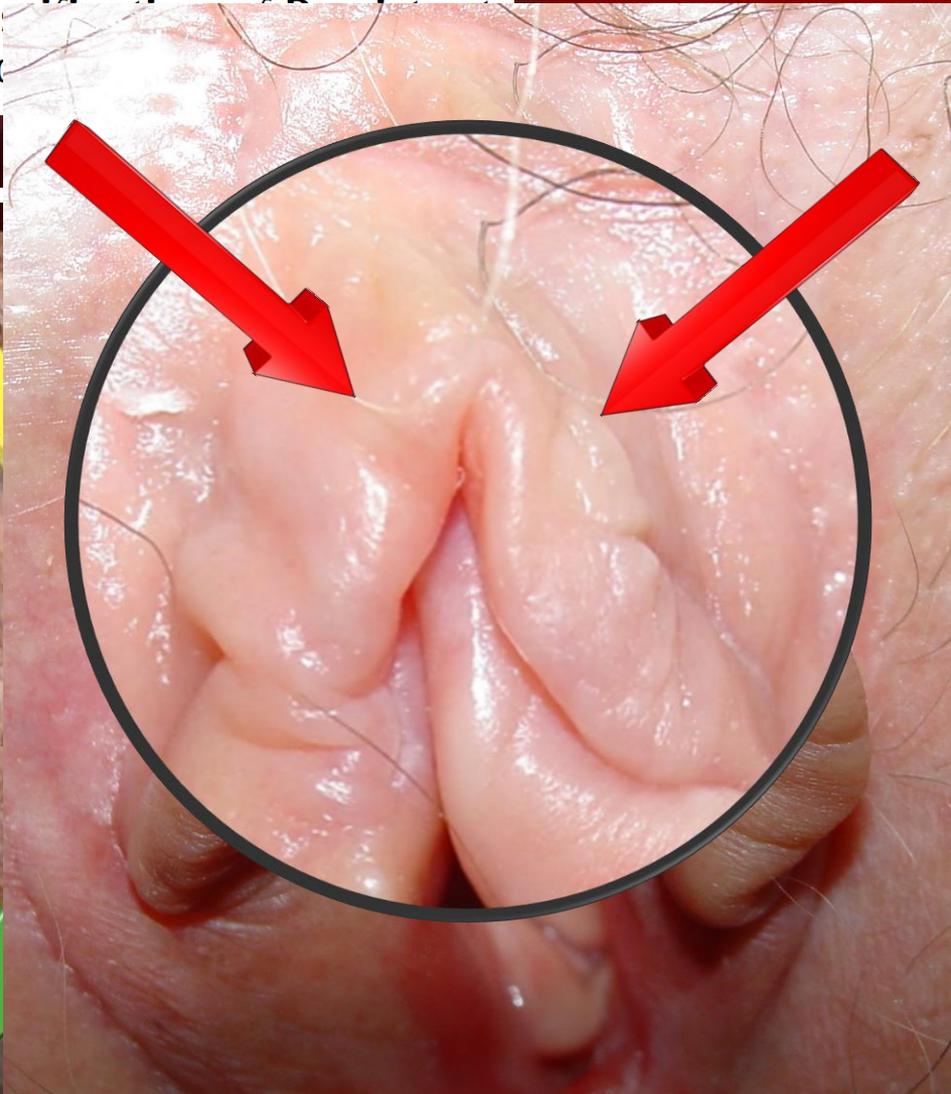
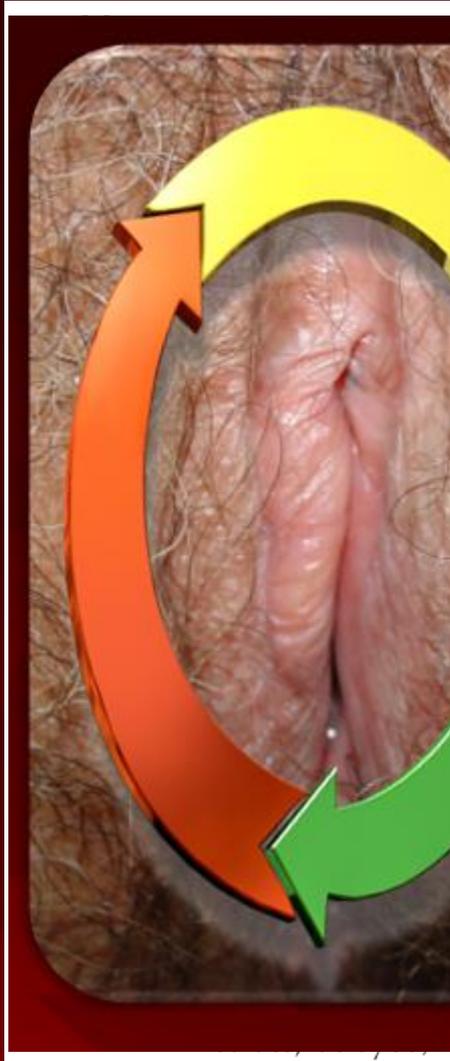




Vulvodinia e Dolore Pelvico Cronico

Filippo Murina

*Servizio di Patologia del Tratto Genitale Inferiore
Osp. V. Buzzi –Università degli Studi di Milano*



