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Feature Article

Polymorphisms of the androgen receptor gene and hormonal contraceptive induced provoked vestibulodynia.

Goldstein AT[1], Belkin ZR, Krapf JM, Song W, Khera M, Jutrzonka SL, Kim NN, Burrows LJ, Goldstein I.

J Sex Med. 2014 Nov;11(11):2764-71. doi: 10.1111/jsm.12668. Epub 2014 Sep 4.
http://www.ncbi.nlm.nih.gov/pubmed/25187224

AIM: Women who developed vestibulodynia (vulvar vestibulitis) while taking combined hormonal contraceptives (CHCs) and a control group of women were tested for polymorphisms of the gene coding for the androgen receptor (AR) that is located on the X chromosome. **STUDY DESIGN:** DNA from 30 women who developed vestibulodynia while taking CHCs and 17 control women were tested for the number of cytosine-adenine-guanine (CAG) trinucleotide repeats in the AR. In addition, serum-free testosterone was tested in both groups. **RESULTS:** The mean number of CAG repeats in the study group was significantly greater than the control group (22.05 ± 2.98 vs. 20.61 ± 2.19, respectively; P = 0.025). This significant difference persisted when analyzing the CAG repeats from the longer allele from each subject. Among those who were taking drospirenone-containing CHCs, the mean calculated free testosterone was 0.189 ± 0.115 ng/dL in the study group and 0.127 ± 0.054 ng/dL in the control group, all of whom were taking drospirenone-containing CHCs (P = 0.042). **CONCLUSION:** In the study cohort, women who developed vestibulodynia while taking CHCs are more likely to have longer 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.

Vulvodynia/Vulvovaginal Pain

Pelvic floor tenderness in the etiology of superficial dyspareunia.
Yong PJ[1], Mui J[1], Allaire C[1], Williams C[1]. in English, French
J Obstet Gynaecol Can. 2014 Nov;36(11):1002-9.
http://www.ncbi.nlm.nih.gov/pubmed/25574678

OBJECTIVE: To calculate the prevalence of pelvic floor tenderness in the population of women with pelvic pain and to determine its implications for symptoms of pelvic pain. **METHODS:** We conducted a retrospective review of patients with pelvic pain at a tertiary referral centre. Pelvic floor tenderness was defined as levator ani tenderness on at least one side during single digit pelvic examination. The prevalence of pelvic floor tenderness in this cohort of women with pelvic pain was compared with the prevalence in a cohort of women without pain attending a gynaecology clinic. In the women with pelvic pain, multiple regression was performed to determine which variables were independently associated with pelvic floor tenderness. **RESULTS:** The prevalence of pelvic floor tenderness was 40% (75/189) in the cohort with pelvic pain, significantly greater than the prevalence of 13% (4/32) in the cohort without pain (OR 4.61; 95% CI 1.55 to 13.7, P = 0.005). On multiple logistic regression, superficial dyspareunia (OR 4.45; 95% CI 1.86 to 10.7, P = 0.001), abdominal wall pain (OR 4.04; 95% CI 1.44 to 11.3, P = 0.005), and bladder base tenderness (OR 4.65; 95% CI 1.87 to 11.6, P = 0.001) were independently associated with pelvic floor tenderness. Pelvic floor tenderness was similarly present in women with or without underlying endometriosis. **CONCLUSION:** Pelvic floor tenderness is common in women with pelvic pain, with or without endometriosis, and is a contributor to superficial dyspareunia. Pelvic floor tenderness was also associated with abdominal wall pain and bladder base tenderness, suggesting that nervous system sensitization is involved in the etiology of pelvic floor tenderness.

Activation of vestibule-associated lymphoid tissue in localized provoked vulvodynia.
Tommola P[1], Bützow R[2], Unkila-Kallio L[3], Paavonen J[3], Meri S[4].
Am J Obstet Gynecol. 2014 Oct 30. pii: S0002-9378(14)02153-X. doi: 10.1016/j.ajog.2014.10.1098. [Epub ahead of print]
http://www.ncbi.nlm.nih.gov/pubmed/25448516

OBJECTIVE: Localized provoked vulvodynia (LPV) may have inflammatory etiology. We wanted to find out whether the cell-mediated immune system becomes activated in the vestibular mucosa in LPV. **STUDY DESIGN:** This was a controlled cross-sectional study. Vestibular mucosal specimens were obtained from 27 patients with severe LPV and 15 controls. Detailed clinical history of the patients was obtained. For immunohistochemistry, antibodies against CD3 (T cells), CD20 (B cells), IgA (mucosal plasma cells), CD163 (dendritic cells [DCs]), CD68 (macrophages), and CD117 (mast cells) were employed. Mann-Whitney U test and χ^2 test were used for statistical analyses. **RESULTS:** More B lymphocytes and mature mucosal IgA-plasma cells were

found in patients than in controls (P < .001 and P < .001, respectively). In LPV samples, B and T cells were arranged into germinal centers representing local immune activation. Germinal centers were not seen in controls. Antigen-presenting DCs and macrophages were found both in patients and controls with similar densities. DCs were found to extend their dendrites into the luminal space through an intact epithelium. Similar amounts of mast cells were found evenly scattered throughout the stroma of vestibular mucosa of both patients and controls. **CONCLUSION:** We demonstrate here local organized vestibule-associated lymphoid tissue analogous to mucosa-associated lymphoid tissue. Vestibule-associated lymphoid tissue may emerge as a response to local infection or inflammation in LPV.

