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Vulvodynia

2015 ISSVD, ISSWSH, and IPPS Consensus Terminology and Classification of Persistent Vulvar Pain and Vulvodynia.

Bornstein J, Goldstein AT, Stockdale CK, Bergeron S, Pukall C, Zolnoun D, Coady D; consensus vulvar pain terminology committee of the International Society for the Study of Vulvovaginal Disease (ISSVD).

J Sex Med. 2016 Apr;13(4):607-12. doi: 10.1016/j.jsxm.2016.02.167. Epub 2016 Mar 25.

<http://www.ncbi.nlm.nih.gov/pubmed/27045260>

INTRODUCTION: In 2014, the Executive Council of the International Society for the Study of Vulvovaginal Disease (ISSVD), the Boards of Directors of the International Society for the Study of Women's Sexual Health (ISSWSH), and the International Pelvic Pain Society (IPPS) acknowledged the need to revise the current terminology of vulvar pain, based on the significant increase in high quality etiologic studies published in the last decade. **METHODS:** The new terminology was achieved in four steps. The first involved a terminology consensus conference with representatives of the three societies, held in April 2015. Then, an analysis of the relevant published studies was used to establish a level of evidence for each factor associated with vulvodynia. The terminology was amended based on feedback from members of the societies. Finally, each society's board accepted the new terminology. **RESULTS AND CONCLUSION:** In 2015, the ISSVD, ISSWSH, and IPPS adopted a new vulvar pain and vulvodynia terminology that acknowledges the complexity of the clinical presentation and pathophysiology involved in vulvar pain and vulvodynia, and incorporates new information derived from evidence-based studies conducted since the last terminology published in 2003.

Vulvodynia: Assessment and Treatment.

Goldstein AT, Pukall CF, Brown C, Bergeron S, Stein A, Kellogg-Spadt S.

J Sex Med. 2016 Apr;13(4):572-90. doi: 10.1016/j.jsxm.2016.01.020. Epub 2016 Mar 25.

<http://www.ncbi.nlm.nih.gov/pubmed/27045258>

INTRODUCTION: Vulvodynia constitutes a highly prevalent form of sexual pain in women, and current information regarding its assessment and treatment is needed. **AIM:** To update the scientific evidence published in 2010, from the Third International Consultation on Sexual Medicine, pertaining to the assessment and treatment of women's sexual pain. **METHODS:** An expert committee, as part of the Fourth International Consultation on Sexual Medicine, was comprised of researchers and clinicians from biological and social science disciplines for the review of the scientific evidence on the assessment and treatment of women's genital pain. **MAIN OUTCOME MEASURES:** A review of assessment and treatment strategies involved in vulvodynia. **RESULTS:** We recommend the following treatments for the management of vulvodynia: psychological interventions, pelvic floor physical therapy, and vestibulectomy (for provoked vestibulodynia). We also support the use of multidisciplinary treatment

approaches for the management of vulvodynia; however, more studies are needed to determine which components are most important. We recommend waiting for more empirical evidence before recommending alternative treatment options, anti-inflammatory agents, hormonal agents, and anticonvulsant medications. Although we do not recommend lidocaine, topical corticosteroids, or antidepressant medication for the management of vulvodynia, we suggest that capsaicin, botulinum toxin, and interferon be considered second-line avenues and that their recommendation be revisited once further research is conducted. **CONCLUSION:** A comprehensive assessment is needed to understand the pain experience of women presenting with vulvodynia. In addition, treatment typically progresses from less invasive to more invasive, and several treatment options are worth pursuing.

Vulvodynia: Definition, Prevalence, Impact, and Pathophysiological Factors.

Pukall CF, Goldstein AT, Bergeron S, Foster D, Stein A, Kellogg-Spadt S, Bachmann G.

J Sex Med. 2016 Mar;13(3):291-304. doi: 10.1016/j.jsxm.2015.12.021.