CLITORIDODINIA

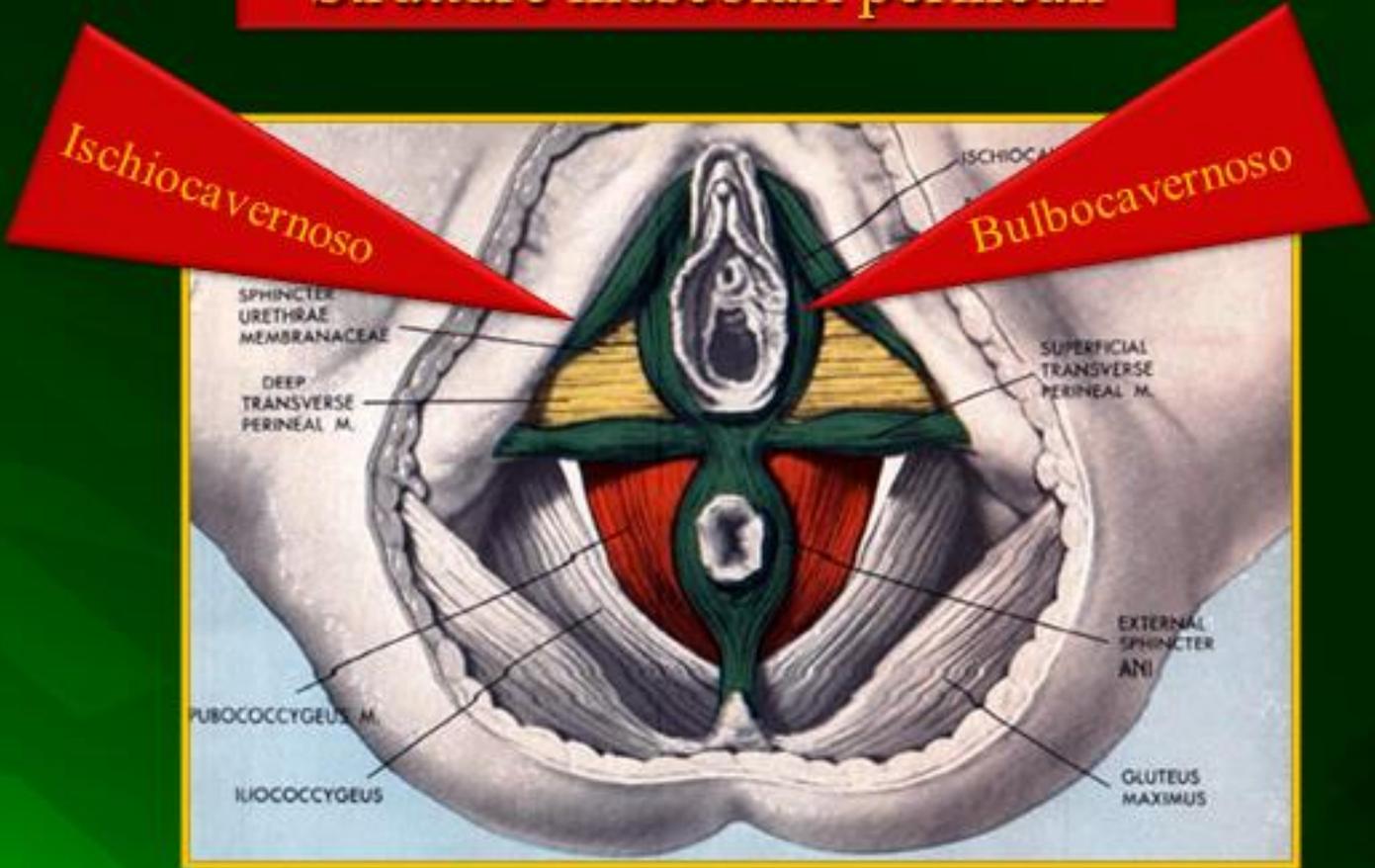
ralizzata

e vulvare,
ione

ato
re, puntura
sensazione



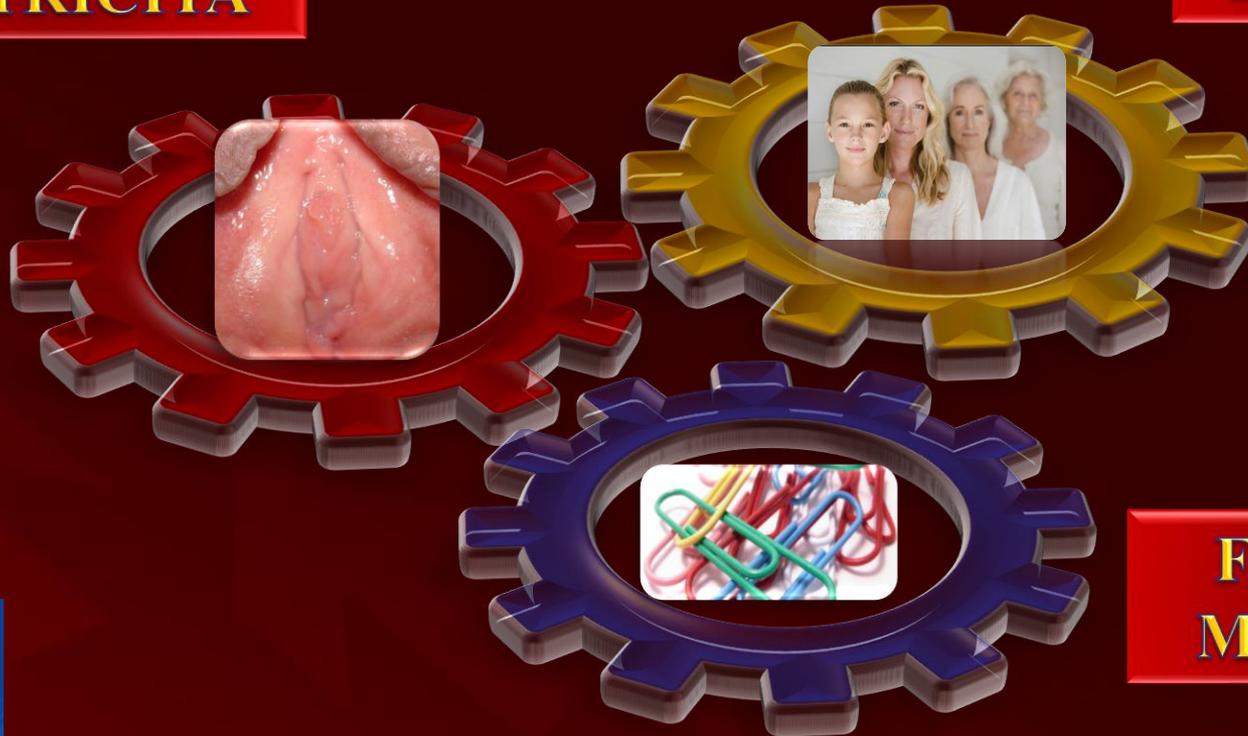
Strutture muscolari perineali



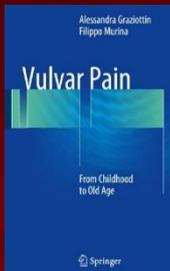
Dolore Vulvare e Vulvodinia

**VESTIBOLO
“CENTRICITA”**

**THE
LIFESPAN**



**FATTORI
MULTIPLI**



Graziottin –Murina .Vulvar Pain: from childhood to old age.-Springer ed. 2017

Alterazione
fibre
nervose

Neuro
infiammazione

Alterazione
muscoli
pelvici

Vulvodinia e Dolore Vulvare
Filo Conduttore Eziopatogenetico
Comune e Sinergico

Vestibolo Vaginale



Linea di Hart

Residui imenali

- Terminazioni nervose sensitive
- Elevato numero recettori estrogenici ed androgenici

Commentary

PAIN

What is special about the vulvar vestibule?

Melissa A. Farmer

Vestibolodinia e Neuroproliferazione

RESULTS: Tender sites from primary vestibulodynia had increased

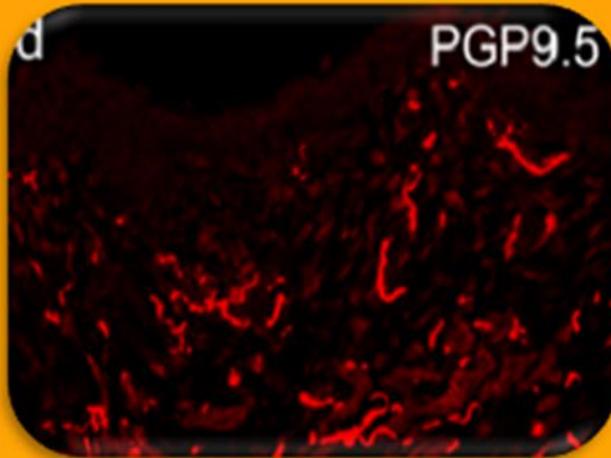
nerve density
Tender sites
tender points
increased
were not

Cite this article
prospective study

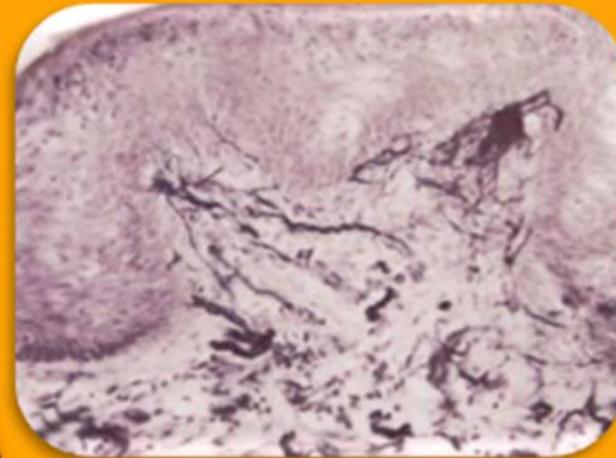
FIG
Ne
A

Fibre Nervose Vestibolari

Superficializzazione



Addensamento



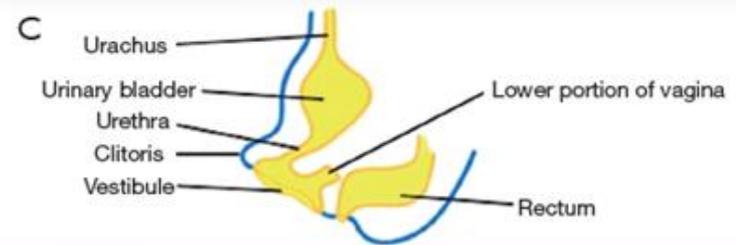
rie

Vestibolodinia e Neuroproliferazione

Anomalia Congenita

Similarities between interstitial cystitis/bladder pain syndrome and vulvodynia: implications for patient management

Jennifer Yonaitis Fariello¹, Robert M. Moldwin²



Differenziazione finale delle strutture endodermiche a 12 sett.