Elevated tissue levels of tumor necrosis factor-α in vulvar vestibulitis syndrome.
Seckin-Alac E, Akhant SE, Bastu E, Tuzlalik S, Yavuz E.
Clin Exp Obstet Gynecol. 2014;41(6):691-3.
http://www.ncbi.nlm.nih.gov/pubmed/25551965

The purpose of this study was to compare levels of inflammatory cytokines, namely TNF-α, IL-1β, and IL-1 receptor in women with vulvar vestibulitis syndrome (VVS) relative to levels in controls. The authors hypothesized that tissue concentrations of inflammatory cytokines would be elevated significantly in women with VVB compared to pain-free controls. The study population consisted of 15 women with strictly defined VVB in reproductive age and 13 age-matched women with no history of vulvodynia. For TNF-α, positive staining was observed in 40% of the samples from the study group and in 7.7% of the samples from the control group. The difference between the groups was statistically significant ($p < 0.05$). In conclusion, a limitation of the present study was the relatively small sam- ple size. However, the authors' intention was simply to propose that the local inflammation may be mediated by cytokines as TNF-α may rather than trying to single out a pathogenesis of VVS. The authors' findings of elevated TNF-α may suggest new therapeutic alternatives for VVS, as inhibiting cytokine synthesis or antagonism of the cytokine receptor.

Activation of vestibule-associated lymphoid tissue in localized provoked vulvodynia.
Tommola P[1], Bützow R[2], Unkila-Kallio L[3], Paavonen J[3], Meri S[4].
Am J Obstet Gynecol. 2014 Oct 30. pii: S0002-9378(14)02153-X. doi: 10.1016/j.ajog.2014.10.1098. [Epub ahead of print]
http://www.ncbi.nlm.nih.gov/pubmed/25448516

OBJECTIVE: Localized provoked vulvodynia (LPV) may have inflammatory etiology. We wanted to find out whether the cell-mediated immune system becomes activated in the vestibular mucosa in LPV. **STUDY DESIGN:** This was a controlled cross-sectional study. Vestibular mucosal specimens were obtained from 27 patients with severe LPV and 15 controls. Detailed clinical history of the patients was obtained. For immunohistochemistry, antibodies against CD3 (T cells), CD20 (B cells), IgA (mucosal

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Feasibility and preliminary effectiveness of a novel cognitive-behavioral couple therapy for provoked vestibulodynia: a pilot study.

Corsini-Munt S[1], Bergeron S, Rosen NO, Mayrand MH, Delisle I.

J Sex Med. 2014 Oct;11(10):2515-27. doi: 10.1111/jsm.12646. Epub 2014 Jul 24.
http://www.ncbi.nlm.nih.gov/pubmed/25059263

INTRODUCTION: Provoked vestibulodynia (PVD), a recurrent, localized vulvovaginal pain problem, carries a significant psychosexual burden for afflicted women, who report impoverished sexual function and decreased frequency of sexual activity and pleasure. Interpersonal factors such as partner responses to pain, partner distress, and attachment style are associated with pain outcomes for women and with sexuality outcomes for both women and partners. Despite these findings, no treatment for PVD has systematically included the partner.**AIMS:** This study pilot-tested the feasibility and potential efficacy of a novel cognitive-behavioral couple therapy (CBCT) for couples coping with PVD. **METHODS:** Couples (women and their partners) in which the woman was diagnosed with PVD (N = 9) took part in a 12-session manualized CBCT intervention and completed outcome measures pre- and post-treatment. **MAIN OUTCOME MEASURES:** The primary outcome measure was women's pain intensity during intercourse as measured on a numerical rating scale. Secondary outcomes included sexual functioning and satisfaction for both partners. Exploratory outcomes included pain-related cognitions; psychological outcomes; and treatment satisfaction, feasibility, and reliability. **RESULTS:** One couple separated before the end of therapy. Paired t-test comparisons involving the remaining eight couples demonstrated significant improvements in women's pain and sexuality outcomes for both women and partners. Exploratory analyses indicated improvements in pain-related cognitions, as well as anxiety and depression symptoms, for both members of the couple. Therapists' reported high treatment reliability and participating couples' high participation rates and reported treatment satisfaction indicate adequate feasibility. **CONCLUSIONS:** Treatment outcomes, along with treatment satisfaction ratings, confirm the preliminary success of CBCT in reducing psychosexual burden for women with PVD and their partners. Further large-scale randomized controlled trials are necessary to examine the

efficacy of CBCT compared with and in conjunction with first-line biomedical interventions for PVD.

