

Vulvodynia

Clinical Evidence Regarding Spermidine-Hyaluronate Gel as a Novel Therapeutic Strategy in Vestibulodynia Management

Filippo Murina, Alessandra Graziottin, et al.

Pharmaceutics. 2024 Nov 12;16(11):1448. doi: 10.3390/pharmaceutics16111448.

<https://pubmed.ncbi.nlm.nih.gov/39598571/>

Background: Vestibulodynia (VBD) represents a summation and overlapping of trigger factors (infections, hormonal disturbances, allergies, genetic aspects, psychological vulnerability, and others) with broad individual variability. As there are no standard treatment options for VBD, the disease is still in need of appropriate therapeutic tools. **Objectives:** A prospective observational trial was performed to confirm the efficacy of a topical gel containing a spermidine-hyaluronate complex (UBIGEL donna™) as either a stand-alone or companion treatment through a multicenter study on a large sample population. **Results:** A total of 154 patients treated with UBIGEL donna™ showed significant improvements across all five evaluated parameters, including pain, dyspareunia, swab test results, muscle hypertonicity, and vestibular trophism. Pain and dyspareunia scores decreased by 46.5% and 33.5%, respectively, while significant improvements were also observed in the other parameters ($p < 0.0001$). These improvements were consistent across various stratifications, including age and disease duration. **Conclusions:** The findings of the present study suggest that UBIGEL donna™ is effective in alleviating pain and dyspareunia, as well as reducing vestibular hypersensitivity in women with VBD. Although UBIGEL donna™ alone cannot serve as a comprehensive substitute for all recommended therapies, we suggest that multimodal therapy strategies may be crucial for attaining substantial improvement in any aspect of the condition.

Evaluation of the Effectiveness of Combined Treatment with Intravaginal Diazepam and Pelvic Floor Rehabilitation in Patients with Vulvodynia by Ultrasound Monitoring of Biometric Parameters of Pelvic Muscles: A Pilot Study

Lucia Merlino, Enrico Ciminello, et al.

Diseases. 2024 Aug 1;12(8):174. doi: 10.3390/diseases12080174.

<https://pubmed.ncbi.nlm.nih.gov/39195173/>

(1) Background: Vulvodynia is characterized by vulvar pain for at least three months and may have related variables, one of these being pelvic floor hypertonus. The purpose of this study was to compare the therapeutic effectiveness of two weekly sessions of pelvic floor rehabilitation and 5 mg of vaginal diazepam daily vs. pelvic floor rehabilitation alone in individuals with vulvodynia. (2) Methods: A single-center, not-blind, randomized study enrolled 20 vulvodynic patients: A total of 10 were treated with dual therapy (intravaginal diazepam and pelvic floor rehabilitation), and 10 were treated with only pelvic floor rehabilitation. All of them underwent a pelvic floor ultrasound examination and VAS pain and Marinoff scale assessments before the beginning of therapy as well as three and six months later. (3) Results: The elevator plate angle ranged from 8.2 to 9.55 ($p = 0.0005$), hiatal area diameter ranged from 1.277 to 1.482 ($p = 0.0002$), levator symphysis distance ranged from 3.88 to 4.098 ($p = 0.006$), anorectal angle ranged from 121.9 to 125.49 ($p = 0.006$), Marinoff scale ranged from 2.3 to 1.4 ($p = 0.009$), and VAS scale ranged from 5.8 to 2.8 ($p < 0.001$). (4) Conclusions: This pilot study demonstrates that the suggested treatment improves the hypertonicity of the pelvic floor, as measured by ultrasound parameters, correlating with a reduction in symptomatology.

Addressing vulvodynia in a chronic pelvic pain unit, does it make any difference?

Alvaro Díez Alvarez, Ana B Bolívar DE Miguel, et al.

Minerva Obstet Gynecol. 2024 Sep 18. doi: 10.23736/S2724-606X.24.05585-4.

<https://pubmed.ncbi.nlm.nih.gov/39292441/>

Background: Vulvodynia is a chronic painful entity that poses diagnostic and therapeutic challenges. The aim of this work was to describe the characteristics of women affected by vulvodynia and to estimate the effectiveness of currently available therapeutic options. **Results:** The mean age at diagnosis was 38.44 years. Mean delay to diagnosis was 29.82 months. According to the classification currently used, vulvodynia was mainly localized, provoked, intermittent, and immediate. Most of the women also reported dyspareunia with mean baseline pain and dyspareunia according to the Visual Analog Scale (VAS) of 4 and 8, respectively. Among the therapeutic options used, neuromodulatory drugs have shown to be effective in symptom control and improving quality of life both at 6 and 12 months. At 24 months improvement in dyspareunia was not statistically significant, probably due to the small sample size due to losses in the follow-up. Non-pharmacological treatments such as physical therapy and cognitive behavioral therapy may also play a role in symptom improvement. **Conclusions:** Most of the available evidence is based on retrospective studies. Quality randomized clinical trials are necessary to better test the efficacy of treatments, especially neuromodulatory drugs.

Health and socioeconomic well-being of women with endometriosis and provoked vestibulodynia: Longitudinal insights from Swedish registry data

Hanna Mühlrad, Matts Olovsson, et al.

PLoS One. 2024 Sep 3;19(9):e0307412. doi: 10.1371/journal.pone.0307412. eCollection 2024.

<https://pubmed.ncbi.nlm.nih.gov/39226269/>

Endometriosis and provoked vestibulodynia (PVD) are prevalent pain conditions among women of reproductive age, significantly impacting their quality of life and psychological well-being. However, comprehensive evidence regarding the lifelong health and socioeconomic outcomes for these individuals remains scarce. Additionally, many prior studies rely on limited and sometimes unrepresentative samples. This study aims to inform on the long-term consequences of these disorders by examining health, fertility, and employment outcomes in a cohort of women diagnosed with

endometriosis and/or PVD, tracing their experiences from childhood to their 40s. Leveraging nationwide administrative data from Sweden and employing a matched case-control design, we investigate both similarities and differences between women with these diagnoses and those without. Our findings indicate that women diagnosed with endometriosis and/or PVD demonstrate elevated healthcare utilization patterns, commencing in their early teenage years and progressively increasing over time. Notably, disparities in labor market outcomes emerge in their 20s, showcasing lower labor earnings and a rise in sickness benefit receipt. Moreover, our results show a higher likelihood among these women to experience mental health disorders and concurrent chronic pain diseases, as well as infertility. While the association between endometriosis and infertility is well-documented, this study offers novel insights into a potential similar link between PVD and infertility. Our study informs healthcare professionals and policymakers about the considerable burden of compromised health, adverse psychosocial well-being, and reduced productivity in the labor market faced by young women with these common pain conditions. These findings underscore the urgency of addressing the multifaceted challenges encountered by individuals diagnosed with endometriosis and PVD across their lifespan.

Internet-based treatment for provoked vulvodynia: factors associated with treatment outcomes

Andrea Hess Engström, Ida Flink, et al.

J Sex Med. 2024 Nov 13;qdae158. doi: 10.1093/jsxmed/qdae158.