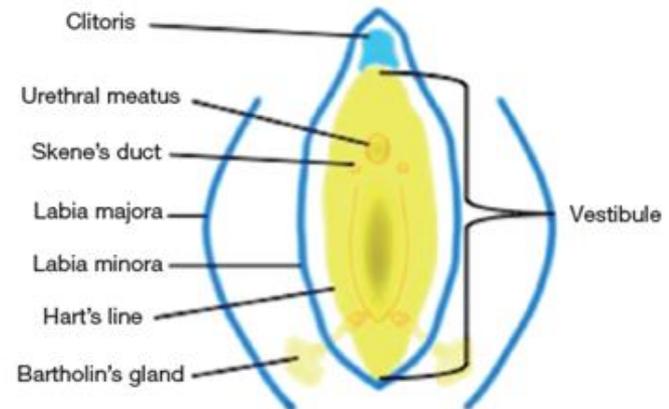
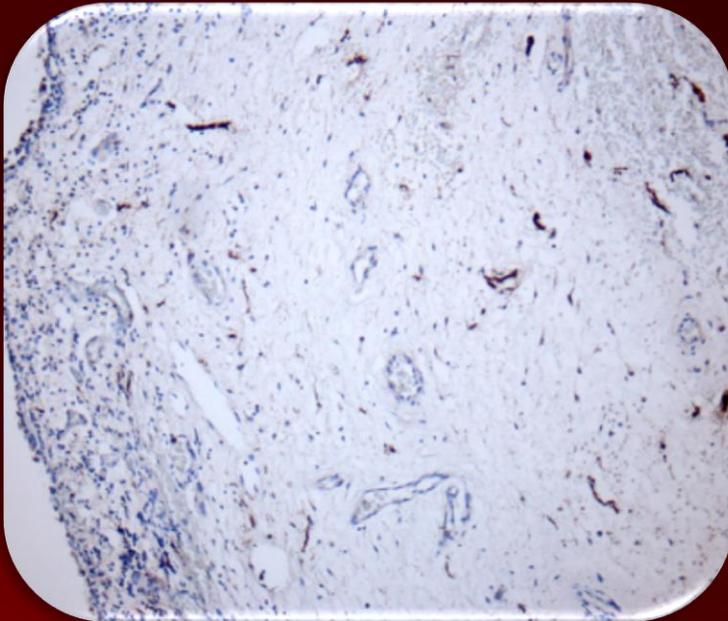


Figure 2 Endodermal derivatives on physical examination of adult are highlighted in yellow. Ectodermal derivatives are highlighted in blue.



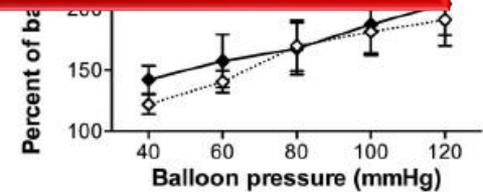
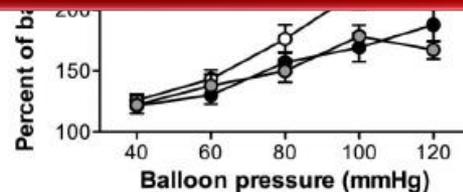
Vestibolodinia e Neuroproliferazione

Abstract

Experiencing early life stress or injury increases a woman's likelihood of developing vulvodynia and concomitant dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis. To investigate the role of the HPA axis in the pathogenesis of vulvodynia, we administered intravaginal zymosan on postnatal days 8 and 10 to mice. We then evaluated the visceromotor response to vaginal balloon distension, the expression of transient receptor potential ankyrin 1 (TRPA1) and vanilloid receptor 1 (VR1) mRNA, and the levels of corticosterone (CORT), mast cell degranulation, and calcitonin receptor-like receptor 1 (CLR) mRNA as indicators of peripheral HPA axis activation. Colorectal and hind paw mechanical and thermal sensitivity were also measured. Adult NVI mice had significantly larger vulvas, and calcium transients were significantly decreased in dorsal root ganglion from NVI mice. Serum CORT, vaginal mast cell degranulation, and CLR mRNA levels were significantly increased in NVI mice. Zymosan administration largely attenuated many of the effects of NVI on the vulva, as well as of adjacent visceral and distant somatic hypersensitivity.

- Somministrazione vaginale di un agente irritante (zymosan) a 8 e 10 gg di vita
- Valutazione in fase adulta dell'ipersensibilità vaginale e della densità di fibre nervose

Insulto precoce è in grado di provocare un'ipersensibilità persistente



Research Paper

PAIN

Neonatal vaginal irritation results in long-term visceral and somatic hypersensitivity and increased hypothalamic-pituitary-adrenal axis output in female mice

Angela N. Pierce, Zhen Zhang, Isabella M. Fuentes, Ruipeng Wang, Janelle M. Ryals, Julie A. Christianson*

2015 · Volume 156 · Number 10

Vestibolodinia e Neuroinfiammazione

Table 2. Methods and Approaches Used in Studying the Connection Between Vulvodynia and Inflammation

IHC and histologic studies— inflammatory infiltrate and mast cells

Assessment of proinflammatory tissue milieu—cytokines, neurokines, chemokines

Hormonal studies connected to inflammation

Studies of systemic immune challenges and associated proinflammatory genetics

Studies of blood flow change (rubor) as a sign of inflammation

Animal model development

In vitro model development

IHC = immunohistochemical.

A review of the available clinical therapies for vulvodynia management and new data implicating proinflammatory mediators in pain elicitation

ML Falsetta,^a DC Foster,^b AD Bonham,^b RP Phipps^{a,b,c}

BJOG 2016

Localised provoked vulvodynia (LPV) is a common, chronic, and disabling condition: patients experience profound pain and a diminished quality of life. The aetiologic origins of vulvodynia are poorly understood, yet recent evidence suggests a link to site-specific inflammatory responses. Fibroblasts isolated from the vestibule of LPV patients are sensitive to proinflammatory stimuli and copiously produce pain-associated proinflammatory mediators (IL-6 and PGE₂). Although LPV is a multifactorial disorder, understanding vulvar inflammation and targeting the inflammatory response should lead to treatment advances

especially for patients exhibiting signs of inflammation. NFκB (already targeted clinically) or other inflammatory components may be suitable therapeutic targets.

Keywords Dectin-1, fibroblast, IL-6, inflammation, NFκB, PGE₂,

Fibroblasti isolati dal vestibolo di donne con VBD producono mediatori proinfiammatori associati al dolore

Conclusion

By accepting inflammation as a possible contributing factor to the occurrence of vulvodynia, we open a new set of possibilities for the treatment and management of this condition. Although we do not advocate a return to vestibulitis) or do not expect practitioners treat vulvodynia, we consider that and clinicians alike should be aware that inflammation is likely to play a role in this condition. Further investigation into how inflammation may influence LPV could lead to the development of new therapeutics or even the improved application of currently accepted and used therapies.

Infiammazione è importante e diventa target della terapia

Table 4. 2015 Consensus Terminology and Classification of Persistent Vulvar Pain and Vulvodynia

- Musculoskeletal (eg, pelvic muscle overactivity,

Tono di base elevato

Table 3 PFM pressure measurement

VRP before the first MVC (cmH ₂ O)	
PFM strength (mean of 3× MVC) (cmH ₂ O)	
PFM endurance (10 sH ₂ O)	

-Tono più alto
-Minore resistenza
-Scarso controllo

(n=35), SD)	<i>p</i> value between groups
)	0.02
6)	0.57
3.0)	0.21

**Alterata capacità
 contrattile**

Pelvic floor muscle function in women with provoked vestibulodynia and asymptomatic controls

Ingrid Naess · Kari Bo

Int Urogynecol J-2015

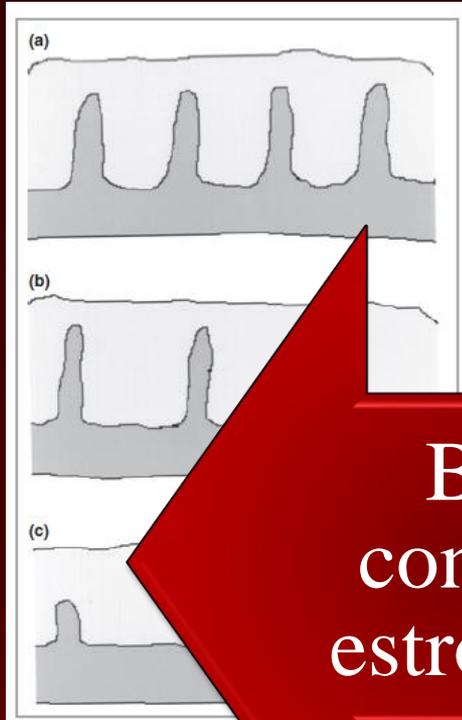
Vestibolodinia e Fattori Ormonali



The vulval vestibular mucosa—morphological effects of oral contraceptives and menstrual cycle