Can Fear, Pain, and Muscle Tension Discriminate Vaginismus from Dyspareunia/Provoked Vestibulodynia? Implications for the New DSM-5 Diagnosis of Genito-Pelvic Pain/Penetration Disorder.
Lahaie MA[1], Amsel R, Khalifé S, Boyer S, Faaborg-Andersen M, Binik YM.
Arch Sex Behav. 2014 Nov 15. [Epub ahead of print]
http://www.ncbi.nlm.nih.gov/pubmed/25398588

Fear has been suggested as the crucial diagnostic variable that may distinguish vaginismus from dyspareunia. Unfortunately, this has not been systematically investigated. The primary purpose of this study, therefore, was to investigate whether fear as evaluated by subjective, behavioral, and psychophysiological measures could differentiate women with vaginismus from those with dyspareunia/provoked vestibulodynia (PVD) and controls. A second aim was to re-examine whether genital pain and pelvic floor muscle tension differed between vaginismus and dyspareunia/PVD sufferers. Fifty women with vaginismus, 50 women with dyspareunia/PVD, and 43 controls participated in an experimental session comprising a structured interview, pain sensitivity testing, a filmed gynecological examination, and several self-report measures. Results demonstrated that fear and vaginal muscle tension were significantly greater in the vaginismus group as compared to the dyspareunia/PVD and no-pain control groups. Moreover, behavioral measures of fear and vaginal muscle tension were found to discriminate the vaginismus group from the dyspareunia/PVD and no-pain control groups. Genital pain did not differ significantly between the vaginismus and dyspareunia/PVD groups; however, genital pain was found to discriminate both clinical groups from controls. Despite significant statistical differences on fear and vaginal muscle tension variables between women suffering from vaginismus and dyspareunia/PVD, a large overlap was observed between these conditions. These findings may explain the great difficulty health professionals experience in attempting to reliably differentiate vaginismus from dyspareunia/PVD. The implications of these data for the new DSM-5 diagnosis of Genito-Pelvic Pain/Penetration Disorder are discussed.

Validation of the partner version of the multidimensional vaginal penetration disorder questionnaire: A tool for clinical assessment of lifelong vaginismus in a sample of Iranian population.
Molaeinezhad M[1], Khoei EM[2], Salehi M[3], Yousfy A[4], Roudsari RL[5].
J Educ Health Promot. 2014 Nov 29;3:114. doi: 10.4103/2277-9531.145913. eCollection 2014.
http://www.ncbi.nlm.nih.gov/pubmed/25540787

BACKGROUND: The role of spousal response in woman's experience of pain during the vaginal penetration attempts believed to be an important factor; however, studies are rather limited in this area. The aim of this study was to develop and investigate the

psychometric indexes of the partner version of a multidimensional vaginal penetration disorder questionnaire (PV-MVPDQ); hence, the clinical assessment of spousal psychosexual reactions to vaginismus by specialists will be easier. **MATERIALS AND METHODS:** A mixed-methods sequential exploratory design was used, through that, the findings from a thematic qualitative research with 20 unconsummated couples, which followed by an extensive literature review used for development of PV-MVPDQ. A consecutive sample of 214 men who their wives' suffered from lifelong vaginismus (LLV) based on Diagnostic and Statistical Manual of Mental Disorders 4(th) version (DSM)-IVTR criteria during a cross-sectional design, completed the questionnaire and additional questions regarding their demographic and sexual history. Validation measures and reliability were conducted by exploratory factor analysis (EFA) and Cronbach's alpha coefficient through SPSS version 16 manufactured by SPSS Inc. (IBM corporation, Armonk, USA). **RESULTS:** After conducting EFA PV-MVPDQ emerged as having 40 items and 7 dimensions: Helplessness, sexual information, vicious cycle of penetration, hypervigilance and solicitous, catastrophic cognitions, sexual and marital adjustment and optimism. Subscales of PV-MVPDQ showed a significant reliability (0.71-0.85) and results of test-retest were satisfactory. **CONCLUSION:** The present study shows PV-MVPDQ is a multi-dimensional valid and reliable self-report questionnaire for assessment of cognitions, sexual and marital relations related to vaginal penetrations in spouses of women with LLV. It may assist specialists to base on which clinical judgment and appropriate planning for clinical management.

Psychosexual aspects of vulvovaginal pain.

Bergeron S[1], Likes WM[2], Steben M[3].

Best Pract Res Clin Obstet Gynaecol. 2014 Oct;28(7):991-9. doi: 10.1016/j.bpobgyn.2014.07.007. Epub 2014 Jul 17.
http://www.ncbi.nlm.nih.gov/pubmed/25104563

Vulvovaginal pain problems are major health concerns in women of childbearing age. Controlled studies have shown that vulvovaginal pain can adversely affect women and their partners' general psychological well-being, relationship adjustment, and overall quality of life. These women have significantly lower levels of sexual desire, arousal, and satisfaction, as well as a lower intercourse frequency than normal controls. They also report more anxiety and depression, in addition to more distress about their body image and genital self-image. Empirical studies indicate that specific psychological and relationship factors may increase vulvovaginal pain intensity and its psychosexual sequelae. Randomized clinical trials have shown that psychosexual interventions, namely cognitive-behavioral therapy (CBT), are efficacious in reducing vulvovaginal pain and improving associated psychosexual outcomes. Women reporting significant psychological, sexual, and/or relationship distress should be referred for psychosexual treatment. A multimodal approach to care integrating psychosexual and medical management is thought to be optimal.