<https://pubmed.ncbi.nlm.nih.gov/39537187/>

Introduction: Previous research has indicated that internet-based Acceptance and Commitment Therapy (ACT) can reduce pain during intercourse and increase pain acceptance in individuals with provoked vulvodynia, but the factors associated with treatment outcomes remain unknown. **Aim:** This study aimed to investigate factors associated with changes in pain acceptance following an internet treatment based on ACT. **Outcomes:** The outcome measure was pain acceptance assessed on the scale Chronic Pain Questionnaire-Revised, which comprises two sub-scales: activity engagement and pain willingness. **Results:** Before adjustment, greater improvement in overall pain acceptance and the subscale activity engagement was seen participants in the intervention group who had a history of physical violence or sexual assault. Increased time spent on the treatment platform per week was also associated with greater improvement in pain acceptance. Participants who reported gastrointestinal problems before the internet-based treatment showed better treatment outcomes in activity engagement. Previous contact with a psychologist or counselor was associated with less improvement in activity engagement. The intervention was less effective on the subscale pain willingness with increased age and for those reporting urinary problems. No associations remained statistically significant after adjustment for multiple testing. **Clinical implications:** Previous exposure to violence and sexual assault, concomitant gastrointestinal or urinary problems, and adherence to treatment should be further investigated in larger studies on factors associated with treatment outcomes after internet treatment based on ACT, especially regarding pain. **Strengths and limitations:** This was a novel and exploratory study and provides information for researchers in future investigations of how individual characteristics may influence treatment outcomes. A range of variables were explored in the models, underscoring the importance of future studies to strengthen the findings. One limitation concerns the sample size, which was fairly small considering the nature of the study. **Conclusion:** After correcting for multiple testing, no factors were found to be statistically associated with changes in pain acceptance after the treatment.

When did the confusion between vulvodynia and vaginismus start?

Pedro Vieira-Baptista, Koray Görkem Saçınrı, et al.

J Turk Ger Gynecol Assoc. 2024 Aug 29;25(3):189–191. doi: 10.4274/jtgga.galenos.2024.2024-8-12

<https://pmc.ncbi.nlm.nih.gov/articles/PMC11576646/>

To the Editor,

Vulvodynia, defined as vulvar pain persisting for at least three months without an identifiable cause, potentially accompanied by associated factors, is common yet remains enigmatic. “Vulvodynia” and “vaginismus” are frequently confused by both laypeople and healthcare professionals. Vaginismus is characterized by involuntary spasms of the pelvic floor muscles, which can be primary or secondary; secondary vaginismus may result from vulvodynia.

The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders included dyspareunia and vaginismus into the newly created category of “genito-pelvic pain/penetration disorder”, which remains a theoretical concept, lacking scientific validation. This change may have increased confusion, potentially denying women the appropriate diagnosis and, consequently, the correct management.

Chronic Pelvic Pain

Younger Age Is Associated With Pelvic Floor Muscle Dysfunction in Women With Urinary Symptoms

Katia A DaSilva, Do H Lee, et al.

Urogynecology (Phila). 2024 Oct 18. doi: 10.1097/SPV.0000000000001557.

<https://pubmed.ncbi.nlm.nih.gov/39423157/>

Importance: Recent articles have highlighted the existence of pelvic floor myofascial dysfunction in women presenting with pelvic floor disorders. **Objective:** The aim of the study was to evaluate whether younger age is associated with pelvic floor muscle dysfunction in women with lower urinary tract symptoms, including urinary urgency, frequency, nocturia, and urinary incontinence. **Study design:** This retrospective cohort study included women seeking an initial outpatient urogynecology evaluation for urinary symptoms from 8/2018 to 2/2022. The primary outcome was the presence of pelvic floor muscle dysfunction, defined as a diagnosis of levator myalgia/spasm. Multivariable logistic regression was used to evaluate the association. **Results:** Four hundred twenty-one women with lower urinary tract symptoms were included, and 115 (27.3%) were diagnosed with pelvic floor muscle dysfunction. Women with pelvic floor dysfunction were 13 years younger, less likely to report any incontinence (60% vs 71.9%, $P = 0.026$) and urgency incontinence (8.7% vs 17.3%, $P = 0.04$). There was no difference in reported urgency, frequency, or nocturia. Women with pelvic floor dysfunction were more likely to report dysuria (19.1% vs 9.5%, $P = 0.012$), dyspareunia (39% vs 7.5%, $P < 0.001$), vulvodynia (11.3% vs 2.3%, $P < 0.001$), and pelvic pain (25.2% vs 7.2%, $P < 0.001$). The odds of pelvic floor muscle dysfunction in women <40 years old was 2.34 times greater than women ≥ 40 years old, after adjusting for other factors (adjusted odds ratio 2.341, 95% confidence interval [1.102, 4.972]). **Conclusions:** Younger women with lower urinary tract symptoms were significantly more likely to have pelvic floor muscle dysfunction compared to older women with similar symptoms, even after controlling for other associated characteristics.

Associations between menstrual pain and sexual function: the role of visceral hypersensitivity on developing sexual pain

Eva M Reina, Kevin M Hellman, et al.

J Sex Med. 2024 Nov 14;qdae149. doi: 10.1093/jsxmed/qdae149.

<https://pubmed.ncbi.nlm.nih.gov/39545357/>

Background: Dyspareunia, defined as pain before, during or after intercourse, is a subset of female sexual dysfunction with overlapping gynecologic, urologic and psychosocial etiologies. **Aim:** This study aimed to evaluate the impact of menstrual pain and visceral hypersensitivity on sexual function and to identify risk factors for sexual pain in healthy reproductive-age females. **Outcomes:** The primary outcome was severity of sexual pain as measured by the FSFI, comparing participants with moderate-to-severe dysmenorrhea (n = 99), dysmenorrhea with bladder hypersensitivity (n = 49) identified on non-invasive oral water challenge, and pain-free controls (n = 37). **Results:** In our young (median age 22 [IQR 19, 29]), nulliparous, predominantly heterosexual cohort (78.3%, 144/185), 64.3% (119/185) engaged in sexual intercourse within the four-week recall period. The median total FSFI score was 27.2 (22.0, 30.2). Across groups, only the dysmenorrhea with bladder hypersensitivity phenotype met the threshold for sexual dysfunction as measured by total FSFI score (24.6 [20.0, 28.1], p = 0.008). Dysfunction was driven by difficulties with lubrication and higher pain levels during and after intercourse. On physical examination, those with and without dyspareunia were largely indistinguishable, with little to no tenderness of the pelvic floor, bladder, uterus and uterosacral ligaments. Amongst the six hypothesized risk factors for sexual pain, only experimentally provoked bladder pain was significantly associated with the severity of dyspareunia (r = 0.41, corrected p < 0.001). **Clinical implications:** Young, otherwise healthy individuals with dysmenorrhea and occult visceral hypersensitivity exhibit signs of sexual dysfunction and significantly higher rates of dyspareunia in the absence of reliable clinical examination findings. **Strengths and limitations:** Strengths include the use of a nonclinical sample of almost exclusively nulliparous females with no co-morbid pelvic pain diagnoses and prospective diary confirmation of dysmenorrhea severity. The study is limited by the narrow heteronormative, cisnormative sexual experience of penile-vaginal intercourse captured by the FSFI. **Conclusion:** Sexual pain is more prevalent in those with dysmenorrhea with bladder hypersensitivity than isolated dysmenorrhea, suggesting visceral hypersensitivity may be a non-structural mechanistic driver for dyspareunia.

Effectiveness of nonpharmacological conservative therapies for chronic pelvic pain in women: a systematic review and meta-analysis

Małgorzata Starzec-Proserpio, Helena Frawley, et al.

Am J Obstet Gynecol. 2024 Aug 13:S0002-9378(24)00827-5. doi: 10.1016/j.ajog.2024.08.006.

<https://pubmed.ncbi.nlm.nih.gov/39142363/>

Objective: To evaluate the effectiveness of nonpharmacological conservative therapies for women with CPP. **Data sources:** A systematic search of electronic databases (Amed, CINAHL, PsycINFO, SportDiscuss, Medline, PubMed, Embase, and Cochrane Central Register of Controlled Trials) was performed in January 2023, and updated in December 2023. **Study eligibility criteria:** Randomized controlled trials comparing a nonpharmacological conservative therapy to inert (eg, placebo, usual care) or nonconservative (eg, surgical, pharmacological) treatment were included. Conservative therapies of interest to this review were: multimodal physical therapy, predominantly psychological approaches, acupuncture, and other tissue-based monotherapies (eg, electrophysical agents, manual stretching).