U. Johannesson, B. Blomgren,* M. Hilliges,† E. Rylander and N. Bohm-Starke

British Journal of Dermatology 2007



Fase follicolare di donne che non usano E-P

Fase luteale di donne che non usano E-P

Basso
contenuto
estrogenico

Progestinici
con < affinità
androgenica

Alterato pattern morfologico con papille
più corte e sparse rispetto alla fase follicolare

Aspetto simile nelle donne in fase luteale che non usano E-P

Polymorphisms of the Androgen Receptor Gene and Hormonal Contraceptive Induced Provoked Vestibulodynia

Andrew T. Goldstein, MD,^{*†} Zoe R. Belkin, MS,^{*†} Jill M. Krapf, MD, MSc,[†] Weitao Song, PhD,[‡] Mohit Khara, MD, MBA, MPH,[‡] Sarah L. Jutrzonka, PhD,[‡] Noel N. Kim, PhD,[§] Lara J. Burrows, MD, MSc,^{*} and Irwin Goldstein, MD[†]

J Sex Med. 2014

ABSTRACT

Aim. Women who developed vestibulodynia (vulvar vestibulitis) while taking combined hormonal contraceptives (CHCs) and a control group of women were tested for the number of cytosine–adenine–guanine (CAG) repeats in the androgen receptor (AR) that is located on the X chromosome.

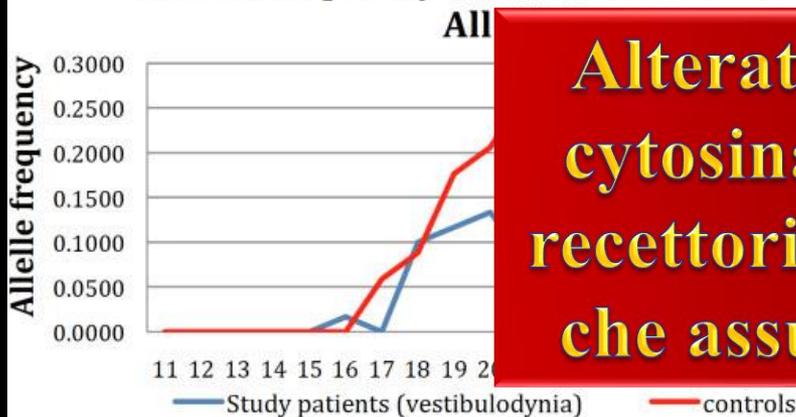
Study Design. DNA from 30 women who developed vestibulodynia and 30 women in the control group were tested for the number of cytosine–adenine–guanine (CAG) repeats in the androgen receptor (AR). Testosterone was tested in both groups.

Results. The mean number of CAG repeats in the AR was significantly higher in the study group (22.05 ± 2.98 vs. 20.61 ± 2.19, respectively; $P = 0.01$). The mean calculated free testosterone was 0.189 ± 0.019 ng/dL in the study group and 0.189 ± 0.019 ng/dL in the control group, all of whom were taking drospirenone/ethinyl estradiol.

Conclusion. In the study cohort, women who developed vestibulodynia had a significantly higher number of CAG repeats in the AR than women who took the same type of CHC but did not develop vestibulodynia. We speculate that the risk of developing CHC-induced vestibulodynia may be due to lowered free testosterone combined with an inefficient AR that predisposes women to vestibular pain. Goldstein AT, Belkin ZR, Krapf JM, Song W, Khara M, Jutrzonka SL, Kim NN, Burrows LJ, and Goldstein I. Polymorphisms of the androgen receptor gene and hormonal contraceptive induced provoked vestibulodynia. J Sex Med ****,**:**-****.

- Due gruppi di donne che assumono E-P :
- Gruppo con VBD
- Gruppo di controllo
- Valutazione eventuale polimorfismo per recettori degli androgeni

Allele Frequency vs. Number of CAG Repeats



Alterata ripetizione del trinucleotide citosina–adenina–guanina (CAG) nei recettori androgenici in donne con VBD che assumono E-P rispetto ai controlli

Vestibolodinia nell' Adolescenza

Vulvodynia Associated Findings

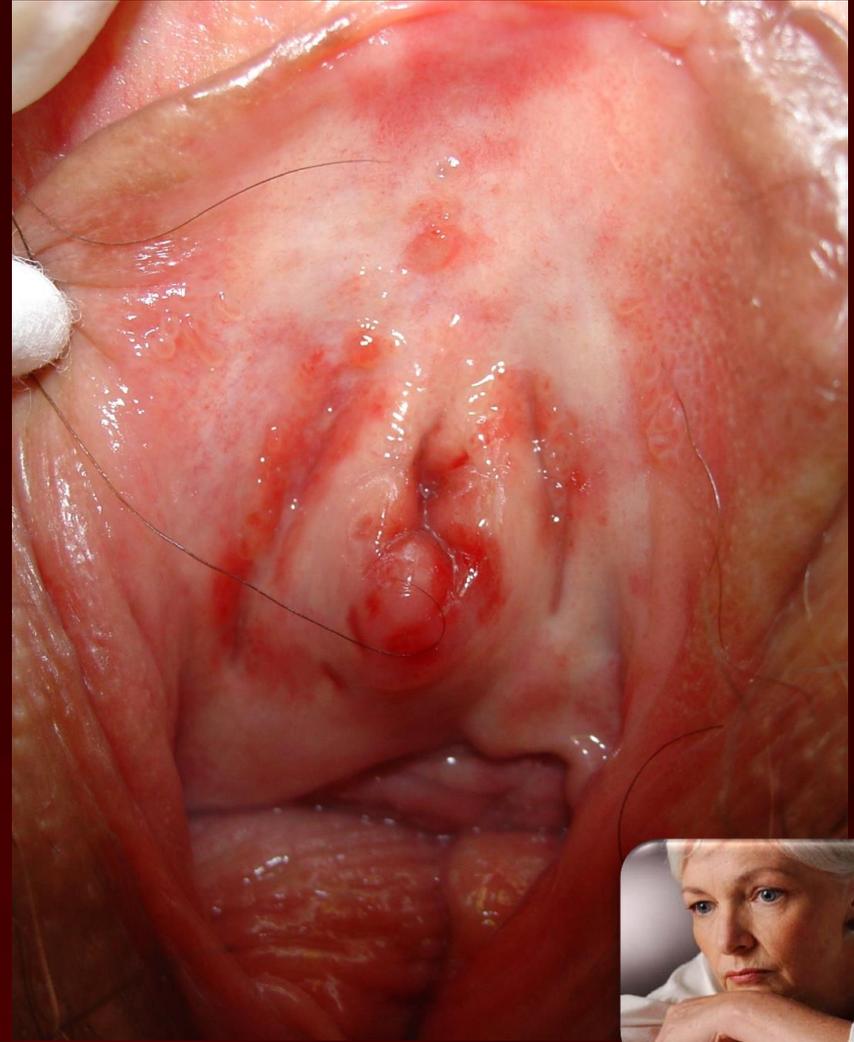


Adolescents

Associated with sexual activity
Tampon insertion
OCP use > 2 years
Decreased libido
Recurrent candidal infection
UTIs
Primary dyspareunia

- Anamnesi di terapia distruttiva vulvare associata a dolore vulvare persistente
- Dolore all' inserimento tamponi indicatore di rischio per dispareunia (4 volte)