Dyspareunia due to Medical Illness or Treatment

[Prevalence of sexual dysfunction among female patients followed in a Brasília Cohort of early rheumatoid arthritis.]
[Article in Portuguese]
Costa TF[1], Silva CR[2], Muniz LF[2], Mota LM[3].
Rev Bras Reumatol. 2014 Nov 25. pii: S0482-5004(14)00237-X. doi: 10.1016/j.rbr.2014.10.006. [Epub ahead of print]
http://www.ncbi.nlm.nih.gov/pubmed/25559062

OBJECTIVE: To determine the prevalence of sexual dysfunction in women diagnosed with early rheumatoid arthritis (RA) (less than one year of symptoms at the time of diagnosis), as well as to evaluate the possible association between sexual dysfunction with AR activity and functional disability. **METHODS:** Cross-sectional study assessing women diagnosed with early RA, accompanied per protocol in the Brasilia Cohort, Hospital Universitário de Brasília. Demographics, disease activity index (Disease Activity Score 28 - DAS 28) and functional disability questionnaire (Health Assessment Questionnaire - HAQ), were obtained by direct interviews. The Female Sexual Function Index (FSFI) was used, questionnaire which contains 19 items that assess six domains: sexual desire, sexual arousal, vaginal lubrication, orgasm, sexual satisfaction and pain. **RESULTS:** 68 patients studied, of whom 54 (79.4%) reported sexual activity in the last four weeks. The participants were 49.7±13.7 (mean±SD) years old and the majority were married (61.4%). The mean DAS 28 was 3.6±1.5 and the mean HAQ was 0.7. The prevalence of sexual dysfunction (FSFI ≤26) was 79.6%. There was no association of disease activity or of functional disability with the occurrence of sexual dysfunction in the female patients evaluated. **CONCLUSION:** The prevalence of sexual dysfunction found in this study was higher than that reported in the literature in healthy women. A knowledge of the extent of the problem is needed to provide adequate therapeutic options for these patients.

Female sexual function improved with ospemifene in postmenopausal women with vulvar and vaginal atrophy: results of a randomized, placebo-controlled trial.
Constantine G[1], Graham S, Portman DJ, Rosen RC, Kingsberg SA.
Climacteric. 2014 Sep 25:1-7.
http://www.ncbi.nlm.nih.gov/pubmed/25252699

Background Ospemifene is a non-estrogen, tissue selective estrogen receptor agonist/antagonist, or selective estrogen receptor modulator, recently approved for the treatment of dyspareunia, a symptom of vulvar and vaginal atrophy (VVA), due to menopause. Postmenopausal dyspareunia is often associated with female sexual dysfunction (FSD). In this report, we present data that demonstrate the effect of ospemifene 60 mg/day on FSD assessed by the Female Sexual Function Index (FSFI), a widely used tool with six domains (Arousal, Desire, Orgasm, Lubrication, Satisfaction, and Pain). Methods A phase-3, randomized, double-blind, 12-week trial (n = 919)

compared the efficacy and safety of oral ospemifene 60 mg/day vs. placebo in postmenopausal women with VVA in two strata based on self-reported, most bothersome symptom of either dyspareunia or dryness. Primary data were published previously. We report herein pre-specified secondary efficacy endpoints analyses, including changes from baseline to Weeks 4 and 12 for FSFI total and domain scores as well as serum hormone levels. Results Ospemifene 60 mg/day demonstrated a significantly greater FSFI total score improvement vs. placebo at Week 4 ($p < 0.001$). Improvement in FSFI scores continued to Week 12 ($p < 0.001$). At Week 4, the FSFI domains of Sexual Pain, Arousal, and Desire were significantly improved with ospemifene vs. placebo; at Week 12, improvements in all domains were significant ($p < 0.05$). Changes in serum hormones were minor and uncorrelated with changes in sexual functioning. Conclusion In a large, randomized, double-blind, placebo-controlled trial, ospemifene 60 mg/day significantly improved FSD in women with VVA. Consistent effects across FSFI domains were observed.

Evaluation of cutaneous sensibility of the internal pudendal artery perforator (IPAP) flap after perineal reconstructions.

Ferreira MC[2], Busnardo FF[3], Olivan MV[3], Ueda T[2], Grillo VA[2], Marques CF[4], Nahas CS[4], Nahas SC[4], Gemperli R[2].