Study appraisal and synthesis methods: All study data were aggregated, and analyses of the included studies were performed. Effects on pain; sexual measures; psychological and physical function; health-related quality of life; symptom severity/bother; pelvic floor muscle function and morphometry; perceived improvement; and adverse events were analyzed. Meta-analyses (random effects model) were conducted using postintervention scores for data that included similar interventions and outcomes. Standardized mean differences were calculated. A narrative summary of findings that could not be included in the meta-analysis is provided. The quality of the evidence was assessed with the Physiotherapy Evidence Database scale and the certainty of evidence with Grading of Recommendations, Assessment, Development, and Evaluations criteria. **Results:** Of 5776 retrieved studies, 38 randomized controlled trials including 2168 women (mean age 35.1±8.6) were included. Meta-analyses revealed that multimodal physical therapy resulted in lower pain intensity compared to inert or nonconservative treatments in both the short (standardized mean difference -1.69, 95% confidence interval -2.54, -0.85; high certainty) and intermediate-terms (standardized mean difference -1.82, 95% confidence interval -3.13, -0.52; moderate certainty), while predominantly psychological approaches resulted in no difference in pain intensity (standardized mean difference -0.18, 95% confidence interval -0.56, 0.20; moderate certainty) and a slight difference in sexual function (standardized mean difference -0.28, 95% confidence interval -0.52, -0.04; moderate certainty). The level of evidence regarding the meta-analysis of the effects of acupuncture on pain intensity (standardized mean difference 1.08, 95% confidence interval -1.38, 3.54, nonstatistically significant results in favor of control treatment) precluded any statement of certainty. A limited number of trials investigated individual tissue-based monotherapies, providing a restricted body of evidence. **Conclusion:** This systematic review with meta-analysis revealed that multimodal physical therapy is effective in women with chronic pelvic pain with a high certainty of evidence.

Will artificial intelligence be the answer for the gap in vulvovaginal diseases?

Pedro Vieira-Baptista, Mario Preti

First published: 25 November 2024

Linked article: P. Gottfrois et al. *J Eur Acad Dermatol Venereol* 2024;38:2280–2285.

<https://pubmed.ncbi.nlm.nih.gov/39582468/>

<https://onlinelibrary.wiley.com/doi/10.1111/jdv.20355>

While common and associated with a high burden, vulvovaginal diseases are mostly neglected. The problem starts in the pre graduated training and does not improve afterwards—including in gynaecology residency programmes. In a study published in 2018, it was shown that in the United States and Canada, the clinical exposure time to patients with these conditions during residency was often very limited. A more recent survey among Italian residents revealed that over one third never attended a vulvovaginal clinic during residency, translating into dissatisfaction with the training programme, and lack of confidence in the management of these conditions. Ancillary tests for the management of vulvovaginal diseases, such as wet mount microscopy rarely are taught, despite the recommendations. The explanation for such neglect is not straightforward but may be partially attributable to being a frontier area, shared by several medical specialties, including gynaecology, dermatology, urology and general medicine. Or may this be just another symptom of the chronic neglect of women's specific conditions?

Can we reverse this situation? What have we been doing wrong? As medicine evolves towards the use of molecular testing, self-sampling and artificial intelligence (AI), vulvovaginal diseases, due to years of chronic neglect, must rush to catch this train.

Gottfrois et al. present very exciting data on the use of AI for the diagnosis of vulvar lichen sclerosus (VLS). Despite being one of the most common causes for an appointment in vulvovaginal disease clinics and being associated with low quality of life and risk of vulvar cancer, it is poorly known to most practitioners. Proper diagnosis, adequate treatment and follow-up significantly reduce the risk of vulvar cancer. But, still, many clinicians are missing the diagnosis and, even during the screening of cervical cancer, when a brief inspection of the external genitalia would provide an opportunity for early diagnosis, it is often overlooked.

The authors have shown us that the way forward may be AI (shame on us for not doing a proper job—but our ultimate goal is to provide adequate care, above our own egos).

In a study in which several experts (including dermatologists and gynaecologists) were invited to evaluate clinical pictures of vulvas affected by VLS, and issue a severity rate for signs, architectural changes and global impression, it was concluded that the rates of agreement were very poor. However, in the Gottfrois et al. study, the accuracy, positive predictive value and average sensitivity were all over 90%. The most straightforward explanation is that a dichotomic distinction between disease/non-disease is probably easier than staging the disease. In fact, the priority should indeed be in identifying VLS, and provide treatment and follow-up, rather than stratifying severity. However, the same might not apply to risk stratification, which is something worth investing in. From this perspective the future actions should involve identifying patients at risk for cancer, which would enable the creation of a tailored follow-up programme, as well as identifying areas that may need to be biopsied to exclude differentiated vulvar intraepithelial neoplasia or cancer.

AI and the new tools, such as molecular tests will be the future, but the human factor cannot be ignored. The information coherency and usefulness will greatly depend on the human input used to train AI—not to mention the role of the human touch and empathy. We still need good teaching and experts and to enforce standard procedures, such as referral to hub centres for vulvar cancer and its precursors.

The future may be much sooner than we realize! Hopefully, in that reality, diagnosis such as VLS and vulvodinia will not be missed and those of vaginitides will be more than an educated guess!

Other Vulvovaginal Conditions

Treatment in persistent genital arousal disorder: a scoping review

Kimberly Magana, Haley Howard, et al.

Proc (Bayl Univ Med Cent). 2024 Sep 19;37(6):970-975. doi:

10.1080/08998280.2024.2402159. eCollection 2024.

<https://pubmed.ncbi.nlm.nih.gov/39440072/>

Background: Persistent genital arousal disorder (PGAD) is a rare condition characterized by unwanted and distressing symptoms of arousal and dysesthesia. The aim of this scoping review was to map the current state of PGAD management, identify gaps in the literature, and understand patient perspectives.

Results: Findings from our scoping review revealed a scarcity of systematic research, limited evidence-based data, and the importance of addressing both physical and psychiatric concerns. Our sample included 46 publications from an initial pool of 636 returns. Case studies were the most common study design. Thirty-three studies examined medication, either alone or as part of a treatment regimen.

Selective serotonin reuptake inhibitors were the most used medication, followed by pramipexole and carbamazepine. Seven studies used a surgical or procedural intervention. Treatment with pelvic floor Botox was the most common procedure. Patient perspectives in the included case studies highlighted themes of shame, suicidal ideation, social isolation, decreased sleep, and overall decline in quality of life.

Conclusion: The findings from our study emphasize patients' distressing and psychiatric symptoms, indicating a need to improve treatment regimens, using both evidence-based research outcomes and patient-reported outcomes. Management for PGAD/GPD lacks a standardized framework, indicating a need for further research and the development of clinical practice guidelines to improve patient care.

Pharmacotherapy of persistent genital arousal disorder/genito-pelvic dysesthesia: an updated review and data from a registry

Tillmann H C Kruger, Sophie Köhne, Franziska M L M Kümpers

Expert Opin Pharmacother. 2024 Oct;25(15):2005-2013. doi: 10.1080/14656566.2024.2415696. Epub 2024 Oct 23.