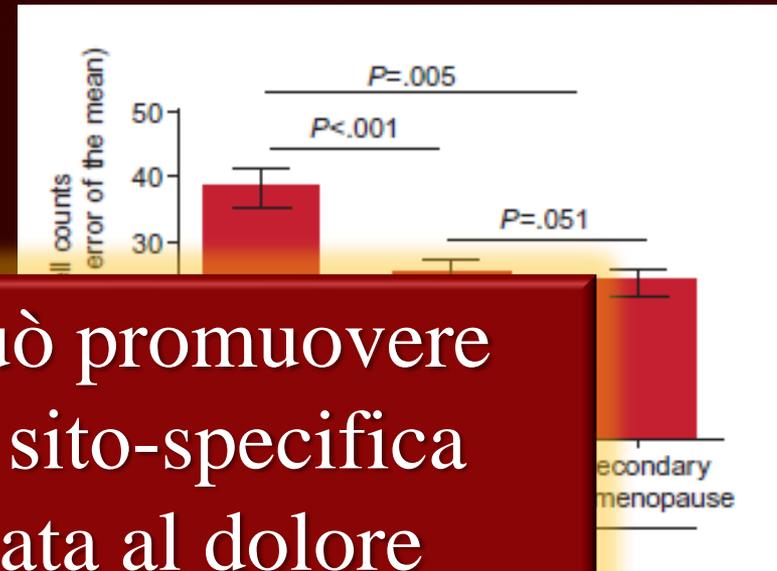
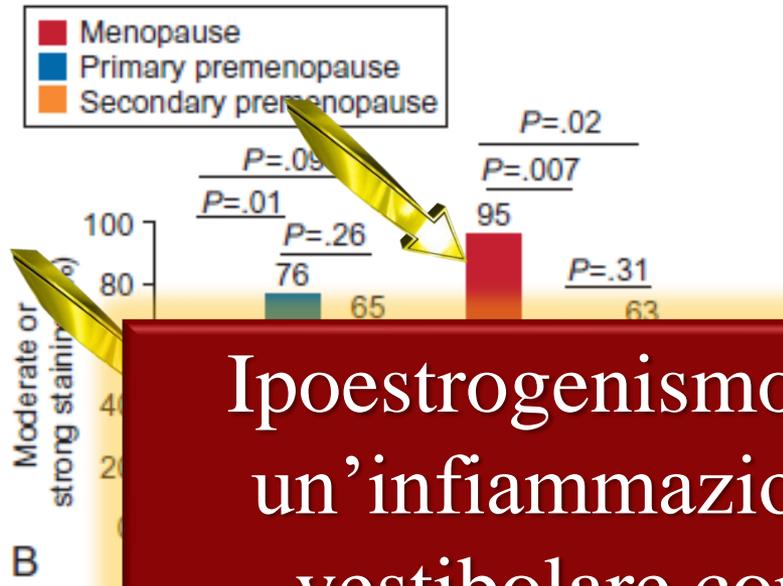
Dispareunia nella Post-Menopausa



Histopathologic Characteristics of Menopausal Vestibulodynia

Catherine M. Ledair, MD, Martha F. Goetsch, MD, MPH, Hong Li, MS, and Terry K. Morgan, MD, PhD

Obstet Gynecol 2013



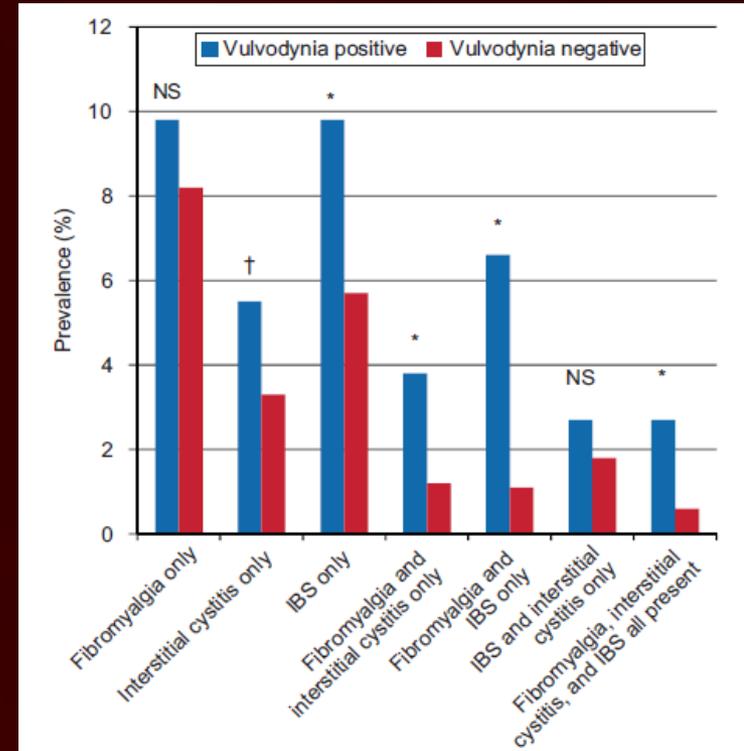
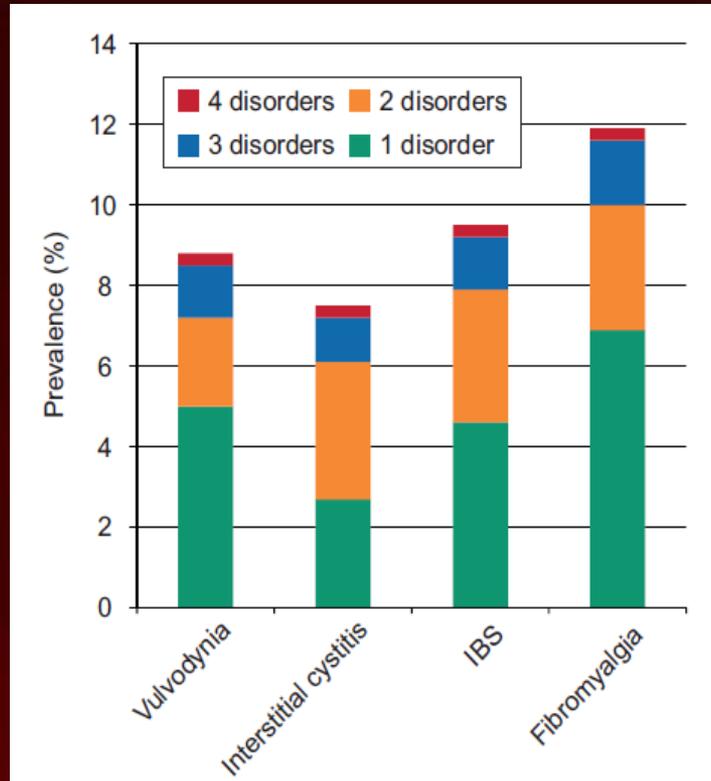
Ipoestrogenismo può promuovere un'inflammatione sito-specifica vestibolare correlata al dolore

< Iperplasia fibre nervose
> Inflammatione

Relationship Between Vulvodynia and Chronic Comorbid Pain Conditions

Barbara D. Reed, MD, MSPH, Siobán D. Harlow, PhD, Ananda Sen, PhD, Rayna M. Edwards, MPH, Di Chen, MPH, and Hope K. Haefner, MD

Obstet Gynecol 2012



La presenza di vulvodinia è associata ad una co-morbidità con un odds ratio di 2.3-3.3

Is the *DSM-V* Leading to the Nondiagnosis of Vulvodynia?

Pedro Vieira-Baptista, MD and Joana Lima-Silva, MD

J Low Genit Tract Dis 2016

Objectives: The authors express their concern about the impact that the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*

“genito-pelvic pain/penetration disorder” may have on vulvodynia patients.

Methods: A review of the concepts of “genito-pelvic pain/penetration disorder,” “vaginismus,” “dyspareunia,” and “vulvodynia” was performed to understand if the suspicion that the more recent and broader DSM concept can have a negative impact on vulvodynia patients.

