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This newsletter is quarterly and contains abstracts from medical journals published between January and March 2007 (abstracts presented at scientific meetings may also be included). Please direct any comments regarding this newsletter to chris@nva.org.

Vulvodynia / Pain

Report of the International Society for the Study of Vulvovaginal Disease terminology and classification of vulvodynia.
Haefner HK
J Low Genit Tract Dis. 2007 Jan;11(1):48-9

No abstract available.

Prevalence of vulvar pain in an urban, minority population.
Lavy RJ, Hynan LS, Haley RW
J Reprod Med. 2007 Jan;52(1):59-62

OBJECTIVE: To determine the prevalence of vulvar pain in a large, urban, minority population. STUDY DESIGN: Women who presented to the University of Texas Southwestern Medical Center neighborhood clinic system for family planning services or gynecologic care were asked to complete a confidential questionnaire on the signs and symptoms of chronic vulvar pain. Responses were analyzed by ethnic group for the presence of vulvar pain. RESULTS: Three hundred twenty questionnaires were distributed, and 242 were completed,for a response rate of 75.6%. The population that completed the questionnaire (74% Hispanic, 20% African American, 5% Caucasian and 0.8% other) was similar in racial/ethnic distribution to the total population served in our health care system (66% Hispanic, 25% African American, 8% Caucasian and 1% other). Twenty-six (11%) women indicated they experienced vulvar pain. Sixteen women reported the start dates for the pain. Ten (63%) reported vulvar pain for more than 1 month. Of the 26 women reporting pain, the racial distribution was similar to that of our surveyed population (85% Hispanic, 11% African American, 4% Caucasian and 0% other). CONCLUSION: The prevalence of vulvar pain in this urban minority population was 11%. The prevalence of vulvar pain was similar among women of different racial/ethnic groups.

Assessment of vulvodynia symptoms in a sample of US women: a prevalence survey with a nested case control study.
Arnold LD, Bachmann GA, Rosen R, Rhoads GG
Am J Obstet Gynecol. 2007 Feb;196(2):128.e1-128.e6

OBJECTIVE: Vulvodynia is a chronic pain syndrome of unknown origin with scant data on frequency. This study assessed the prevalence of vulvodynia symptoms in a sample of US women and compared health characteristics of symptomatic and asymptomatic women. STUDY DESIGN: A phone survey contacted

2127 US households to identify 100 symptomatic women, who were matched on age and time zone to 325 asymptomatic controls. Odds ratios (ORs) and logistic regression were used to model associations between pain, medical conditions, and health care utilization variables. RESULTS: Current vulvar pain of at least 6 months duration was reported by 3.8% of respondents, with a 9.9% lifetime prevalence. Forty-five percent of women with pain reported an adverse effect on their sexual life and 27% an adverse effect on their lifestyle. Cases more frequently reported repeated urinary tract infections (OR, 6.15; 95% CI, 3.51-10.77) and yeast infections (OR, 4.24; 95% CI, 2.47-7.28). Associations existed with chronic fatigue syndrome (OR, 2.78; 95% CI, 1.33-6.19), fibromyalgia (OR, 2.15; 95% CI, 1.06-4.36), depression (OR, 2.99; 95% CI, 1.87-4.80), and irritable bowel syndrome (OR, 1.86; 95% CI, 1.07-3.23). CONCLUSION: Lifetime chronic vulvar pain was less prevalent in this national sample of women than previous data suggest and was correlated with several comorbid chronic medical conditions and substantial reduction in self-reported quality of life.