<http://www.ncbi.nlm.nih.gov/pubmed/26944461>

INTRODUCTION: Vulvodynia constitutes a highly prevalent form of chronic genital pain in women, and current information regarding its definition, prevalence, impact, and pathophysiologic factors involved is needed. **AIM:** To update the scientific evidence published in 2010 from the Third International Consultation of Sexual Medicine pertaining to the definition, prevalence, impact, and pathophysiologic factors of women's sexual pain. **METHODS:** An expert committee, as part of the Fourth International Consultation of Sexual Medicine, comprised of researchers and clinicians from biological and social science disciplines, reviewed the scientific evidence on the definition, prevalence, impact, and pathophysiologic factors related to chronic genital pain. **MAIN OUTCOME MEASURES:** A review of the definition, prevalence, impact, and pathophysiological factors involved in vulvodynia. **RESULTS:** Vulvodynia is a prevalent and highly impactful genital pain condition. Numerous factors have been implicated in its development and maintenance. **CONCLUSION:** What is becoming increasingly apparent is that it likely represents the end point of different factors that can differ from patient to patient. Longitudinal research is needed to shed light on risk factors involved in the expression of vulvodynia, as well as in potential subgroups of affected patients, in order to develop an empirically supported treatment algorithm.

Recruitment in a Clinical Trial of Provoked Vulvodynia and Evaluation of Racial Differences [4Q]

Candi Bachour, Gloria A. Bachmann, David C Foster, Candace Brown, Jim Wan, Leslie Rawlinson

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<https://www.researchgate.net/publication/303180796> Recruitment in a Clinical Trial of Provoked Vulvodynia and Evaluation of Racial Differences 4Q

INTRODUCTION: Clinical trials for chronic pain conditions are often terminated due to low enrollment, and minority groups are often underrepresented. Enrollment of women with provoked vulvodynia (PVD) is particularly challenging due to reluctance in women and clinicians in discussing dyspareunia. We compared the effectiveness of different recruitment methods on eligibility, enrollment and randomization in women with this pain condition and evaluated racial differences. **METHODS:** Recruitment methods for this multicenter clinical trial included mass mailing, media and the health care system. Eligibility, enrollment and recruitment fractions were calculated for each recruitment method. Data are reported as percentages and were analyzed by chi-square and exact binomial test. **RESULTS:** Of

763 subjects screened, the overall eligibility fraction was 28.0%, enrollment fraction was 40.7% and recruitment fraction was 11.4%. Compared to media and the health care system, in this trial mass mailing resulted in the highest eligibility fraction ($P=.001$), enrollment fraction ($P=.01$) and recruitment fraction ($P=.01$). Black women had a higher enrollment fraction than white women ($P=.02$), with mass mailing remaining the most effective recruitment method in this cohort ($P<.0001$). **CONCLUSION:** Recruitment of women with chronic gynecologic pain conditions is consistent with the challenges met in other pain trials. The development of more effective recruitment methods targeted at specific cohorts of women with chronic pain appears necessary for timely clinical trials' completion.

Provoked Vestibulodynia

Familiality analysis of provoked vestibulodynia treated by vestibulectomy supports genetic predisposition.

Morgan TK, Allen-Brady KL, Monson MA, Leclair CM, Sharp HT, Cannon-Albright LA.

Am J Obstet Gynecol. 2016 May;214(5):609.e1-7. doi: 10.1016/j.ajog.2015.11.019. Epub 2015 Nov 25.