<https://pubmed.ncbi.nlm.nih.gov/39435475/>

Introduction: Persistent genital arousal disorder/genitopelvic dysesthesia (PGAD/GPD) is a rare, yet debilitating disease, which has been included in ICD-11. Pharmacotherapy in PGAD/GPD is a mixed blessing - drugs may either alleviate symptoms or worsen/induce them. Therefore, we aim at offering both an overview of pharmacological approaches to treat this disorder, including treatment failures, and to highlight drugs that may induce or worsen symptoms. We include all available data published so far as well as data from an own registry. **Areas covered:** The international registries have not recorded any completed or ongoing trials on pharmacotherapy of PGAD/GPD. We refer to case reports, case series, online surveys, and data from our own registry that includes 90 subjects with PGAD/GPD. **Expert opinion:** There is weak evidence (level 4) that some drugs such as SSRIs, SNRIs, cannabinoids, and anticonvulsants (pregabalin and gabapentin) may alleviate symptoms in PGAD/GPD. However, serotonergic drugs may also induce or worsen PGAD/GPD during administration or termination, as observed in 28% of cases. In conclusion, the pharmacotherapy of PGAD/GPD is still in its infancy just like the etiopathological understanding of the disease. Clinicians should be aware of PGAD/GPD, conduct careful diagnostics, and discuss an individual treatment plan with the patient.

Genitourinary Syndrome of Menopause/Vulvovaginal Atrophy

Pelvic floor muscle training associated with the photobiomodulation therapy for women affected by the genitourinary syndrome of menopause: a study protocol

Lívia Oliveira Bezerra, Maria Letícia Araújo Silva de Carvalho, et al.

PeerJ. 2024 Nov 29;12:e17848. doi: 10.7717/peerj.17848. eCollection 2024.

<https://pubmed.ncbi.nlm.nih.gov/39624135/>

Background: Frequently, the women affected by the genitourinary syndrome of menopause experience genitourinary dysfunctions that profoundly influence their overall health. Even though the symptoms do not jeopardize the women's lives, the urinary and sexual dysfunctions significantly impact their quality of life. Isolated treatments focused on the main causes of the dysfunctions, such as pelvic floor muscle training (PFMT) and photobiomodulation have shown significant improvements in genitourinary dysfunctions. So, the association of PFMT with photobiomodulation may generate additional effects in

the genitourinary area. This study aims to create a PFMT protocol isolated and associated with photobiomodulation therapy in women affected by the genitourinary syndrome of menopause. **Discussion:** Despite there are gold standard treatments such as PFMT, to alleviate genitourinary symptoms, interventions mirroring clinical practice are needed. This study protocol might show a groundbreaking and viable method to potentiate the effects of a gold-standard treatment associated with photobiomodulation. **Conclusion:** We expect this protocol to demonstrate that the use of PFMT and photobiomodulation strategies is feasible and able to potentiate the recovery of women affected by the genitourinary syndrome of menopause. The Ethics Committee of the Federal University of Rio Grande do Norte approved the study (n° 6.038.283), and the clinical trials platform registered the protocol (n° RBR-5r7zrs2).

Hyaluronic acid and erbium laser for the treatment of genitourinary syndrome of menopause

Tiziana Fidecicchi, Marco Gambacciani

Climacteric. 2024 Nov 4:1-6. doi: 10.1080/13697137.2024.2418492.

<https://pubmed.ncbi.nlm.nih.gov/39495047/>

Objective: This study aimed to evaluate the effect of the vaginal erbium laser (VEL) in association with vaginal hyaluronic acid (HA) in postmenopausal women suffering from genitourinary syndrome of menopause (GSM). **Results:** A significant ($p < 0.001$) improvement in both vaginal dryness and superficial dyspareunia was evident, with greater ($p < 0.001$) improvement in Group 2 and Group 3.

Conclusions: The results suggest that vaginal HA administration can improve the VEL effects on GSM in postmenopausal women.

Experience in the Management of Genitourinary Syndrome of Menopause With Fractional CO₂ Laser at Dr. Alejandro Dávila Bolaños Military Teaching Hospital in Nicaragua

Violeta López, María Esther Suárez García, et al.

Cureus. 2024 Nov 28;16(11):e74667. doi: 10.7759/cureus.74667. eCollection 2024 Nov.

<https://pubmed.ncbi.nlm.nih.gov/39735009/>

Objective: We evaluated the quality of life improvements in patients with genitourinary syndrome of menopause (GSM) who received fractional CO₂ laser therapy at the Gynecology-Obstetrics Department of "Dr. Alejandro Dávila Bolaños" Military School Hospital (HMADB) in Managua, Nicaragua, from June 2022 to October 2023. **Results:** Most patients were between 56 and 68 years of age (80%), and 56% were in active sexual relationships. Prior to CO₂ laser therapy, 100% of participants reported vulvar symptoms, 92% experienced impacts on daily life, and 72% had difficulties in sexual life. Six months post-treatment, these percentages dropped to 40%, 16%, and 8%, respectively. Overall, 52% of patients became asymptomatic, while 48% reported mild symptoms. Paired t-test analysis indicated statistically significant improvements ($p < 0.05$) between pre- and post-treatment scores. Mild and transient adverse effects included pruritus (40%), pain (28%), dyspareunia (24%), and erythema (16%).

Conclusion: Fractional CO₂ laser therapy is a safe and effective non-hormonal option for GSM management, with minimal and transient side effects, providing a valuable alternative for patients who cannot use estrogen-based treatments.

Experiences With Genitourinary Syndrome of Menopause and Barriers to Vaginal Estrogen Usage Reported by a National Sample of 1500 Women

Sabrina L Stair, Jennifer Chyu, et al.

Urology. 2024 Nov 16:S0090-4295(24)01063-X. doi: 10.1016/j.urology.2024.11.014.

<https://pubmed.ncbi.nlm.nih.gov/39557363/>

Objective: To investigate women's experiences with genitourinary syndrome of menopause (GSM) and vaginal estrogen therapy (VET), including barriers, awareness, and knowledge, and to report current trends and findings on GSM and VET to address barriers to care. **Results:** Respondents (n = 1505) had a mean age of 57.6 years (SD 10.8). The majority (87%) were white, 13.7% were peri-menopausal, and 872 (57.9%) were post-menopausal. 999 (69%) of women reported at least one genitourinary symptom associated with menopause. Of the 323 women who received a prescription, 13% did not use it due to cost and 38.4% for fear of side effects. Among current VET users, moderate to severe concern for risks listed on the package insert were reported for breast cancer (31.4%), endometrial cancer (27.2%), and cardiovascular issues (32.1%). **Conclusion:** The vast majority of survey respondents reported at least one symptom of GSM. VET usage was lower than reported GSM symptoms. Patient barriers to using VET include cost and fear of side effects. A quarter of women reported their symptoms were not adequately addressed by their provider. The majority of women using VET reported symptomatic improvement and that treatment was well-tolerated.

Retrospective Investigator-Initiated Trial on Tocopherol Acetate Vaginal Administration in Pre-and Postmenopausal Women

Noemi Venditti, Giulio Petronio Petronio, et al.

Diseases. 2024 Oct 2;12(10):237. doi: 10.3390/diseases12100237.

<https://pubmed.ncbi.nlm.nih.gov/39452479/>

Background: Menopause, a natural phase in a woman's life, often adversely affects physical, mental, sexual, and emotional well-being due to low estrogen levels. This study examines the impact of vaginal ovules with tocopherol acetate (Filme Gyno-V[®] ovules, manufactured by Panin Srl and distributed by Hulka Srl, Italy), 500 mg per ovule, on vaginal health in pre- and menopausal women. **Results:** The findings showed that distressing symptoms of vaginal atrophy, such as dryness, itching, and pain during intercourse, were resolved post-treatment. A molecular analysis revealed a reduction in *Escherichia coli* in both cohorts and an increase in three species of *Lactobacillus* in premenopausal patients.