Symptoms of interstitial cystitis, painful bladder syndrome and similar diseases in women: a systematic review.
Bogart LM, Berry SH, Clemens JQ
J Urol. 2007 Feb;177(2): 450-6

PURPOSE: In women symptoms of interstitial cystitis are difficult to distinguish from those of painful bladder syndrome and they appear to overlap with those of urinary tract infection, chronic urethral syndrome, overactive bladder, vulvodynia and endometriosis. This has led to difficulties in formulating a case definition for interstitial cystitis, and complications in the treatment and evaluation of its impact on the lives of women. We performed a systematic literature review to determine how best to distinguish interstitial cystitis from related conditions. MATERIALS AND METHODS: We performed comprehensive literature searches using the terms diagnosis, and each of interstitial cystitis, painful bladder syndrome, urinary tract infection, overactive bladder, chronic urethral syndrome, vulvodynia and endometriosis. RESULTS: Of 2,680 screened titles 604 articles were read in full. The most commonly reported interstitial cystitis symptoms were bladder/pelvic pain, urgency, frequency and nocturia. Interstitial cystitis and painful bladder syndrome share the same cluster of symptoms. Chronic urethral syndrome is an outdated term. Self-reports regarding symptoms and effective antibiotic use can distinguish recurrent urinary tract infections from interstitial cystitis in some but not all women. Urine cultures may also be necessary. Pain distinguishes interstitial cystitis from overactive bladder and vulvar pain may distinguish vulvodynia from interstitial cystitis. Dysmenorrhea distinguishes endometriosis from interstitial cystitis, although many women have endometriosis plus interstitial cystitis. CONCLUSIONS: In terms of symptoms interstitial cystitis and painful bladder syndrome may be the same entity. Recurrent urinary tract infections may be distinguished from interstitial cystitis and painful bladder syndrome via a combination of self-report and urine culture information. Interstitial cystitis and painful bladder syndrome may be distinguished from overactive bladder, vulvodynia and endometriosis, although identifying interstitial cystitis and painful bladder syndrome in women with more than 1 of these diseases may be difficult.

Evidence of diffuse noxious inhibitory controls (DNIC) elicited by cold noxious stimulation in patients with provoked vestibulodynia.
Johannesson U, de Boussard CN, Brodda Jansen G, Bohm-Starke N
Pain. 2006 Dec 12; [Epub ahead of print]

Provoked vestibulodynia is a common cause of superficial dyspareunia in young women. Recent evidence has pointed out the importance of studying endogenous pain modulation in these women. An impairment of diffuse noxious inhibitory controls (DNIC) has been suggested in chronic pain conditions with a female predominance such as fibromyalgia and temporomandibular disorder. Our aim was to examine whether patients with provoked vestibulodynia and healthy women with or without combined oral contraceptives (COC) display a DNIC response to cold noxious stimulation. Twenty patients with provoked vestibulodynia not using COC, 20 healthy women on COC and 20 healthy women without COC were included and tested days 7-11 of their menstrual cycle. Pressure pain thresholds (PPTs) and pain ratings using VAS were measured on the arm and leg before and during a cold pressor test. A socio-

medical questionnaire, the Hospital and Anxiety Depression Scale and the Short Form-36 were completed. The majority of the subjects in all three study groups significantly increased their PPTs during cold noxious stimulation indicating a DNIC response. The patients displayed lower PPTs compared to the healthy women. Depression, anxiety and bodily pain were more often reported by the patients. No differences related to the intake of COC were observed between the healthy women. In conclusion, women with provoked vestibulodynia as well as healthy women irrespective of COC status display a DNIC response indicating an endogenous pain inhibition. However, the results imply a systemic hypersensitivity in women with vestibulodynia with low general pain thresholds as compared to healthy women.

Value of colposcopy in the diagnosis of candidiasis in patients with vulvodynia.
Pagano R
J Reprod Med. 2007 Jan;52(1):31-4

OBJECTIVE: To evaluate the value of colposcopy in the diagnosis of chronic vulvar candidiasis in patients presenting with vulvodynia. STUDY DESIGN: A prospective study of 460 patients presenting with vulvodynia over a 24-month period was undertaken. All patients underwent colposcopy of the vulva, which was regarded as positive if acetowhite lesions with central clearing with or without petechiae were present. Vulvar skin scrapings were taken for Candida culture on all patients. Those patients with positive colposcopic findings were treated with long-term oral antimycotic therapy irrespective of laboratory findings. RESULTS: Patients with positive colposcopic findings and positive cultures had a 93% rate of improvement in symptoms. Those with positive colposcopic findings and negative cultures also had a 60% rate of improvement. Thus, the overall improvement rate in patients with positive colposcopic findings (irrespective of culture results) was 76%. When colposcopy findings were negative, Candida cultures were also negative in 92% of patients. CONCLUSION: Colposcopy of the vulva can be a valuable triage tool in the assessment of patients with vulvodynia by detecting changes that are highly suspicious for the presence of chronic vulvar candidiasis.