J Plast Reconstr Aesthet Surg. 2015 Feb;68(2):252-61. doi: 10.1016/j.bjps.2014.09.049. Epub 2014 Oct 23.
http://www.ncbi.nlm.nih.gov/pubmed/25456285

BACKGROUND: In oncological perineal reconstructions, the internal pudendal artery perforator (IPAP) flap is our flap of choice, supplied by perforator vessels from the internal pudendal artery and innervated by branches from the pudendal nerve and the posterior femoral cutaneous nerve. Data related to the evaluation of its cutaneous sensibility are scarce, discrepant, and subject to methodological criticism. **OBJECTIVE:** The objective of this study was to evaluate the cutaneous sensibility of the IPAP flap 12 months after perineal reconstruction and compare it with the preoperative cutaneous sensibility of the gluteal fold (flap donor area). **METHODS:** A prospective study of 25 patients undergoing abdominoperineal excision of rectum (APER) and reconstruction with bilateral VY advancement IPAP flap was conducted. The tactile, pain, thermal, and vibration sensibilities were analyzed in four areas of the gluteal fold preoperatively and in the four corresponding areas of the flap 12 months after surgery. Tactile sensibility was assessed using the Pressure Specified Sensory Device™ (PSSD™), which measures the pressure applied to the skin. The other types of sensibility were analyzed using a needle for pain, hot/cold contact for thermal, and a tuning fork for vibration sensibility. **RESULTS:** A comparison between tactile sensibility thresholds on the gluteal fold preoperatively and on the flap 12 months after surgery showed no statistically significant difference, with p values >0.05 in all four areas evaluated. All patients had preserved pain, thermal, and vibration sensibility in all four areas, postoperatively. **CONCLUSION:** In oncological perineal reconstructions after APER, it is expected that the cutaneous sensibility on the IPAP flap be maintained.

Obstetric vulvar lacerations and postpartum dyspareunia.
Ventolini G[1], Yaklic JL, Galloway ML, Hampton M, Maher JE.
J Reprod Med. 2014 Nov-Dec;59(11-12):560-5.
http://www.ncbi.nlm.nih.gov/pubmed/25552128

OBJECTIVE: To report the type and prevalence of obstetric lacerations in a primigravid patient population after term spontaneous vaginal delivery without episiotomy. We examined the characteristics of lacerations in patients with postpartum dyspareunia or vulvodynia. **STUDY DESIGN:** This was a retrospective cohort of primiparous patients who spontaneously delivered in the residents' service at a large urban hospital under the supervision of Ob/Gyn faculty. Data was extracted from medical records using discharge diagnosis codes. Postpartum medical records and diagnostic codes of all patients with lacerations and postpartum dyspareunia were reviewed. The study was IRB approved. **RESULTS:** A cohort of 1617 primiparous patients with spontaneous vaginal delivery met the inclusion criteria. No tears were recorded in 836 patients (51.7%), first-degree tears in 413 cases (25.5%), second-degree tears in 271 cases (16.8%), third-degree tears in 58 cases (3.6%), fourth-degree in 21 cases (1.3%), and 18 cases (1.1%) were not further classified. Only 51 patients (3.2%) with first- and second-degree lacerations had postpartum complications, and merely 6 (0.4%) had vulvar pain and 6 (0.4%) had dyspareunia. However, 4 of those patients (33.3%) required vulvoplasty for complete dyspareunia remission. **CONCLUSION:** Almost half of patients with spontaneous vaginal delivery without episiotomy experienced some type of vaginal laceration. A first degree was documented in >25% of cases; however, <10% of those subsequently had complaints of vulvar pain or dyspareunia.

Comorbid Disorders

Risk of Associated Conditions in Relatives of Subjects With Interstitial Cystitis.
Allen-Brady K[1], Norton PA, Cannon-Albright L.
Female Pelvic Med Reconstr Surg. 2014 Oct 27.
http://www.ncbi.nlm.nih.gov/pubmed/25349937

OBJECTIVES: Urological chronic pelvic pain syndrome includes interstitial cystitis/painful bladder syndrome (IC/PBS), a chronic bladder pain condition of unknown etiology. Interstitial cystitis/painful bladder syndrome can co-occur with a number of associated conditions such as irritable bowel syndrome and fibromyalgia. The purpose of this study was to estimate the heritability of approximately 20 associated conditions in first-degree relatives (and if appropriate, second- and third-degree relatives) of patients with IC/PBS to identify shared genetic contributions for the disease combinations. **METHODS:** We used the Utah Population Database, a unique population-based genealogical database that has been linked to electronic health records for the University of Utah Health Sciences Center back in 1994. Interstitial cystitis/painful bladder syndrome probands were identified by the International Classification of Diseases, Ninth Revision code for chronic interstitial cystitis and had genealogy

information for 12 of their 14 immediate ancestors. We calculated excess risk of an associated condition in relatives of patients with IC/PBS using relative risk estimates. **RESULTS:** We identified 248 IC/PBS probands. We found that 2 associated conditions, myalgia and myositis/unspecified (fibromyalgia) as well as constipation, were in significant excess in the patients with IC/PBS themselves, their first-degree relatives, and their second-degree relatives. The excess risk among relatives between IC/PBS and these associated conditions also held in the converse direction. Excess risk of IC/PBS was observed in the first- and second-degree relatives in probands with myalgia and myositis/unspecified (fibromyalgia) and in probands with constipation. **CONCLUSIONS:** These results suggest that myalgia and myositis/unspecified (fibromyalgia) as well as constipation are likely to share underlying genetic factors with IC/PBS.

Relationship between Chronic Nonurological Associated Somatic Syndromes and Symptom Severity in Urological Chronic Pelvic Pain Syndromes: Baseline Evaluation of the MAPP Study.