Conclusions: This study concludes that Filme Gyno-V ovules may benefit vaginal health by alleviating atrophy symptoms and promoting healthy vaginal microbiota.

How to help patients navigate genitourinary syndrome of menopause

Taisa Trischuk, Jessica Visentin and Renée Morissette

Canadian Family Physician November/December 2024; 70 (11-12) 710-714; DOI:

<https://pubmed.ncbi.nlm.nih.gov/39638389/>

<https://www.cfp.ca/content/70/11-12/710.long>

Genitourinary syndrome of menopause (GSM) includes both vulvovaginal and lower urinary tract symptoms resulting from decreased estrogen levels during menopause. Signs and symptoms of GSM include vaginal atrophy, dryness, burning, itching, irritation, dyspareunia, urinary frequency or urgency, and increased risk of urinary tract infections (UTIs). Genitourinary syndrome of menopause is estimated

to affect up to 77% of women; however, it is often underreported, underdiagnosed, and undertreated despite the availability of safe and effective treatments. Data from a US survey published in 2017 indicated 50% of women experiencing GSM had never used any therapy to address symptoms. Barriers to accessing treatment include limited public knowledge of GSM symptoms and treatments; patient and provider hesitancy in discussing the topic; and concerns regarding use of hormone therapies. Symptoms of GSM often persist if untreated and can substantially impair an individual's health, relationships, sexual intimacy, and quality of life.

The Menopause Society (formerly the North American Menopause Society) and the Society of Obstetricians and Gynaecologists of Canada issued separate guidance updates on management of GSM in 2020 and 2021, respectively. This article highlights key information for primary care providers to consider when helping women manage GSM. Through their work with the RxFiles Academic Detailing Program at the University of Saskatchewan in Saskatoon, 2 authors (T.T. and J.V.) also contributed to a detailed summary of menopause therapies for clinicians (Appendix 1, available from **CFPlus**). We use the term *women* throughout this article to remain consistent with the research referenced; however, this term does not apply to all people who experience GSM. Information contained herein is intended to help any person experiencing these symptoms.

Update on Genitourinary Syndrome of Menopause: A Scoping Review of a Tailored Treatment-Based Approach

Ilaria Cuccu, Tullio Golia D'Augè, et al.

Life (Basel). 2024 Nov 19;14(11):1504. doi: 10.3390/life14111504.

<https://pubmed.ncbi.nlm.nih.gov/39598302/>

This scoping review explores the therapeutic strategies available for managing genitourinary syndrome of menopause (GSM), a condition often underdiagnosed and undertreated despite significantly affecting women's quality of life. GSM results from decreased estrogen levels during menopause, leading to a range of symptoms including vulvovaginal atrophy and urinary tract issues. **Results:** A total of 451 relevant articles were retrieved. After screening, 19 articles were included in this scoping review. **Discussion:** First-line treatments typically include lubricants and moisturizers for short-term symptom relief, while unresolved or severe cases may warrant hormonal treatment. Topical hormonal treatments often have fewer side effects than systemic alternatives. Special attention is given to selective estrogen receptor modulators like ospemifene and steroid hormones like dehydroepiandrosterone (DHEA), which have shown beneficial effects on GSM symptoms. Moreover, innovative therapeutic approaches, such as laser treatment, are discussed in the context of their efficacy and accessibility. The safety of GSM hormonal therapy in women with a history or risk of cancer is also addressed, noting the need for more definitive research in this area. While there is a growing demand for tailored therapy, this scoping review emphasizes the importance of effective communication and counseling to allow women to make informed decisions about their treatment. Overall, this review underscores the need for increased awareness and further research into effective treatment options for GSM.

A Preliminary Qualitative Analysis of women's Experiences With Vaginal Fractional CO₂ Laser Treatments

Anne Nileshni Fernando, Christine Hamori, et al.

Aesthet Surg J Open Forum. 2024 Sep 3;6:ojae074. doi: 10.1093/asjof/ojae074. eCollection 2024.

<https://pubmed.ncbi.nlm.nih.gov/39381431/>

Background: Menopause involves a range of bodily changes, with impacts on physical and psychological well-being. Around half of the postmenopausal women experience genitourinary syndrome of menopause (GSM). Fractional CO₂ laser treatment can promote tissue regeneration in the vaginal wall to potentially assist with managing GSM. However, the results from clinical trials of this treatment have been mixed, and the personal perceptions and experiences of women receiving this treatment have been largely unexplored. **Objectives:** To qualitatively explore the motivations and outcomes of women who have undergone vaginal fractional CO₂ laser treatment. **Results:** Analyses produced 4 major themes. First, motivations mostly revolved around participants seeking relief from menopausal symptoms. Second, some participants noted positive sexual outcomes, including improved sexual pleasure after treatment. Third, participants noted positive physical and psychological effects, including improvements in incontinence and overall confidence. Lastly, a subset of participants reported no discernible changes. **Conclusions:** This novel qualitative exploration of women's motivations and outcomes of fractional CO₂ laser therapy demonstrates the multifaceted impact of treatment. These findings highlight the importance of considering the holistic effects of fractional CO₂ laser therapy on women's health during midlife, particularly amid menopausal changes.

Practical Guidance on the Use of Vaginal Laser Therapy: Focus on Genitourinary Syndrome and Other Symptoms

Victoria Kershaw, Swati Jha

Int J Womens Health. 2024 Nov 14;16:1909-1938. doi: 10.2147/IJWH.S446903. eCollection 2024.

<https://pubmed.ncbi.nlm.nih.gov/39559516/>

Genitourinary syndrome of the menopause (GSM) is a chronic, often progressive condition, characterised by symptoms relating to oestrogen deficiency including; vaginal dryness, burning, itching, dyspareunia, dysuria, urinary urgency and recurrent urinary tract infections. GSM affects up to 70% of breast cancer survivors with a tendency to particularly severe symptoms, owing to the effects of iatrogenic menopause and endocrine therapy. Patients and clinicians can be reluctant to replace oestrogen vaginally due to fear of cancer recurrence. Vaginal laser is a novel therapy, which may become a valuable nonhormonal alternative in GSM treatment. There are currently 6 published studies regarding Erbium:YAG laser treatment for GSM, 41 studies regarding CO₂ laser treatment for GSM and 28 studies regarding vaginal laser treatment for GSM in breast cancer survivors. Number of participants ranges from 12 to 645. The majority of studies describe a course of 3 treatments, but some report outcomes after 5. Significant improvements were reported in vaginal dryness, burning, dyspareunia, itch, Vaginal Health Index Scores (VHIS), Quality of Life, and FSFI (Female Sexual Function Index). Most studies reported outcomes at short-term follow-up from 30 days to 12 months post-treatment. Few studies report longer-term outcomes with conflicting results. Whilst some studies suggest improvements are sustained up to 24 months, others report a drop-off in symptom improvement at 12-18 months. Patient satisfaction ranged from 52% to 90% and deteriorated with increasing time post-procedure in one study. The findings in this review must be validated in robust randomised sham-controlled trials of adequate power. There remain a number of unanswered questions in terms of which laser medium to use, optimal device settings, ideal interval between treatments, pre-treatment vaginal preparation, as well as safety and efficacy of repeated treatments long term. These issues could be addressed most efficiently with a mandatory registry of vaginal laser procedures.

Pelvic Floor Physical Therapy is Self-Reported as a Minimally Effective, and Sometimes Harmful, Treatment for Pudendal Neuralgia: A Cross-Sectional Study

Jenny M Niedenfuehr, David M Stevens, Lindsey M King

Int J Sex Health. 2024 Aug 28;36(4):627-635. doi: 10.1080/19317611.2024.2397124. eCollection 2024.