<http://www.ncbi.nlm.nih.gov/pubmed/26627726>

BACKGROUND: Provoked vestibulodynia is a poorly understood disease that affects 8-15% of women in their lifetime. There is significant inflammation and nerve growth in vestibular biopsies from affected women treated by vestibulectomy compared with matched female population controls without vestibulodynia. The triggers leading to this neurogenic inflammation are unknown, but they are likely multifactorial. **OBJECTIVE:** Our objective was to determine whether vestibulodynia is more common in close and distantly related female relatives of women diagnosed with the disease and those specifically treated by vestibulectomy. Excess familial clustering would support a potential genetic predisposition for vestibulodynia and warrant further studies to isolate risk alleles. **STUDY DESIGN:** Using population-based genealogy linked to University of Utah Hospital CPT coded data, we estimated the relative risk of vestibulectomy in female relatives of affected women. We also compared the average pairwise relatedness of cases to the expected relatedness of the population and identified high-disease-burden pedigrees. **RESULTS:** A total of 183 potential vestibulectomy probands were identified using CPT codes. The relative risk of vestibulectomy was elevated in first-degree (20 [6.6-47], $P < .00001$), second-degree (4.5 [0.5-16], $P = .07$), and third-degree female relatives (3.4 [1.2-8.8], $P = .03$). Seventy of these 183 CPT-based probands had available clinical history to confirm a diagnosis of moderate to severe vestibulodynia. Notably, this smaller group of confirmed probands ($n = 70$) revealed a similar familiality in first-degree (54 [17.5-126], $P < .00001$), second-degree (19.7 [2.4-71], $P = .005$), and third-degree relatives (12 [3.3-31], $P = .0004$), despite less statistical power for analysis. Overall, the average pairwise relatedness of affected women was significantly higher than expected ($P < .001$) and a number of high-disease-burden Utah families were identified. **CONCLUSION:** Our data suggest that vestibulodynia treated by vestibulectomy has a genetic predisposition. Future studies will identify candidate genes by linkage analysis in affected families and sequencing of distantly related probands.

Provoked Vestibulodynia: Does Pain Intensity Correlate With Sexual Dysfunction and Dissatisfaction?

Aerts L, Bergeron S, Pukall CF, Khalifé S.

J Sex Med. 2016 Apr 12. pii: S1743-6095(16)30055-8. doi: 10.1016/j.jsxm.2016.03.368.

<http://www.ncbi.nlm.nih.gov/pubmed/27080365>

INTRODUCTION: Provoked vestibulodynia (PVD) is suspected to be the most frequent cause of vulvodynia in premenopausal women. Previous research has been inconclusive as to whether higher vulvovaginal pain ratings are associated with lower sexual function and satisfaction in women with PVD. Whether pain intensity correlates with sexual impairment is an important question given its implications for treatment recommendations. **AIM:** To examine the associations among self-reported and objective pain measurements, sexual function, and sexual satisfaction in a large combined clinical and community sample of premenopausal women diagnosed with PVD. **METHODS:** Ninety-eight women with PVD underwent a cotton-swab test, a vestibular friction pain measurement, and a vestibular pressure-pain threshold measurement. In addition to sociodemographics, participants completed measurements of pain, sexual function, and sexual satisfaction. **MAIN OUTCOME MEASURES:** Self-report measurements were the pain numerical rating scale (0-10), the McGill-Melzack Pain Questionnaire, the Female Sexual Function Index, and the Global Measure of Sexual Satisfaction. Objective measurements were pain during a cotton-swab test, pain during a vestibular friction procedure, and the vestibular pressure-pain threshold measurement. **RESULTS:** Age and relationship duration were significantly correlated with the Female Sexual Function Index total score ($r = -0.31$, $P < .01$; and $r = -0.22$, $P < .05$, respectively). When controlling for age, intercourse-related pain intensity, pain during the cotton-swab test, pain during vestibular friction, the vestibular pressure-pain threshold, and the McGill-Melzack Pain Questionnaire sensory and affective subscale scores were not significantly associated with sexual function and satisfaction in women with PVD. **CONCLUSION:** The findings show that in women with PVD, self-report and objective pain ratings are not associated with sexual function and satisfaction. The results support the biopsychosocial nature of PVD and underscore the importance of a patient-focused multidisciplinary treatment approach for PVD.

Psychological Treatments for Provoked Vestibulodynia: Integration of Mindfulness-Based and Cognitive Behavioral Therapies.

Dunkley CR, Brotto LA.

J Clin Psychol. 2016 Mar 28. doi: 10.1002/jclp.22286.