“genito-pelvic pain/penetration disorder” overlap those of provoked vestibulodynia, a form of vulvodynia characterized by mechanical allodynia localized to the vulvar vestibule. Despite the footnote that the diagnosis

Conclusions: The “genito-pelvic pain/penetration disorder” diagnosis may help the clinical approach of women with dyspareunia and/or an increased pelvic muscle tonus. However, it may have a significant negative

imp
Co
may
crea
imp
be
will
WO
would be su

Dispareunia ed Ipertono espressioni di differenti condizioni che richiedono una diagnosi appropriata

not
osis
ach

Key Words: genito-pelvic pain/penetration disorder, vulvodynia, vaginismus, dyspareunia, vulvar pain

Vulvodinie e Dolori Vulvari

Candidosi ricorrenti

Alterazioni muscolari

IVU ricorrenti

Comorbidità

Predisposizione genetica

Neuroinfiammazione

Fattori ormonali

Fattori psicosociali



Graziottin –Murina -Vulvar Pain: from childhood to old age.-Springer ed. 2016



Vulvodynia—Younger Age and Combined Therapies Associate With Significant Reduction in Self-Reported Pain

Anu P. Aalto, MD,^{1,2} Silja Vuoristo, BM,² Heidi Tuomaala, BM,² Riikka J. Niemi, MD,³ Synnöve M. Staff, MD, PhD,^{2,3} and Johanna U. Mäenpää, MD, PhD^{2,3}

J Low Genit Tract Dis 2017

Objectives:

... pain disorder v...
... the efficacy of...
... (NRS) for pain...

Materials and Methods:

... VD patient col...
... and review of the medical records.

Results: We report here a statistically

Valutazione retrospettiva dell'efficacia terapeutica (numerical rating scale -NRS- for pain)

TABLE 3. Different Treatment Modalities Used for VD Patients

TABLE 4. Overall Effect of Various VD Treatments on NRS score and the Most Frequent Treatment Combinations

Treatment	No. patients	NRS score before treatments, median (IQR)	NRS score after treatments	<i>p</i>
Combination of treatments ^a	70	8 (8–9)	4 (2–7)	<.001

^aMost...
37 patient

**-Multimodalità strategia più efficace
-Vulvodinia in età più avanzata più resistente al trattamento**

Local pain, <i>n</i> (%)	Laser treatment	3 (4.3)
Generalized pain, <i>n</i> (%)	Sacral neuromodulation	2 (2.9)

	(selection bias)	(selection)
Backman et al ²¹	—	—
Bergeron et al ²²	+	?
Bergeron et al ¹⁸	—	—
Bergeron et al ²³	+	?
Brotto et al ²⁵	—	—
Brotto et al ²⁶	—	—
Danielsson et al ²⁷	+	?
Downey and Frederick ²⁸	—	—
Fisher ²⁹	—	—
Fowler ³⁰	—	—
Forth et al ³¹	—	—
Gentikore-Saulnier et al ⁹	—	—
Glazer et al ³²	—	—
Glazer et al ³³	—	—
Goetsch ³⁴	—	—
Goldfinger et al ³⁵	—	—
Goldfinger et al ³⁶	+	?
Granot et al ³⁷	—	—
Hartmann and Nelson ³⁸	—	—
Holland ³⁹	—	—
Idama and Pring ⁴⁰	—	—
Kalina ⁴¹	—	—

Lindström and Kvist ⁴²	—	—
Mackenzie ⁴³	—	—
McKay et al ⁴⁴	—	—
Miletta and Bogliatto ⁴⁵	—	—
Munday et al ⁴⁶	—	—
Murina et al ⁴⁷	—	—
Murina et al ⁴⁸	+	?
Murina et al ⁴⁹	+	?
Nappi et al ⁵⁰	—	—
Olszewski ⁵¹	—	—
Smith and Gillmer ⁵²	—	—
Spoelstra et al ⁵³	—	—
Tommola et al ⁵⁴	—	—
Vallinga et al ⁵⁵	—	—
Weijmar Schultz et al ⁵⁶	+	?

“The vast majority of studies showed that physical therapy modalities such as biofeedback, dilators, electrical stimulation, education, manual physical therapy, were effective for decreasing pain during intercourse and improving sexual function”

PVD. Physical therapy was shown to be a good adjunct to ves-

Transcutaneous electrical nerve stimulation to treat vestibulodynia: a randomised controlled trial

Table 3. FSFI, VAS, SF-MPQ and Marinoff Dyspareunia Scale in the two groups at 3 months after treatment follow up

	TENS group	P value	Placebo group	P value
FSFI	20.3 ± 7.5	0.002	16.8 ± 5.9	NS
VAS	2.8 ± 2.5	0.004	5.6 ± 2.1	NS
SF-MPQ	8.5 ± 10.7	0.001	17.1 ± 8.4	NS
Marinoff Dyspareunia Scale	1.1 ± 0.9	0.001	2.4 ± 0.8	NS

sessions.

vestibulodynia.

Main outcome measures Visual analogue scale (VAS), the short form of the McGill-Melzack Pain Questionnaire (SF-MPQ), the

Keywords TENS, vulvodynia, vulval vestibulitis syndrome.

Table 1. Characteristics of the Study Population.

Age, mean (range)
Nulliparous, n (%)
Duration of symptoms, mean (range),
Sexually active, n (%)
VAS, mean (SD)
Marinoff dyspareunia, mean (SD)

Mean CPT values are reported in Table 2. Women in the PEA + polydatin group showed mean CPT values at a 5-Hz stimulation (C fibers) 10-fold lower compared with placebo (reduction of 40% vs 4.59%), whereas the CPT values at 2,000-Hz (A β) showed a less significant reduction than values at 5-Hz stimulation (12.8%). The 250-Hz stimulation (A δ fibers) values showed a similar reduction among the 2 groups (0.8% vs 1.7%) (see Table 3).

Subject group		2,000 Hz (A β fibers)	250 Hz (A δ fibers)	5 Hz (C fibers)
PEA + polydatin	Basal	541.9	256.9	82.5
	After therapy	575	259.2	139.5
	<i>Difference, %</i>	5.7	0.8	40.8
Placebo	Basal	598.5	214	99.7
	After therapy	558.8	217.8	104.5
	<i>Difference, %</i>	-6.6	1.7	4.5

off

oup p
NS
NS

Amitrintilina e Dolore Vulvare

SECOND OF 3 PARTS

VULVAR PAIN SYNDROMES

A bounty of treatments—
but not all of them are proven



Treatments for vulvodynia and vestibulodynia range from lifestyle adjustments and application of topical agents to tricyclic antidepressants and nerve blocks—but the data on their efficacy are not as bountiful

Neal M. Lenky, MD, MPH, moderator; Libby Edwards, MD, Jennifer Gunter, MD, and Hope K. Haefner, MD, panelists

and the particular agent used. Amitriptyline is often used as a first-line medication. I start the patient on 10 to 25 mg nightly and increase that amount by 10 to 25 mg weekly, not to exceed 150 mg daily. A sample regimen might be 10 mg at bedtime for 1 week. If symptoms persist, increase the dose to 20 mg at bedtime for another week, and so on. Once a dose is established that provides relief, the patient should continue to take that amount nightly. Advise the patient not to discontinue the drug abruptly. Rather, it should be weaned.

3 gtt la sera (6 mg)

6 gtt la sera (12 mg)

10 gtt la sera (20 mg)

15 gtt la sera (30 mg)

childhood to old age.-Springer ed. 2017

Alpha Lipoic Acid Plus Omega-3 Fatty Acids for Vestibulodynia Associated With Painful Bladder Syndrome

J Obstet Gynaecol Can 2017;

Filippo Murina, MD;¹ Alessandra Graziottin, MD;² Raffaele Felice, MD;¹ Dania Gambini, MD²

Abstract

Objective: This study assessed the effectiveness of alpha lipoic acid (ALA) plus omega-3 polyunsaturated fatty acids (n-3 PUFAs) in

Table 1. Patient demographics and disease characteristics

	Group A			Group B
	All patients (n = 84)	Amitriptyline plus ALA + n-3 PUFAs (n = 43)	Amitriptyline (n = 41)	
Age (years) ^a	30.1 ± 7.7/29 (18 to 50)	30.0 ± 8.2/29 (18 to 50)	30.2 ± 7.3/29 (18 to 45)	
Months from disease onset ^a	28.4 ± 19.4/24 (2 to 84)	28.4 ± 21.1/24 (2 to 84)	28.3 ± 17.7/24 (4 to 72)	
<12	10 (11.9%)	6 (14.0%)	4 (9.8%)	
12–24	28 (33.3%)	14 (32.5%)	14 (34.1%)	
>24	46 (54.8%)	23 (53.5%)	23 (56.1%)	
Amitriptyline (mg) ^a	21.7 ± 6.6/20 (12 to 30)	21.8 ± 6.8/20 (12 to 30)	21.6 ± 6.5/20 (12 to 30)	

^aMean ± SD/median (minimum to maximum).

amitriptyline treatment was also associated with improvements in dyspareunia and pelvic floor muscle tone. The overall incidence of adverse events was low, and none led to treatment discontinuation.