KTP-nd:YAG laser therapy for the treatment of vestibulodynia: a follow-up study.
Leclair CM, Goetsch MF, Lee KK, Jensen JT
J Reprod Med. 2007 Jan;52(1):53-8

OBJECTIVE: To evaluate the results of KTP-Nd:YAG laser therapy for the treatment of vestibulodynia. STUDY DESIGN: Retrospective review and follow-up mail survey of women with vestibulodynia who underwent laser treatment. Demographics, number of laser treatments and symptom severity prior to laser treatment (100-mm visual analog scale) were obtained from the medical record. The survey included questions regarding current sexual pain, sexual quality of life and satisfaction with treatment. RESULTS: Of41 treated women, 37 women were located and agreed to participate. The mean number of laser sessions was 2.81 (range, 1-8). The mean age was 32.9 years and mean follow-up, 2.8. Following laser treatment, most (24 of 37, 68%) subjects reported less pain with sexual intercourse. One subject reported more pain, while 29% (11 of 37) reported no change. Sixty percent (21 of 37) reported their sex lives to be more satisfying/pleasurable following laser treatment. Thirteen women (13 of 37, 35%) underwent vestibulectomy following laser therapy, and 2 subjects were treated with a laser after failed vestibulectomy. CONCLUSION: Most women with vestibulodynia treated with a KTP-Nd:YAG laser achieve a reduction in sexual pain and improved sexual satisfaction without excisional therapy.

Botulinum toxin A for the management of vulvodynia.
Yoon H, Chung WS, Shim BS
International Journal of Impotence Research (2007) 19**,** 84–87
Complete article available to view: http://www.nature.com/ijir/journal/v19/n1/pdf/3901487a.pdf

Clinically, botulinum toxin A blocks the cholinergic innervation of the target tissue. Recently, it has been proved effective not only at a neuromuscular junction but also within parasympathetic or sympathetic

neural synapses. Seven women with pain on genitalia that could not be controlled with conventional pain managements were enrolled in this study. Twenty to 40 U of botulinum toxin A were used in each injection. Injection sites were the vestibule, levator ani muscle or the perineal body. Repeat injections were administered every 2 weeks if the patient's symptoms had not fully subsided. In all patients, pain had disappeared with botulinum toxin A injections. Five patients needed to be injected twice; the other two patients needed only one injection. We did not observe complications related to botulinum toxin A injections, such as pain, hemorrhage, infection, muscle paralysis or other complications. The subjective pain score improved from 8.3 to 1.4, and no one has experienced a recurrence (the follow-up period was four to 24 months, with a mean follow-up of 11.6 months). Botulinum toxin A is effective in blocking nociception. Even though further investigation and well-controlled study will be necessary, we suggest that the botulinum toxin therapy would be useful and safe in managing vulvodynia of muscular or neuroinflammatory origins.

Treatment of women in the United States with localized, provoked vulvodynia: practice survey of women's health physical therapists.
Hartmann D, Strauhal MJ, Nelson CA
J Reprod Med. 2007 Jan;52(1):48-52