<http://www.ncbi.nlm.nih.gov/pubmed/27019368>

Provoked vestibulodynia (PVD) is a chronic and distressing genital pain condition involving sharp pain to the vulvar vestibule with lifetime prevalence as high as 12%. PVD is the most prevalent cause of pain during sexual intercourse (dyspareunia) in premenopausal women, and gives rise to considerable sexual and relational concerns. As intercourse for women with PVD is either painful or impossible, PVD has pronounced negative effects on women's romantic relationship adjustment and sexual intimacy, as well as their emotional well-being and sense of sexual self-efficacy. Given the low efficacy and high side-effect profile of medications for the treatment of PVD, attention has shifted toward psychological interventions over the past decade. Psychological treatments for PVD have the advantage of targeting both the experience of pain and its many psychosexual consequences, such as reduced desire and arousal. Cognitive behavioral therapy (CBT) currently represents one of the most popular first-line psychological interventions for PVD. Mindfulness has been increasingly used alongside, or instead of CBT for a variety of health-related conditions, particularly with respect to chronic pain disorders and more

recently in women with PVD. This review provides a detailed overview of CBT and mindfulness-based approaches in treating PVD.

Pudendal Neuralgia

Selection criteria for surgical treatment of pudendal neuralgia.

Charlotte W, Sebastian D, Viviane T, Luc B.

Neurourol Urodyn. 2016 Mar 21. doi: 10.1002/nau.22988.

<http://www.ncbi.nlm.nih.gov/pubmed/26999519>

AIMS: Pudendal neuralgia is the clinical expression of a chronic compression of the pudendal nerve. The diagnosis is based on a set of five criteria, called Nantes criteria. Four of the criteria are clinical and the last requires evaluation of the anesthetic response to CT-guided infiltration of the pudendal nerve. The aim of our study is to evaluate the relevance of anesthetic test response to select patients for surgery, and whether this criterion can be used to predict its success. **METHODS:** Retrospective analysis of a cohort of 34 patients undergoing surgical treatment. In our cohort, we included six patients with negative CT-guided pudendal nerve infiltration test. **RESULTS:** Of the 28 patients that met all five Nantes criteria, 64% (18 patients) responded well to surgery. In contrast, 100% of the six patients with a negative anesthetic test failed to show an amelioration of symptoms after surgical treatment ($P = 0.006$). In our analysis, there was no significant difference in surgery response when men were compared to women ($P = 0.387$), when procedure was unilateral or bilateral ($P = 0.562$), or when duration of symptoms was long ($P = 0.412$). We observed a difference in terms of age between the group of responders and non-responders, although this difference did not reach the threshold of significance ($P = 0.216$). **CONCLUSIONS:** The selection of candidates for surgery should always include a single diagnostic anesthetic injection of the pudendal nerve, as the fifth of the Nantes criteria is an effective predictor of the success of surgery

New perineal injection technique for pudendal nerve infiltration in diagnostic and therapeutic procedures.

Weinschenk S, Hollmann MW, Strowitzki T.

Arch Gynecol Obstet. 2016 Apr;293(4):805-13. doi: 10.1007/s00404-015-3812-0. Epub 2015 Sep 15.

<http://www.ncbi.nlm.nih.gov/pubmed/26374644>

PURPOSE: Pudendal nerve injection is used as a diagnostic procedure in the vulvar region and for therapeutic purposes, such as in vulvodynia. Here, we provide a new, easy-to-perform perineal injection technique. **PATIENTS AND METHODS:** We analyzed 105 perineal injections into the pudendal nerve with a local anesthetic (LA), procaine in 20 patients. A 0.4 × 40 mm needle was handled using a stop-and-go technique while monitoring the patient's discomfort. The needle was placed 1-2 cm laterally to the dorsal introitus. After aspiration, a small amount of LA was applied. After subcutaneous anesthesia, the needle was further advanced step-by-step. Thus, 5 ml could be applied with little discomfort to the patient. Anesthesia in the pudendal target region was the primary endpoint of our analysis. **RESULTS:** In 93 of 105 injections (88.6 %), complete perineal anesthesia was achieved with a single injection. 12 injections were repeated. These injections were excluded from the analysis. Severity of injection pain, on visual analog scale (VAS) from 0 to 100, was 26.8 (95 % CI 7.2-46.4). Age ($\beta = 0.33$, $p < 0.01$) and the number of previous injections ($\beta = 0.35$, $p < 0.01$) inversely correlated with injection pain. Injection pain

and anesthesia were not affected by BMI, the number and the side of previous injections, or order of injection. A reversible vasovagal reaction was common, but no serious adverse effects occurred.