Krieger JN[1], Stephens AJ[2], Landis JR[2], Clemens JQ[3], Kreder K[4], Lai HH[5], Afari N[6], Rodríguez L[7], Schaeffer A[8], Mackey S[9], Andriole GL[5], Williams DA[3]; MAPP Research Network.

J Urol. 2014 Oct 22. pii: S0022-5347(14)04767-3. doi: 10.1016/j.juro.2014.10.086.
http://www.ncbi.nlm.nih.gov/pubmed/25444992

PURPOSE: We used MAPP data to identify participants with urological chronic pelvic pain syndrome only or a chronic functional nonurological associated somatic syndrome in addition to urological chronic pelvic pain syndrome. We characterized these 2 subgroups and explored them using 3 criteria, including 1) MAPP eligibility criteria, 2) self-reported medical history or 3) RICE criteria. **MATERIALS AND METHODS:** Self-reported cross-sectional data were collected on men and women with urological chronic pelvic pain syndrome, including predominant symptoms, symptom duration and severity, nonurological associated somatic syndrome symptoms and psychosocial factors. **RESULTS:** Of 424 participants with urological chronic pelvic pain syndrome 162 (38%) had a nonurological associated somatic syndrome, including irritable bowel syndrome in 93 (22%), fibromyalgia in 15 (4%), chronic fatigue syndrome in 13 (3%) and multiple syndromes in 41 (10%). Of 233 females 103 (44%) had a nonurological associated somatic syndrome compared to 59 of 191 males (31%) ($p = 0.006$). Participants with a nonurological associated somatic syndrome had more severe urological symptoms and more frequent depression and anxiety. Of 424 participants 228 (54%) met RICE criteria. Of 228 RICE positive participants 108 (47%) had a nonurological associated somatic syndrome compared to 54 of 203 RICE negative patients (28%) with a nonurological associated somatic syndrome ($p < 0.001$). **CONCLUSIONS:** Nonurological associated somatic syndromes represent important clinical characteristics of urological chronic pelvic pain syndrome. Participants with a nonurological associated somatic syndrome have more severe symptoms, longer duration and higher rates of depression and anxiety. RICE positive patients are more likely to have a nonurological associated somatic syndrome and more severe

symptoms. Because nonurological associated somatic syndromes are more common in women, future studies must account for this potential confounding factor in urological chronic pelvic pain syndrome

Effect of Letrozole on endometriosis-related pelvic pain.
Almassinokiani F[1], Almasi A[2], Akbari P[3], Saberifard M[4].
Med J Islam Repub Iran. 2014 Oct 4;28:107. eCollection 2014.
http://www.ncbi.nlm.nih.gov/pubmed/25664308

BACKGROUND: To determine the role of Letrozole, an aromatase inhibitor, in the treatment of endometriotic pain. **METHODS:** In this prospective, randomized, controlled clinical trial in minimally invasive surgery research center, 51 women with pelvic endometriosis and endometriotic pain (dyspareunia, dysmenorrhea, pelvic pain) score of 5 or more (for at least one of these endometriotic pain), after laparoscopic diagnosis and conservative laparoscopic surgery were treated with either Letrozole plus OCP (n=25) or only OCP (n=26) for 4 months continuously. **RESULTS:** Using VAS test, the score of dyspareunia, dysmenorrhea and pelvic pain 4 months after the laparoscopic surgery declined significantly in both groups but the difference between results of the two groups was not significant. **CONCLUSION:** Both treatment modalities showed comparable effectiveness in the treatment of pains related to endometriosis and in comparison with OCP, Letrozole did not affect the outcome.

Chronic pelvic floor dysfunction.
Hartmann D[1], Sarton J[2].
Best Pract Res Clin Obstet Gynaecol. 2014 Oct;28(7):977-90. doi: 10.1016/j.bpobgyn.2014.07.008. Epub 2014 Jul 17.
http://www.ncbi.nlm.nih.gov/pubmed/25108498

The successful treatment of women with vestibulodynia and its associated chronic pelvic floor dysfunctions requires interventions that address a broad field of possible pain contributors. Pelvic floor muscle hypertonicity was implicated in the mid-1990s as a trigger of major chronic vulvar pain. Painful bladder syndrome, irritable bowel syndrome, fibromyalgia, and temporomandibular jaw disorder are known common comorbidities that can cause a host of associated muscular, visceral, bony, and fascial dysfunctions. It appears that normalizing all of those disorders plays a pivotal role in reducing complaints of chronic vulvar pain and sexual dysfunction. Though the studies have yet to prove a specific protocol, physical therapists trained in pelvic dysfunction are reporting success with restoring tissue normalcy and reducing vulvar and sexual pain. A review of pelvic anatomy and common findings are presented along with suggested physical therapy management.