<https://pubmed.ncbi.nlm.nih.gov/39552618/>

Objectives: Pudendal neuralgia (PN) is a sexual pain disorder characterized as pain of the genital and/or perineal regions, and despite the lack of clinical evidence supporting its use, pelvic floor physical therapy (PFPT) is a recommended treatment for PN. **Results:** The average self-reported PGIC score among participants was 4.6 ± 1.3 ($n = 144$), indicating no to minimal improvement in symptoms. Most participants (66%) scored 4 or 5, suggesting no change to minimal improvement. Twelve percent of participants scored 3 or lower, indicating worsening of symptoms, and only 22% scored 6 or 7, indicating much or very much improvement of symptoms. Participants who only participated in PFPT ($n = 24$) had a lower PGIC score of 4.4 ± 1.3 . For self-reported satisfaction with PFPT as a treatment for PN, participants self-reported a score of 4.9 ± 3.0 , indicating slight dissatisfaction. For those who experienced symptom improvement, the median number of sessions before noticing improvement was five sessions.

Conclusion: Based on self-reported results, PFPT is a minimally effective, and sometimes harmful, treatment for PN. Patients should receive greater transparency regarding the lack of efficacy of PFPT and its potential harm.

Pudendal nerve entrapment syndrome: clinical features, diagnosis, and management

Rayan Fawaz, MD, Aicha Ltaief-Boudrigoua, MD, Manon Duraffourg, MD

Pain Medicine, pnae092, <https://doi.org/10.1093/pm/pnae092>

<https://pubmed.ncbi.nlm.nih.gov/39231034/>

<https://academic.oup.com/painmedicine/advance-article-abstract/doi/10.1093/pm/pnae092/7749388?redirectedFrom=fulltext&login=false>

The pudendal nerve is a mixed nerve that provides sensory innervation to the perineal integument, from the penis or clitoris to the anus, and motor innervation to the erector muscles and striated sphincters of the urethra and anus. It also carries autonomic fibers. Along its course, this nerve passes through several intricate structures with which it might become entrapped, causing pudendal neuralgia (PN), the most common peripheral neuropathy associated with chronic perineal pain, with a female:male sex ratio of 6:4. The exact prevalence of PN remains unknown; however, it appears to be underestimated. PN is a challenging clinical problem. Estimates have shown an average diagnosis time of 4 years, with patients consulting between 10 and 30 doctors.² The present study aims to provide an overview of the clinical features, diagnosis, and management of PN, drawing the attention of physicians to this lesser-known disorder.

Anatomy and etiology

The pudendal nerve, which arises from the sacral plexus, is formed in the presacral region by the union of the ventral branches of the S2–S4 spinal roots. It follows a pelvic, gluteal, and perineal course, running beneath the piriformis muscle to reach the large sciatic opening and the infrapiriform canal to the gluteal region (Figure 1). It enters the perineal region after crossing the Alcock's canal, fascial compartment of the obturator internus muscle, before diverging to its collateral branches: The inferior rectal nerve, the penis' or clitoris' dorsal nerve, and the perineal nerves.

Impact of Treatment of Pudendal Neuralgia on Pain: A Systematic Review and Meta-Analysis

Sarah E Andiman, Julia S Maron, et al.

Int Urogynecol J. 2024 Nov 28. doi: 10.1007/s00192-024-06004-x.

<https://pubmed.ncbi.nlm.nih.gov/39607531/>

Introduction and hypothesis: Pudendal neuralgia is chronic pelvic pain associated with the pudendal nerve. Unfortunately, the best treatment approach is unknown. Our objective was to systematically assess interventions for pudendal neuralgia for improvement in pain. **Results:** Six hundred eighty-seven abstracts were screened yielding 37 studies that met eligibility criteria. Treatments included 16 surgeries with 12 nerve decompressions and 4 nerve stimulator placements, 14 injections, and 7 pulse radiofrequency treatments. The majority, 95%, were Grade C. All treatments appear to provide relief to a similar extent (mean difference in VAS of 2.73 cm (1.77, 3.69), $p < 0.07$, with high heterogeneity $I^2 = 98.18\%$), but no treatment was clearly superior for pain relief. Adverse events were inconsistently reported but more severe in the surgery group. **Conclusions:** There are many treatment approaches to pudendal neuralgia, but overall, the evidence includes heterogeneous patient populations, non-standardized treatments, poor-quality studies, variable pain measurement instruments, and short-term follow-up. All interventions improved pain with no statistically significant difference between groups.

Pudendal Nerve Block

Shirin Ghanavatian, Stephen W. Leslie, Armen Derian

In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan.

2024 Sep 2.

<https://pubmed.ncbi.nlm.nih.gov/31855362/>

Pudendal nerve blocks are a preferred technique for diagnosing and managing chronic pelvic pain, particularly in cases of pudendal neuralgia often linked to nerve entrapment. This regional anesthetic technique is also widely employed in gynecologic, obstetric, and anorectal procedures. Pudendal nerve blocks are commonly used to reduce labor pain, provide localized anesthesia during surgery, and treat chronic pelvic pain conditions across various clinical settings.

Diagnostic Pain: A Case of Pudendal Neuralgia

Keshav Khanijow, M Carolina Musri, Matthew Kelly

Cureus. 2024 Aug 29;16(8):e68096. doi: 10.7759/cureus.68096. eCollection 2024 Aug.

<https://pubmed.ncbi.nlm.nih.gov/39347260/>

Pudendal neuralgia remains a challenging diagnosis given the absence of sensitive biomarkers or imaging findings. The following case describes a patient with rectal pain complicated by prolonged hospitalization who was eventually diagnosed with pudendal neuralgia per the Nantes criteria. It furthermore underscores several confounders that prevented timely diagnosis, including misattribution of her symptoms to prior resolved conditions, anchoring bias in the absence of confirmatory evidence, and misattribution of her pain to opiate-induced allodynia. It also draws attention to the toll exacted by delays in diagnosis, including patient discomfort, deconditioning, exposure to high-dose opioids, susceptibility to potential nosocomial infections, strain on patient-provider relationships, and the need for post-discharge inpatient rehabilitation, in addition to significant financial costs.

A Preliminary Study Using High-Frequency Ultrasound to Evaluate Vulvar Skin With Lichenoid Vulvar Dermatoses

Jingyi Ma, Yan Song, et al.

Skin Res Technol. 2024 Sep;30(9):e70065. doi: 10.1111/srt.70065.

<https://pubmed.ncbi.nlm.nih.gov/39300833/>

Background: Lichenoid vulvar dermatoses (LVD) are inflammatory diseases primarily affecting the vulva and anus. This study aims to evaluate the skin changes in patients with LVD using high-frequency ultrasound. **Results:** Epidermal thickness, SLEB thickness, dermal thickness, and VI were increased in the VLS and VLSC groups compared to the control group ($p < 0.05$). There were no statistically significant differences in ultrasound parameters between the VLS and VLSC groups ($p > 0.05$). The ROC curves showed that the area under the curve (AUC) value for the dermis (AUC = 0.882) was the largest for VLS, and VI (AUC = 0.917), it was the largest for VLSC. Binary logistic regression indicated that having an allergic disease was a risk factor for VLS between VLS and VLSC groups (OR = 6.797, $p = 0.028$).

Conclusion: High-frequency ultrasound can detect thickening of the skin and increasing VI in patients with LVD, which can be helpful in the evaluation and management of LVD.