CONCLUSION: Perineal pudendal injection is an effective and safe technique for anesthesia in diagnostic (vulva biopsy) and therapeutic indications (pudendal neuralgia), and regional anesthesia in perinatal settings.

Ultrasound-Guided Pudendal Nerve Block at the Entrance of the Pudendal (Alcock) Canal: Description of Anatomy and Clinical Technique.

Bendtsen TF, Parras T, Moriggl B, Chan V, Lundby L, Buntzen S, Dalgaard K, Brandsborg B, Børglum J. *Reg Anesth Pain Med.* 2016 Mar-Apr;41(2):140-5. doi: 10.1097/AAP.0000000000000355. <http://www.ncbi.nlm.nih.gov/pubmed/26780419>

BACKGROUND AND OBJECTIVES:

Ultrasound-guided techniques for pudendal nerve block have been described at the level of the ischial spine and transperineally. Theoretically, however, blockade of the pudendal nerve inside Alcock canal with a small local anesthetic volume would minimize the risk of sacral plexus blockade and would anesthetize all 3 branches of the pudendal nerve before they ramify in the ischioanal fossa. This technical report describes a new ultrasound-guided technique to block the pudendal nerve. The technique indicates an easy and effective roadmap to target the pudendal nerve inside the Alcock canal by following the margin of the hip bone sonographically along the greater sciatic notch, the ischial spine, and the lesser sciatic notch. **METHODS:** The technique was applied bilaterally in 3 patients with chronic perineal pain. The technique described was also used to locate the pudendal nerve within Alcock canal and inject dye bilaterally in 2 cadavers. **RESULTS:** Complete pinprick anesthesia was obtained in the pudendal territory of the perineum in all 3 patients. Pain was effectively alleviated or reduced in all patients with no affection of the sacral plexus nerve branches. In the 2 cadavers, all 4 pudendal nerves were successfully targeted and colored. **CONCLUSIONS:** This new technique is based on easily recognizable sonoanatomical patterns. It probably implies no risk of sacral plexus blockade, and the pudendal nerve is anesthetized before any branches ramify from the main trunk. This promising new technique must be validated in future clinical trials.

Pudendal Neuralgia Due to Pudendal Nerve Entrapment: Warning Signs Observed in Two Cases and Review of the Literature.

Ploteau S, Cardaillac C, Perrouin-Verbe MA, Riant T, Labat JJ. *Pain Physician.* 2016 Mar;19(3):E449-54. <http://www.ncbi.nlm.nih.gov/pubmed/27008300>

Pudendal neuralgia is a chronic neuropathic pelvic pain that is often misdiagnosed and inappropriately treated. The Nantes criteria provide a basis for the diagnosis of pudendal neuralgia due to pudendal nerve entrapment. The 5 essential diagnostic criteria are pain situated in the anatomical territory of the pudendal nerve, worsened by sitting, the patient is not woken at night by the pain, and no objective sensory loss is detected on clinical examination. The fifth criterion is a positive pudendal nerve block. We have also clarified a number of complementary diagnostic criteria and several exclusion criteria that make the diagnosis unlikely. When pudendal neuralgia due to pudendal nerve entrapment is diagnosed according to the Nantes criteria, no further investigation is required and medical or surgical treatment can be proposed. Nevertheless, a number of warning signs suggesting other possible causes of pudendal neuralgia must not be overlooked. These warning signs (red flags) are waking up at night, excessively

neuropathic nature of the pain (for example, associated with hypoesthesia), specifically pinpointed pain, which can suggest neuroma and pain associated with neurological deficit. In these atypical presentations, the diagnosis of pain due to pudendal nerve entrapment should be reconsidered and a radiological examination should be performed. The 2 cases described in this report (tumor compression of the pudendal nerve) illustrate the need to recognize atypical pudendal neuralgia and clarify the role of pelvic magnetic resonance imaging (MRI), as MRI provides very valuable information for the evaluation of diseases involving the ischiorectal fossa. The presence of red flags must be investigated in all cases of pudendal neuralgia to avoid missing pudendal neuralgia secondary to a mechanism other than nerve entrapment.