OBJECTIVE: To identify current practice trends of physical therapists in the U.S. treating women with localized, provoked vulvodynia (LPV). STUDY DESIGN: The Section on Women's Health conducted an Internet poll in July of 2005 inquiring about physical therapy care of women diagnosed with LPV. It queried clinicians' demographics, physician/clinician referral patterns, assessment/ treatment modalities and length of care. RESULTS: Nearly two-thirds reported >11 years of physical therapy experience, with 42% treating women with vulvodynia for > 6 years. Most referrals were from obstetrician/gynecologists. Assessment modalities used by > 70% included detailed history; assessment of posture, tension in the pelvic floor, pelvic girdle, associated pelvic structures and bowel/bladder function; digital sEMG/pEMG testing of the pelvic floor; hip, sacroiliac joints and spine mobility; strength testing of abdominals and lower extremities; and voiding diaries. Nearly 70% utilized exercise for the pelvic girdle and pelvic floor; soft tissue mobilization/myofascial release of the pelvic girdle, pelvic floor and associated structures; joint mobilization/manipulation; bowel/bladder retraining and help with contact irritants, dietary changes and sexual function. Typical care is 60-minute weekly sessions for 7-15 weeks. CONCLUSION: Sixty-three percent of physical therapists in the U.S. treating women with LPV have > 11 years of experience, with almost half treating women for > 6 years. Obstetrician/gynecologists are the largest referral source. Three quarters agree on 14 assessment tools, while more than two thirds agree on 11 treatments. Women are treated weekly for 1 hour, for 7-15 weeks.

A qualitative study of women with vulvodynia: I. The journey into treatment.
Buchan A, Munday P, Ravenhill G, Wiggs A, Brooks F
J Reprod Med. 2007 Jan;52(1):15-8

OBJECTIVE: To evaluate women's experiences of accessing help and treatment for vulvodynia. STUDY DESIGN: Women who had participated in a vulvar pain management program were evaluated in a retrospective, qualitative, in-depth interview study. RESULTS: The women described their distressing symptoms of vulvodynia and their previous experiences of seeking help. The women thought that the delay to diagnosis contributed to the severity of their symptoms and that achieving a diagnosis was the first step on a path toward the acceptance of a chronic condition and a commitment to a management program. CONCLUSION: Vulvodynia is poorly recognized, and the delay to diagnosis adversely affects patients, exacerbating the severity of their symptoms.

A qualitative study of women with vulvodynia: II. Response to a multidisciplinary approach to management.
Munday P, Buchan A, Ravenhill G, Wiggs A, Brooks F
J Reprod Med. 2007 Jan;52(1):19-22

OBJECTIVE: To evaluate the response of a group of women with vulvodynia who were participating in an integrated, multidisciplinary management program comprising medical evaluation and treatment, psychotherapy, physiotherapy and dietary advice. STUDY DESIGN: Retrospective, qualitative, in-depth interview study. RESULTS: Twenty-seven of 29 women reported a significant benefit, and 9 who had completed the program were pain free. All women appreciated the integrated approach, and even those who were not completely pain free found that they were able to manage their condition satisfactorily. CONCLUSION: Further evaluation of this program is warranted to assess whether it would be helpful for other women with this problem.

Managing postmenopausal dyspareunia: beyond hormone therapy.
Rosenbaum T
The Female Patient. 2006;31:1-5

No abstract available.

Pelvic floor involvement in male and female sexual dysfunction and the role of pelvic floor rehabilitation in treatment: A literature review.
Rosenbaum T
J Sex Med 2007;4:4–13.

Introduction: The sphincteric and supportive functions of the pelvic floor are fairly well understood, and pelvic floor rehabilitation, a specialized field within the scope and practice of physical therapy, has demonstrated effectiveness in the treatment of urinary and fecal incontinence. The role of the pelvic floor in the promotion of optimal sexual function has not been clearly elucidated. Aim: To review the role of the pelvic floor in the promotion of optimal sexual function and examine the role of pelvic floor rehabilitation in treating sexual dysfunction. Main outcome measure: Review of peer-reviewed literature. Results: It has been proposed that the pelvic floor muscles are active in both male and female genital arousal and orgasm, and that pelvic floor muscle hypotonus may impact negatively on these phases of function. Hypertonus of the pelvic floor is a significant component of sexual pain disorders in women and men. Furthermore, conditions related to pelvic floor dysfunction, such as pelvic pain, pelvic organ prolapse, and lower urinary tract symptoms, are correlated with sexual dysfunction. Conclusions: The involvement of the pelvic floor in sexual function and dysfunction is examined, as well as the potential role of pelvic floor rehabilitation in treatment. Further research validating physical therapy intervention is necessary.