Dermatoscopic features of vulvar lichen sclerosis in children: A retrospective study

Yuyang Han, Runtao Liu, Yuanjun Li

Pediatr Dermatol. 2024 Nov-Dec;41(6):1091-1095. doi: 10.1111/pde.15743. Epub 2024 Sep 3.

<https://pubmed.ncbi.nlm.nih.gov/39225276/>

Objectives: To explore the dermoscopic features of lichen sclerosis in different parts of the external genitalia in children. **Results:** Among the 42 female children, aged 3-14 years (mean: 7.24 ± 2.43 years), the duration of vulvar lichen sclerosis ranged from 3 months to 2 years (mean: 9.83 ± 4.93 months). Clinical lesions occurred in the labia minora in 18 cases (42.9%), labia majora in 38 cases (90.5%), posterior fourchette in 36 cases (85.7%), perianal area in 13 cases (31.0%), anterior fourchette in 17 cases (40.5%), clitoris in seven cases (16.7%), and interlabial sulcus in 11 cases (26.2%). Dermoscopic findings common in the labia majora included follicular keratotic plugs, cloverleaf-like structures, comedo-like openings, and linear vessels ($p < .05$); however, purple-red globules and patches and white linear streaks were more common in the posterior fourchette ($p < .05$), whereas dotted vessels were more common in the labia minora ($p < .05$). **Conclusions:** Common dermoscopic findings in pediatric vulvar lichen sclerosis were yellow-white structureless areas, white linear streaks, follicular keratotic plugs, and cloverleaf-like structures; yellow-white structureless areas and white linear streaks showed the highest specificity. The dermoscopic findings varied among different affected areas, which provides a basis for further understanding of the characteristics of different sites of vulvar lichen sclerosis in the pediatric population.

D2-40 and CK17 Immunohistochemistry as a Diagnostic Adjunct for HPV-Independent Squamous Lesions in the Vulva and Their Role in Defining Atypical Lichen Sclerosis

Emily M Hartsough, Jaclyn Watkins, Rosalynn M Nazarian

Am J Surg Pathol. 2024 Sep 17. doi: 10.1097/PAS.0000000000002310.

<https://pubmed.ncbi.nlm.nih.gov/39285528/>

Vulvar lichen sclerosus (LS) is a common, chronic inflammatory disorder with a subset of cases progressing to differentiated vulvar intraepithelial neoplasia (dVIN) and/or squamous cell carcinoma (SCC). Histopathologic diagnosis of LS and dVIN can be challenging, and it is difficult to predict the subset of LS cases that progress. Immunohistochemistry (IHC) may be a useful diagnostic aid in this setting. CK17 has been shown to be overexpressed in invasive SCC and dVIN, and less commonly in LS. Similar to CK17, D2-40 has been correlated with cutaneous SCC prognosis but has not been evaluated in vulvar lesions. We identified a total of 13 patients with HPV-independent vulvar SCC that had precursor LS or dVIN. CK17 and D2-40 IHC stain intensity and pattern was scored in foci of LS, dVIN, and SCC. An increase in basal layer D2-40 expression was observed with progression from LS to dVIN with strong and diffuse staining in SCC. CK17 maintained similar stain intensity among squamous lesions, but displayed different patterns of staining, with superficial staining in LS, suprabasal staining in dVIN, and diffuse staining in SCC. A subset of LS cases displayed an intermediate (suprabasal) CK17 IHC profile, wild-type p53 expression, and cytomorphologic and architectural features intermediate between LS and dVIN; we defined such cases as "atypical LS." We found that a panel of D2-40/CK17 can serve as a diagnostic adjunct to differentiate LS, dVIN, and invasive SCC. Additional studies with larger patient cohorts are needed to validate these findings and determine their prognostic significance.

5-Aminolevulinic acid photodynamic therapy is a safe and effective treatment for female patients with intractable vulvar lichen sclerosus

Xiangrong Zheng, Xiaoli Liu, et al.

Photodiagnosis Photodyn Ther. 2024 Oct;49:104330. doi: 10.1016/j.pdpdt.2024.104330. Epub 2024 Sep 7.

<https://pubmed.ncbi.nlm.nih.gov/39245302/>

Background: Female vulvar lichen sclerosus (VLS) is a chronic inflammatory skin disease of the vulva and its etiology is unknown. The main clinical symptoms are itching, burning and dyspareunia, and there is a lack of effective treatment. **Results:** All patients received six sessions of ALA-PDT treatment and follow-up visits. After ALA-PDT treatment, 24 of 36 (66.67 %) patients' itching symptoms completely disappeared, 10 of 36 (27.78 %) patients' itching symptoms were relieved from severe to mild, and only 2 of 36 (5.56 %) patients' symptoms were not significantly relieved. 16 of 36 (44.4 %) patients' itching symptoms completely disappeared, 9 of 36 (25 %) patients' itching symptoms were relieved from severe to mild, and only 2 of 36 (5.56 %) patients still had severe pain. Compared to 22 patients with dyspareunia before treatment, only 9 patients still had dyspareunia with varying degrees of dyspareunia relief after treatment. Clinical signs improved significantly in the patients after ALA-PDT treatment. The total scores of clinical signs were (5.31 ± 1.67 vs 3.67 ± 1.71) before and after treatment. All patients showed improvement in DLQI after treatment. The main side effects of ALA-PDT were pain, erythema and swelling which were transient and tolerable. All patients were "satisfied" or "very satisfied" with the results of the treatment. **Conclusions:** ALA-PDT is a safe and effective treatment for women with intractable vulva lichen sclerosus.

Associations vulvar lichen sclerosus with autoimmune thyroid diseases

Maja J Zieba-Domalik, Dominika Orszulak, et al.

Ginekol Pol. 2024 Oct 29. doi: 10.5603/gpl.103145.

<https://pubmed.ncbi.nlm.nih.gov/39469822/>

Objectives: Vulvar lichen sclerosis (VLS) is defined as a chronic inflammatory skin disease that most often involves lesions on the mucous membranes of the vulva with a tendency to progress to the anal skin. The etiopathogenesis of VLS remains unknown and is likely multifactorial. Data emphasize the role of immunological factors - more than 25% of VLS cases coexist with autoimmune diseases. The purpose of the present study was to determine the correlation of the prevalence of anti-thyroid antibodies - IgG class antibodies against thyroid peroxidase and IgG class antibodies against thyroglobulin in women with vulvar lichen sclerosis, and the appropriateness of screening tests for autoimmune thyroid diseases in women with vulvar lichen sclerosis. **Results:** Antibodies to thyroid peroxidase were present in 12% of the study group with vulvar lichen sclerosis and 4.88% of the control group, and this difference was not statistically significant ($p = 0.41$). Anti-thyroglobulin antibodies were detected in 4% of the patients with vulvar lichen sclerosis and 4.88% of the control group, and this difference was not statistically significant either ($p = 0.76$). **Conclusions:** The study did not confirm the association of VLS with autoimmune thyroid diseases. Undoubtedly, based on the data available in the literature, further studies are needed to determine the mechanisms behind the association between vulvar lichen sclerosis and autoimmune thyroid diseases.

The relationship between the vaginal and vulvar microbiomes and lichen sclerosis symptoms in post-menopausal women

Oluwatobiloba A Taylor, Kenzie D Birse, et al.

Sci Rep. 2024 Nov 7;14(1):27094. doi: 10.1038/s41598-024-78372-9.