Ultrasound-guided pulsed radiofrequency treatment of the pudendal nerve in chronic pelvic pain.

Ozkan D, Akkaya T, Yildiz S, Comert A.

Anaesthesist. 2016 Feb;65(2):134-136. Epub 2016 Jan 26.

<http://www.ncbi.nlm.nih.gov/pubmed/26811947>

Chronic pelvic pain is a condition that can be caused by pudendal neuralgia, interstitial cystitis, piriformis syndrome and neuropathy of the ilioinguinal, iliohypogastric and genitofemoral nerves. Based on three case reports this article discusses the clinical effectiveness of pulsed high-frequency radiofrequency (PRF) treatment applied to the pudendal nerve under ultrasound guidance in medicinally treated patients with chronic pelvic pain.

Lichen Sclerosus

Vulvar Lichen Sclerosus and Neoplastic Transformation: A Retrospective Study of 976 Cases.

Micheletti L, Preti M, Radici G, Boveri S, Di Pumpo O, Privitera SS, Ghiringhello B, Benedetto C.

J Low Genit Tract Dis. 2016 Apr;20(2):180-3. doi: 10.1097/LGT.000000000000186.

<http://www.ncbi.nlm.nih.gov/pubmed/26882123>

OBJECTIVE: The aim of the study was to estimate the neoplastic potential of vulvar lichen sclerosus (VLS). **MATERIALS AND METHODS:** This was a retrospective study of 976 women with VLS. We recorded age at diagnosis of VLS, length of follow-up, and type of neoplasia, categorized as the following: (1) vulvar intraepithelial neoplasia (VIN), further subdivided in differentiated VIN (dVIN) and high-grade squamous intraepithelial lesion; (2) superficially invasive squamous cell carcinoma; and (3) frankly invasive squamous cell carcinoma. Neoplasia incidence risk, neoplasia incidence rate, and cumulative probability of progression to neoplasia according to the Kaplan-Meier method were estimated. Log-rank test was used to compare the progression-free survival curves by age at diagnosis of VLS. **RESULTS:** The mean age at diagnosis of VLS was 60 (median = 60; range = 8-91) years. The mean length of follow-up was 52 (median = 21; range = 1-331) months. The following 34 patients developed a neoplasia: 8 VIN (4 dVIN, 4 high-grade squamous intraepithelial lesions), 6 keratinizing superficially invasive squamous cell carcinoma (5 with adjacent dVIN), and 20 keratinizing invasive squamous cell carcinoma (1 with adjacent dVIN). The neoplasia incidence risk was 3.5%. The neoplasia incidence rate was 8.1 per 1,000 person-years. The cumulative probability of progression to neoplasia increased from 1.2% at 24 months to 36.8% at 300 months. The median progression-free survival was significantly shorter in older women (≥ 70 years) when compared with that in younger women ($p = .003$). **CONCLUSIONS:** Vulvar lichen sclerosus has a nonnegligible risk of neoplastic transformation and requires a careful and lifelong follow-

up in all patients, particularly in elderly women. Early clinical and histological detection of preinvasive lesions is essential to reduce the risk of vulvar cancer.

Outcomes for Management of Lichen Sclerosus Urethral Strictures by 3 Different Techniques.

Patel CK, Buckley JC, Zinman LN, Vanni AJ.

Urology. 2016 May;91:215-21. doi: 10.1016/j.urology.2015.11.057. Epub 2016 Feb 15.

<http://www.ncbi.nlm.nih.gov/pubmed/26892645>

OBJECTIVE: To evaluate the intermediate-term outcomes from a large, single institution series of patients with lichen sclerosus (LS) who underwent surgical management of their urethral strictures.