Conclusions: The addition of ALA/n-3 PUFAs to amitriptyline treatment in patients with VBD/PBS appears to improve outcomes and may allow for a lower dosage of amitriptyline, which may lead to fewer adverse effects.

Alpha Lipoic Acid Plus Omega-3 Fatty Acids for Vestibulodynia Associated With Painful Bladder Syndrome

Filippo Murina, MD;¹ Alessandra Graziottin, MD;² Raffaele Felice, MD;¹ Dania Gambini, MD²

J Obstet Gynaecol Can 2017;

Figure 1. Relative change (%) in pain from baseline to visit two measured using a VAS pain score and the McGill Pain Questionnaire ($P < 0.001$)

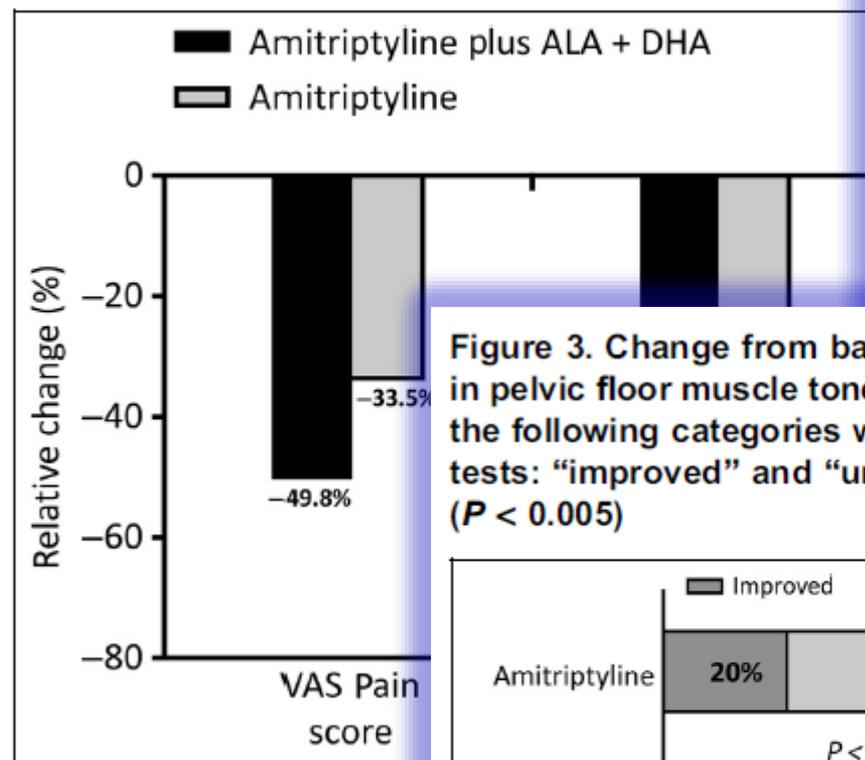


Figure 2. Change in pelvic dyspareunia from baseline to visit two; the following categories were considered for the two tests: “improved” and “unchanged/worsened” ($P < 0.03$)

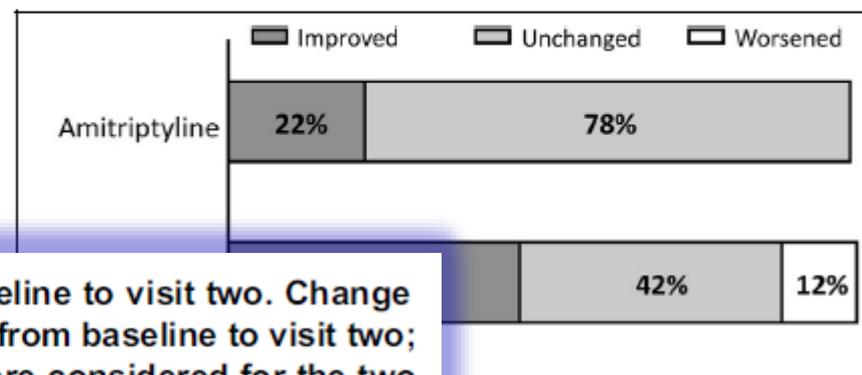
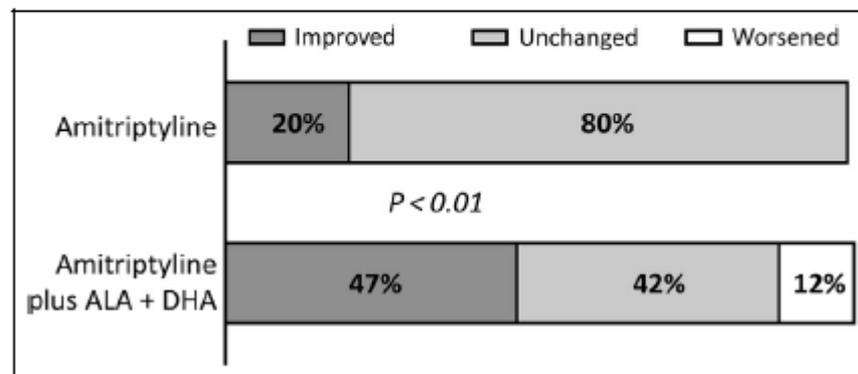


Figure 3. Change from baseline to visit two. Change in pelvic floor muscle tone from baseline to visit two; the following categories were considered for the two tests: “improved” and “unchanged/worsened” ($P < 0.005$)



Alpha Lipoic Acid Plus Omega-3 Fatty Acids for Vestibulodynia Associated With Painful Bladder Syndrome

Filippo Murina, MD;¹ Alessandra Graziottin, MD;² Raffaele Felice, MD;¹ Dania Gambini, MD²

J Obstet Gynaecol Can 2017;

indication.²³ ALA has three main mechanisms of action: it

acts as an antioxidant; as an anti-inflammatory of interleukin-1, interleukin-6, and tumor necrosis factor- α biosynthesis; decreased nuclear factor- κ B as a coenzyme of cellular energy metabolism (adenosine triphosphate biosynthesis).²⁴

ALA crosses the blood-brain barrier and exerts a positive effect on inflammation.²⁶ The n-3 PUFAs have a wide range of

physiologic roles in the cardiovascular and immune systems. Their anti-inflammatory action

ALA
-Inibizione interleukine
-Riduzione THF
-Riduzione attivazione fattore kB

n-3 PUFAs

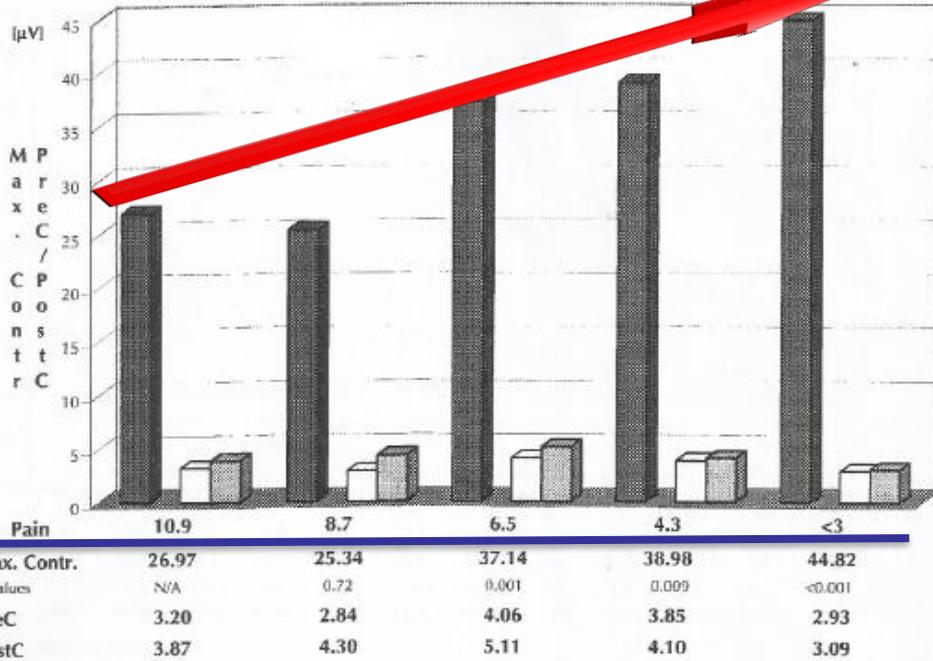
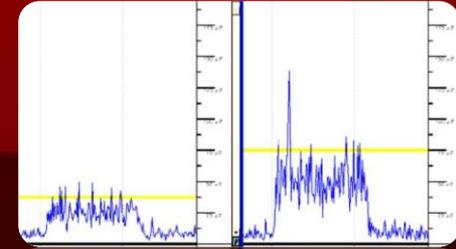
muscle contraction can be perceived as painful.³⁰ In conclusion, a lower dosage of the oral amitriptyline may potentially be just as effective with fewer adverse effects when used in combination with ALA plus n-3 PUFAs.