Pudendal Neuralgia

Sacral neuromodulation as a treatment for pudendal neuralgia.
Valovska A, Peccora CD, Philip CN, Kaye AD, Urman RD[1].
Pain Physician. 2014 Sep-Oct;17(5):E645-50.
http://www.ncbi.nlm.nih.gov/pubmed/25247915

Pudendal neuralgia is a debilitating pain syndrome, and finding long-lasting treatment modalities has been challenging in pain management. The pudendal nerve has sensory and motor functions, and influences autonomic functions. Thus, entrapment or damage of this nerve can have multiple serious implications. The constellation of symptoms which result from injury to this nerve is commonly referred to as pudendal neuralgia. When conservative therapy does not provide adequate pain relief and surgical procedures fail or are not viable options, central and peripheral nerve stimulation can be effective treatment modalities. More recent approaches to treatment include the use of peripheral nerve stimulation through the use of an electrical lead placed next to the pudendal nerve in the ischioanal fossa. Also, epidural stimulation of the conus medullaris and pulsed radiofrequency ablation of the pudendal nerve have been shown to be effective in small patient populations. We present the case of a 36-year-old woman who sustained pudendal nerve injury during a hysterectomy and subsequently developed intractable pelvic pain and pudendal neuralgia. Conservative treatment measures failed, but she obtained excellent results from peripheral nerve stimulator therapy. Permanent implantation consisted of 4 tined Interstim leads, individually placed into the bilateral S3 and S4 foramina. The patient has been followed for approximately 4 years since her procedure, demonstrating increased function as she is able to stand and sit for prolonged periods of time. She has returned to her usual daily activities, including horseback riding. This is the first reported case of transforminal sacral neurostimulation providing excellent relief of pudendal neuralgia related symptoms.

Pudendal nerve block by transgluteal way guided by computed tomography in a woman with refractory pudendal neuralgia expressed like chronic perineal and pelvic pain.
Ricci P[1], Wash A.
Arch Esp Urol. 2014 Jul;67(6):565-71.
http://www.ncbi.nlm.nih.gov/pubmed/25048589

OBJECTIVE: To demonstrate that the deep infiltration of the pudendal nerve guided by tomography is a good treatment option for patients with refractory neuralgia. **METHOD:** Two cases of pudendal neuralgia are presented, both expressed mainly with pain in the perineal and gluteal areas. Both cases had changes in the skin and one with urinary symptoms. A deep trans-gluteal infiltration guided by CT scan was performed, administering bupivacaine 0.25% with 80 mg methylprednisolone. **RESULTS:** In women, after infiltration, there was a decrease in pain from 6 to 3. **CONCLUSIONS:** Pudendal Neuralgia diagnosis is unknown. The most common cause is inflammation of

adjacent structures to the nerve frequently caused by falling. Diagnosis is mainly clinical. Trans-gluteal infiltration guided by CT scan is an effective option in treatment.

Dermatological Disorders/Infectious Disease

Marked improvement of vulvovaginitis of unknown origin in a pediatric patient--case report.
Check JH, Cohen R.
Clin Exp Obstet Gynecol. 2014;41(6):723-4.
http://www.ncbi.nlm.nih.gov/pubmed/25551972

PURPOSE: To present a novel therapy for pediatric vulvovaginitis. **MATERIALS AND METHODS:** An eight-year-old girl with persistent severe vulvovaginitis of unknown origin also complained of unexplained weight gain and sudden academic difficulties. She was treated with dextroamphetamine sulfate. **RESULTS:** She not only showed very quick and excellent relief from her vulvovaginitis but she also lost weight and improved her mentality. **CONCLUSIONS:** Sympathomimetic amine therapy may benefit pediatric vulvovaginitis when an infectious cause cannot be ascertained.

[Reliable microbiological diagnosis of vulvovaginal candidiasis].
[Article in Bulgarian]
Baykushev R, Ouzounova-Raykova V, Stoykova V, Mitov I.
Akush Ginekol (Sofiia). 2014;53(4):17-20.
http://www.ncbi.nlm.nih.gov/pubmed/25510066

INTRODUCTION: Vulvovaginal candidiasis is common infection among those affecting the vulva and vagina. Is caused by the perpesentatives from the genus Candida, in most cases C. albicans (85-90%). An increase in the percentage of the so-called non-albicans agents is seen and these pathgogens are often resistant to the most commonly used in the practice antifungals. Faulty diagnosis, incorrect use of azoles, and self-treatment lead to selection of resistant strains and recurrent infections. **AIM:** Identification of Candida species associated with vulvovaginal candidiasis by conventional and PCR techniques. **MATERIALS AND METHODS:** For six months a total number of 213 vaginal secretions were tested applying Gram stain and cultivation on ChromAgar. API Candida fermentation tests and API 20CAUX assimilation tests were performed for the identification of the bacteria. Extraction of DNA of all the smears with subsequent PCR detection of different Candida species were done. **RESULTS:** 80.7% materials showed presence of blastospores and/or hyphae. Positive culture results were detected in 60 (28.2%) samples. The species specific identification revealed presence of C. albicans in 51 (85%) smears, C. glabrata--in 8 (13.3%), C. krusei--in 2 (3.3%), and S. cervisie--in 1 (2.1%). The PCR technique confirmed the results of the conventional methods. It is worth to mention that 51 of the tested smears were positive for G. vaginalis using additional PCR. **CONCLUSIONS:** The correct

diagnosis of the cause of vulvovaginal candidiasis helps in the correct choice of appropriate antifungal therapy and prevents development of recurrent infections and consequences. The PCR based method is rapid, specific and sensitive. It perfectly correlates with the results from the conventional diagnostic tests so it could be selected as a method of choice for the diagnosis of vulvovaginal candidiasis.