MATERIALS AND METHODS: We retrospectively reviewed 79 patients who underwent surgical management of their LS urethral strictures from 2003 to 2014, comparing outcomes of patients undergoing a single-stage buccal mucosa graft (BMG) urethroplasty, 2-stage BMG urethroplasty, or perineal urethrostomy (PU). Demographic and surgical outcomes data were collected for all patients.

RESULTS: Of the 79 patients, the mean follow-up was 32.4 months, mean age was 50.1 years, and the mean body mass index was 35.7, with morbid obesity (body mass index > 35) in 48% of the cohort. The mean stricture length was 9.6 cm (1.5-21 cm), with 62% of patients having a bulbopendulous stricture.

Of the 37 patients who were planned for a 2-stage BMG urethroplasty, 9 (24%) patients had stricture recurrence or recurrent LS in the first-stage BMG. Single-stage BMG urethroplasty was performed in 20 patients with a mean stricture length of 9.47 cm (4-21 cm) and a success rate of 75%. Fourteen patients from the cohort received a PU as the primary treatment, with a success rate of 93%. **CONCLUSION:** Management of LS strictures continues to pose challenges to the reconstructive surgeon due to the high rate of stricture recurrence and often progression. Patients undergoing single-stage or 2-stage reconstruction often require revision and must be carefully observed for recurrent urethral stricture. PU offers the highest degree of success and should be considered for all patients.

Clinical and dermoscopic changes of vulvar lichen sclerosus after topical corticosteroid treatment.

Borghi A, Corazza M, Minghetti S, Toni G, Virgili A.

J Dermatol. 2016 Apr 14. doi: 10.1111/1346-8138.13374.

<http://www.ncbi.nlm.nih.gov/pubmed/27075682>

With the aim to assess changes in both clinical and dermoscopic features of vulvar lichen sclerosus (VLS) after a treatment with topical corticosteroid, 29 VLS patients treated with mometasone furoate 0.1% ointment for 12 weeks were evaluated for symptoms, objective signs and dermoscopic variables at baseline and treatment completion. Numeric scores were assigned to each parameter. Mean itching and burning values had decreased significantly at the 12-week control visit compared with baseline, as well as values referring to pallor, hyperkeratosis and purpuric lesions. Among the dermoscopic variables, the vessel score increased while the scores of patchy, structureless, whitish areas, whitish background, purpuric globules and scales decreased significantly after treatment. Scores referring to gray-blue dots, comedo-like openings and structures like ice slivers did not change significantly throughout the treatment. Based on these findings, dermoscopic features may change, even significantly, with topical corticosteroids and may be useful for monitoring the response to treatment.

Photodynamic therapy as a therapeutic alternative in vulvar lichen sclerosus: series of 8 cases.

Imbernón-Moya A, Martínez-Pérez M, Churruca-Grijelmo M, Lobato-Berezo A, Vargas-Laguna E, Fernández-Cogolludo E, Aguilar-Martínez A, Gallego-Valdés MÁ.

Photodermatol Photoimmunol Photomed. 2016 Apr 21. doi: 10.1111/phpp.12242.

<http://www.ncbi.nlm.nih.gov/pubmed/27098754>

Lichen sclerosus (LS) is a chronic mucocutaneous inflammatory disease of progressive course, with a predilection for the anogenital region. Patients require clinical control every 6-12 months and treatment to avoid progression. Local hygiene measures and use of emollients is essential. High potency topical corticosteroids are the first-line treatment. The therapeutic response is often unsatisfactory and therapeutic alternatives are needed. The following measures have been tried: topical calcineurin inhibitors, UVA1 phototherapy, topical tretinoin, oral acitretin, oral cyclosporine, cryotherapy, CO₂ laser, ultrasonic therapy and surgery. No clinical benefit has been proven with topical administration of progesterone and testosterone (1).

Infectious Disease

Experimental Models of Vaginal Candidiasis and Their Relevance to Human Candidiasis.