<https://pubmed.ncbi.nlm.nih.gov/39511372/>

Lichen sclerosis is a chronic inflammatory condition of unknown etiology that affects the genital and extragenital skin, which can lead to sexual dysfunction and has been associated with vulvar cancer. The vaginal microbiome has a critical role in gynecologic health, but little is known about the microbiome in lichen sclerosis. This study investigated the vaginal and vulvar microbiomes of 27 post-menopausal women with lichen sclerosis. The most abundant genera detected in the vaginal microbiome were Lactobacillus, Gardnerella, and Anaerococcus, while Lactobacillus, Anaerococcus, and Staphylococcus were the most abundant in the vulvar microbiome. The vaginal samples clustered into two main groups, Lactobacillus dominant ($n = 6$, > 50% microbiome Lactobacillus) and polymicrobial ($n = 21$) with no dominant genus. The vulvar samples were mainly polymicrobial ($n = 25$). Actinomyces, Anaerococcus, and Ezakiella in the vaginal microbiome and Actinomyces and Ezakiella in the vulvar microbiome were significantly associated with lichen sclerosis symptoms (adjusted $p < 0.05$). In this population of post-menopausal women with lichen sclerosis the majority have diverse, non-Lactobacillus dominant microbiomes, which is considered less optimal for gynecologic health based on studies of pre-menopausal women. Actinomyces, Ezakiella, and Anaerococcus were associated with lichen sclerosis symptoms. Understanding the role of these bacteria in lichen sclerosis pathogenesis will be an essential future investigation.

Enhancing awareness of vitiligo vulvar lichen sclerosis: An underrecognized variant in patients with skin of color

Shivani Desai, Rachel Blasiak, et al.

JAAD Case Rep. 2024 Aug 31;53:50–53. doi: 10.1016/j.jdc.2024.08.017

<https://pubmed.ncbi.nlm.nih.gov/39430637/>

<https://pmc.ncbi.nlm.nih.gov/articles/PMC11488412/>

Characterized by skin changes of depigmentation, vitiligoid vulvar lichen sclerosus (VVLS) often goes undiagnosed or misdiagnosed as vitiligo in patients with skin of color. A clinical suspicion of vulvar vitiligo (VV) may not be worked up histopathologically, missing the diagnosis of vulvar lichen sclerosus (VLS) and thereby leading to architectural changes and risk of vulvar squamous cell carcinoma. Thus, recognition of this variant in patients with skin of color is imperative to provide adequate long-term treatment to decrease these risks.

It can be difficult to distinguish VVLS from VV clinically as both conditions present with depigmentation. VLS may present with pruritus, burning, dyspareunia, and texture changes, whereas VV is asymptomatic. VLS is also differentiated by architectural changes present in some patients, which are not present in patients with VV. Additionally, it is important to acknowledge the coexistence of VLS and VV to prevent missing a diagnosis of concomitant VLS in a patient with vitiligo. Therefore, current recommendations in the literature support assessing for findings such as fissures, lichenification, atrophy, erosions, and petechiae in patients with VV as these findings may indicate concomitant VLS. Understanding the distinction between VVLS and VV is vital because treatment of VLS is necessary to mitigate long-term sequelae. Although both conditions may be treated with high-potency topical steroids or calcineurin inhibitors, there are distinctions in treatment timelines. VV is typically treated episodically whereas VLS is treated with an initial treatment plan followed by a life-long maintenance treatment as preventive use of topical steroids has shown to decrease the risk of developing vulvar squamous cell carcinoma and decrease further scarring of the vulva.

Our goal is to increase recognition of this variant of VLS in adult patients with skin of color and its similarity to VV. Here, we present 3 cases of biopsy-supported VVLS.

Effects of vitamin E and physical therapy in alleviating the symptoms of vulva pruritus: A review of 49 cases

Hong Wang

Afr J Reprod Health. 2024 Oct 31;28(10):208-212. doi: 10.29063/ajrh2024/v28i10.20.

<https://pubmed.ncbi.nlm.nih.gov/39625412/>

This was a retrospective study. Vulva pruritus is a common symptom in gynaecology and causes mental burden in patients. This study aimed to analyze effects of the Vitamin E and physical therapy on alleviating the symptoms of vulva pruritus. Forty nine (49) women diagnosed with vulva pruritus in the Huai'an First People's Hospital from November 2019 to November 2020 were included. All diagnosed cases received oral administration of Vitamin E, topical application of Vitamin E, and physical therapy consisting of low-frequency pelvic circulation and trigger point acupuncture. Clinical data, degree of itching, visual analog scale for evaluating pain, self-rating scale score for evaluating depression, and sexual function index were recorded. After treatment, the degree of itching, pain, and depression levels were significantly decreased. We conclude that a combination of Vitamin E plus physical therapy can alleviate symptoms of patients with vulva pruritus. We therefore recommend the use of this approach in clinical practice.

Successful Microablative Fractional Carbon Dioxide Laser Therapy for Vulvar Lichen Sclerosus: A Case Report and Mini-review

Wen-Lin Hsieh, Dah-Ching Ding

Gynecol Minim Invasive Ther. 2024 Oct 21;13(4):272-275. doi: 10.4103/gmit.gmit_71_24. eCollection 2024 Oct-Dec.

<https://pubmed.ncbi.nlm.nih.gov/39660244/>

Vulvar lichen sclerosus (VLS) is a chronic inflammatory skin disorder affecting the vulvar region. VLS predominantly affects women, and most cases occur after menopause. Common symptoms include itching, skin-whitening, pain, discomfort, fissures, and scarring. Treatment options include topical steroids, emollients, lifestyle modifications, regular follow-up, and surgical interventions. Carbon dioxide (CO₂) laser treatment is a therapeutic option for managing lichen sclerosus. We report a case of VLS successfully treated with a fractional microablative CO₂ laser. A 72-year-old female presented with a dry vagina and vulvar itching for 6 months. She visited a local medical clinic, and oral anti-itching medication and topical anti-itching ointment were administered. However, the condition did not improve, and she felt itching. She visited our outpatient department, and a pelvic examination showed bilateral labia minor, revealing a white skin color change and a hardening sensation. The patient was diagnosed with VLS. Microablative fractional CO₂ laser therapy was subsequently administered. The treatment course comprised three laser therapy sessions (treatment day, 1 month, and 2 months after the first therapy). The vulvovaginal symptoms questionnaire-21 scores were 14, 6, and 2 for the first, second, and third courses of treatment, respectively. Vulvar itching improved significantly after laser treatment - no more steroid treatment needed. After 10 months of follow-up, the condition of the vulva was maintained well. Although the treatment protocol requires further exploration, CO₂ laser treatment could be considered for VLS if topical steroids are ineffective.

Treatment strategies for erosive genital lichen planus: A systematic review of therapeutic modalities and emerging breakthroughs

Borna Safari-Kish, Matin Bidares, et al.

Health Sci Rep. 2024 Oct 14;7(10):e70129. doi: 10.1002/hsr2.70129. eCollection 2024 Oct.

<https://pubmed.ncbi.nlm.nih.gov/39410948/>

Background and aims: Erosive genital lichen planus (EGLP) is a severe form of lichen planus characterized by painful erosions in the genital area, leading to significant distress and complications. This review aims to provide a thorough examination of EGLP, focusing on its clinical manifestations, diagnostic challenges, and various treatment strategies, with an emphasis on patient-centered care. **Results:** EGLP presents with a range of symptoms, including severe pain, itching, and sexual dysfunction. Treatment options include topical corticosteroids, systemic medications, and surgical interventions. Despite the availability of various therapies, many cases are refractory to treatment, resulting in chronic symptoms and reduced quality of life. Emerging therapies show promise but are not yet established as standard practice. **Conclusion:** Management of EGLP requires a tailored, multidimensional approach. While topical corticosteroids remain essential, the development of new therapies offers hope for improved outcomes. A patient-centered approach is vital to address both the physical and psychosocial impacts of EGLP. Continued research is necessary to refine treatment protocols and enhance patient care.