Randomized Trial of Periodic Presumptive Treatment with High-Dose Intravaginal Metronidazole and Miconazole to Prevent Vaginal Infections in HIV-negative Women.

McClelland RS[1], Balkus JE[2], Lee J[3], Anzala O[4], Kimani J[5], Schwebke J[6], Bragg V[7], Lensing S[3], Kavak L[8].

J Infect Dis. 2014 Dec 19. pii: jiu818.
http://www.ncbi.nlm.nih.gov/pubmed/25526757

BACKGROUND: Vaginal infections are common, frequently recur, and may increase women's risk for sexually transmitted infections (STIs). We tested the efficacy of a novel regimen to prevent recurrent vaginal infections. **METHODS:** HIV-negative women 18-45 years old with one or more vaginal infections including bacterial vaginosis (BV), vulvovaginal candidiasis (VVC), or Trichomonas vaginalis (TV) were randomly assigned to receive vaginal suppositories containing metronidazole 750mg plus miconazole 200mg or matching placebo for five consecutive nights each month for 12 months. Primary endpoints, evaluated every 2 months, were BV (Gram stain) and VVC (positive wet mount and culture). **RESULTS:** Participants (N=234) were randomly assigned to the intervention (N=118) or placebo (N=116) arm. Two-hundred and seventeen (93%) women completed an end-of-study evaluation. The intervention reduced the proportion of visits with BV compared to placebo (21.2% versus 32.5%; relative risk [RR] 0.65, 95% confidence interval [CI] 0.48-0.87). In contrast, the proportion of visits with VVC was similar in the intervention (10.4%) versus placebo (11.3%) arms (RR 0.92, 95%CI 0.62-1.37). **CONCLUSIONS:** Monthly treatment with intravaginal metronidazole plus miconazole reduced the proportion of visits with BV during 12 months of follow-up. Further study will be important to determine whether this intervention can reduce women's risk of STIs.

Dermatosis associated with menopause.

Nair PA[1].

J Midlife Health. 2014 Oct;5(4):168-75. doi: 10.4103/0976-7800.145152.
http://www.ncbi.nlm.nih.gov/pubmed/25540566

Menopause is defined as permanent irreversible cessation of menses brought by decline in ovarian follicular activity. Hormonal alteration results in various physical, psychological, and sexual changes in menopausal women. Associated dermatological problems can be classified as physiological changes, age-related changes, changes due to estrogen deficiency and due to hormone replacement therapy. Dermatosis seen due to estrogen deficiency includes Atrophic Vulvovaginitis, Vulvar Lichen Sclerosus, Dyaesthetic Vulvodynia, Hirsutism, Alopecia, Menopausal Flushing, Keratoderma

Climactericum, Vulvovaginal Candidiasis. Dermatologists and gynecologists need to be familiar with the problems of menopausal women, as with increase in life expectancy, women passing through this phase is rising.

The impact of vulvar lichen sclerosus on sexual dysfunction.

Haefner HK[1], Aldrich NZ, Dalton VK, Gagné HM, Marcus SB, Patel DA, Berger MB.

J Womens Health (Larchmt). 2014 Sep;23(9):765-70. doi: 10.1089/jwh.2014.4805. Epub 2014 Aug 27.
http://www.ncbi.nlm.nih.gov/pubmed/25162790

BACKGROUND: Lichen sclerosus (LS) is a chronic inflammatory condition that is known to arise on the vulva. Many women with LS report vulvar pain, often affecting a patient's quality of life. In this study, the sexual function of LS patients, with and without pain, was compared to control populations. **MATERIALS AND METHODS:** A case-control study to examine the relationship between LS and sexual dysfunction was conducted. A total of 335 women presenting to the gynecology clinic were included in the study: 197 women with biopsy confirmed LS were compared to two control groups (95 asymptomatic women were "healthy" controls and 43 women had vulvovaginal candidiasis) on self-reported current health complaints, medical and surgical history and current symptoms such as pain and itching, type and frequency of sexual activity, and satisfaction with sexual activity. **RESULTS:** Women with LS reported less frequent sexual activity than healthy controls ($p=0.007$) and Candida controls ($p=0.04$). Currently sexually active women with LS were significantly less likely to report vaginal intercourse (71.6%) than healthy controls (89.0%, $p=0.003$) or Candida controls (100%, $p=0.0003$), even though similar proportions of all three groups reported that vaginal intercourse was important. Satisfaction towards the quality of current sexual activity was significantly lower among women with LS compared with both the healthy and Candida control groups. 23.7% of women with LS reported that sexual activity was rarely or never satisfactory as compared with 0% of healthy controls ($p<0.0001$) and 6.5% of Candida controls ($p=0.03$). **CONCLUSION:** Women with LS have less frequent sexual activity and less satisfying sexual activity when compared with controls.