Cassone A, Sobel JD.

Infect Immun. 2016 Apr 22;84(5):1255-61. doi: 10.1128/IAI.01544-15. Print 2016 May.

<http://www.ncbi.nlm.nih.gov/pubmed/26883592>

Vulvovaginal candidiasis (VVC) is a high-incidence disease seriously affecting the quality of life of women worldwide, particularly in its chronic, recurrent forms (RVVC), and with no definitive cure or preventive measure. Experimental studies in currently used rat and mouse models of vaginal candidiasis have generated a large mass of data on pathogenicity determinants and inflammation and immune responses of potential importance for the control of human pathology. However, reflection is necessary about the relevance of these rodent models to RVVC. Here we examine the chemical, biochemical, and biological factors that determine or contrast the forms of the disease in rodent models and in women and highlight the differences between them. We also appeal for approaches to improve or replace the current models in order to enhance their relevance to human infection.

Health-related quality of life as measured with the Short-Form 36 (SF-36) questionnaire in patients with recurrent vulvovaginal candidiasis.

Zhu YX, Li T, Fan SR, Liu XP, Liang YH, Liu P.

Health Qual Life Outcomes. 2016 Apr 29;14(1):65. doi: 10.1186/s12955-016-0470-2.

<http://www.ncbi.nlm.nih.gov/pubmed/27129474>

BACKGROUND: Recurrent vulvovaginal candidiasis (RVVC) has a poor therapeutic outcome and a severe impact on women and their partners, both physically and psychologically. Health-related quality of life (HRQOL) is significantly affected in patients with RVVC; however, little is known about HRQOL in patients with this disease. In this study, we aim to identify the clinical and mycological characteristics of women with RVVC and the effects of RVVC on women's HRQOL. **METHODS:** We designed this study as a comparative cross-sectional study. The Short-Form Health Survey (SF-36) was used to measure HRQOL in 102 patients with RVVC and 101 women seeking general health care (controls). RVVC was defined as

four or more episodes of proven VVC in the previous 12-month period. VVC was defined as vulvar itching, burning, erythema, vaginal discharge, pseudohyphae or blastoconidia on a wet 10 % potassium hydroxide (KOH)-treated vaginal slide and a positive Candida culture. Group comparisons were conducted with independent samples t test. Correlation analysis was performed on the variables.

RESULTS: The mean age at first diagnosis of the patients with RVVC was 30.96 years (SD 5.38), and the mean age of the controls was 29.75 years (SD 5.83; $p > 0.05$). The duration of the patients' complaints varied from 6 months to 10 years, with a mean duration of 22.28 (± 21.75) months. The most common complaints were increased vaginal discharge (102 cases, 100 %), itching (97 cases, 95.1 %), dyspareunia (65 cases, 63.7 %), burning (79 cases, 77.5 %) and erythema (25 cases, 24.5 %). *C. albicans* was the predominant Candida species (86 strains, 84.3 %) in the patients, followed by *C. glabrata* (12 strains, 11.8 %). *C. parapsilosis* (1 strain, 0.9 %), *C. tropicalis* (1 strain, 0.9 %), *C. krusei* (1 strain, 0.9 %) and *C. lusitaniae* (1 strain, 0.9 %). The mean SF-36 dimension scores for physical function, role physical, bodily pain, general health, vitality, social functioning, role emotional, and mental health were significantly lower in the patients with RVVC than in the controls (85.20, 61.39, 77.79, 54.95, 53.17, 67.89, 52.48 and 59.17 vs. 90.20, 80.87, 87.08, 67.38, 59.69, 79.86, 68.01 and 65.38). The physical composite and mental composite scores of the patients with RVVC were 63.06 and 64.87, respectively, which were lower than those of the controls (75.01 and 74.87; $p < 0.05$). **CONCLUSIONS:** Nearly all of the patients with RVVC had clinical symptoms. In our sample, RVVC was mainly caused by *C. albicans*. RVVC has negative effects on women's HRQOL, as indicated by lower physical and mental composite scores among the RVVC group compared with controls.