be synergistic. RHPD is commonly seen in both VBD



Treating Vulvar Vestibulitis with Electromyographic Biofeedback of Pelvic Floor Musculature

Esperanza McKay, M.D., Raymond H. Kaufman, M.D., Uday Doctor, M.D.,
Zuzana Berkova, Ph.D., Howard Glazer, Ph.D., and Vladimir Redko, M.D.



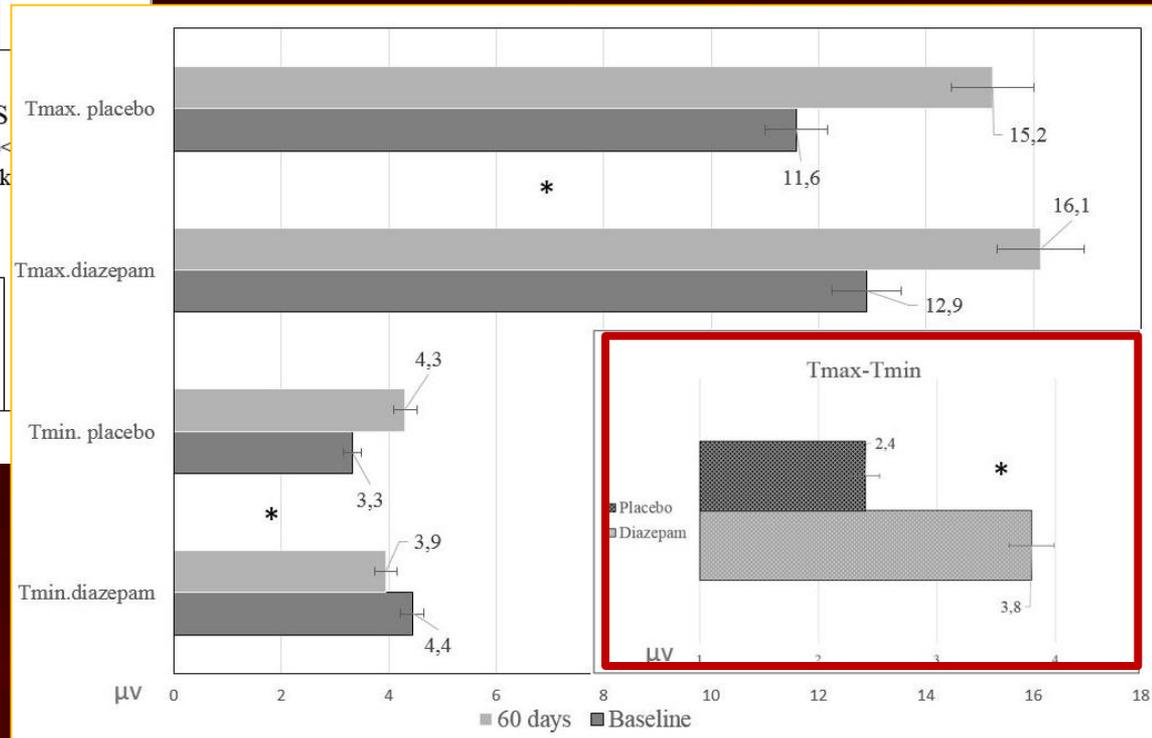
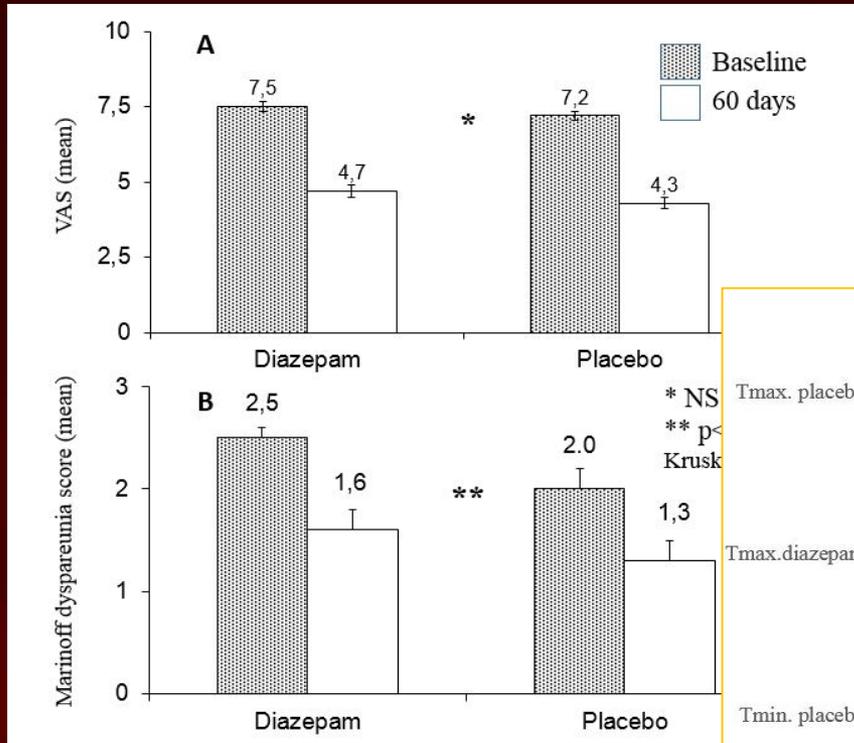
PreC/PostC values = resting potential before/after contraction.
P values of Max. Contraction compared to Max. Contraction at the pain level 10.9

Figure 1 Average maximal contraction, precontraction and postcontraction values in relation to pain.

Variabilità nell'escursione
della contrazione è
correlata alla riduzione
della dispareunia
piuttosto che il tono basale
in pre e post-contrazione

**Fondamentale è riacquisire una
normale funzionalità muscolare**

Title. Vaginal diazepam plus Transcutaneous Electrical Nerve Stimulation: a powerful synergy to treat vestibulodynia . A Randomized Controlled Trial



SEXUAL MEDICINE

What Do Patients Want? A Needs Assessment of Vulvodynia Patients Attending a Vulvar Diseases Clinic

Katherine LePage, BSc, MD,¹ and Amanda Selk, MD, MSc, FRCSC^{2,3}

3 main themes:

- (1) challenges related to obtaining a diagnosis of vulvodynia and finding practitioners who are knowledgeable about vulvodynia
- (2) challenges related to the current impact of the disease physically, emotionally, and in social relationships with patients' intimate partners
- (3) barriers to adherence with recommended therapy

formation classes for new patients, and the creation of peer support networks for patients and their partners.

Conclusion: A patient-focused needs assessment suggests optimal vulvodynia care requires better education of physicians and a multimodal approach to therapy, ideally with multiple services offered in 1 location.

Sex Med 2016;■:e1–e7. Copyright © 2016, The Authors. Published by Elsevier Inc. on behalf of the International Society for Sexual Medicine. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).



**Grazie per
l'attenzione!!!!**

Filippo Murina

*Servizio di Patologia del Tratto Genitale Inferiore
Osp. V. Buzzi –Università degli Studi di Milano*