Vulvodynia. Development of a psychosexual profile.
Jantos M, Burns NR
J Reprod Med. 2007 Jan;52(1):63-71

OBJECTIVE: To assess the psychosexual profile of vulvodynia patients, focusing on the age at onset and age distribution, and to analyze the impact of vulvodynia on the emotional, social and sexual well-being of this patient population. STUDY DESIGN: A retrospective review was performed of patient files consisting of questionnaires, psychometric tests, sexual history, electromyographic assessments and clinical notes. RESULTS: The highest prevalence of vulvodynia in this clinical sample occurred before the age of 25 years; 75% of the 744 patients were under the age of 34. A comparison of primary and secondary vulvodynia patients showed the average age at symptom onset to be 19.1 years for primary cases and 25.0 years for secondary cases. There were significant differences in duration of symptoms, age at first sexual intercourse and number of sexual partners, even when controlling for age ($p < 0.001$). Marriage provided an effective buffer against depression and anxiety. CONCLUSION: Vulvodynia can have an early onset and affect social relationships. Given the psychologic distress associated with vulvodynia, early diagnosis and treatment of the medical aspects are essential, as is focusing on the psychosexual implications of this pain syndrome.

Vulvar Dermatoses

2006 ISSVD classification of vulvar dermatoses: pathologic subsets and their clinical correlates.
Lynch PJ, Moyal-Barrocco M, Bogliatto F, Micheletti L, Scurry J
J Reprod Med. 2007 Jan;52(1):3-9

The International Society for the Study of Vulvovaginal Disease (ISSVD) has, as one of its major societal goals, the development and promulgation of nomenclature and classification of vulvar disease. A committee of the ISSVD has developed new nomenclature and classification for the specific area of vulvar dermatoses. This classification was approved by the ISSVD members at the most recent international congress, held in New Zealand in February 2006.

Decorin and chondroitin sulfate distribution in vulvar lichen sclerosus: correlation with distinct histopathologic stages.
Correa AC, Azevedo L, Almeida G, do Val I, Cuzzi T, Takiya CM
J Reprod Med. 2007 Jan;52(1):38-42

OBJECTIVE: To characterize decorin and chondroitin sulfate (CS) expression in lichen sclerosus (LS). STUDY DESIGN: Thirty-one untreated vulvar LS lesions were biopsed, and hematoxylin-eosin-stained cases were graded according to Hewitt's classification. Immunohistochemistry was performed using antibodies directed against human decorin diluted 1:500 and CS diluted 1:200. The control group, made up of cutaneous fragments from vulvoperineal corrective surgeries or nymphoplasties, represented 22 patients. RESULTS: Decorin and CS were present at the LS hyaline zone in different moments of matrix modulation. In all Hewitt stages CS prevailed at the extracellular matrix in cases with a compact aspect of the hyaline zone, while decorin was seen only in areas of less compactness. Normal vulvar tissue revealed only the presence of CS in juxtaepithelial zones. No decorin immunoexpression was found in normal vulvar skin. CONCLUSION: Decorin and CS deposition in vulvar LS varies in the distinct histologic stages, which probably reflect the importance of these molecules in matricial remodeling in this disorder. Decorin may play an important role in cases of LS.

High prevalence of thyroid disease in patients with lichen sclerosus.
Birenbaum DL, Young RC
J Reprod Med. 2007 Jan;52(1):28-30

OBJECTIVE: To investigate the association between lichen sclerosus and thyroid disease in our patient population. STUDY DESIGN: This was a retrospective chart review of patients seen between January 1995 and September 2005 with biopsy-proven lichen sclerosus. Charts were reviewed to assess the patients' history of thyroid disease. RESULTS: We identified 211 patients with biopsy-proven lichen sclerosus, 63 (29.9%) of whom had thyroid disease. In women <55 years old, 25 of 74 (33.8%) had thyroid disease; in women > or = 55 years old, 38 of 137 (27.7%) had thyroid disease. CONCLUSION: The prevalence of thyroid disease in our patients with biopsy-proven lichen sclerosus is almost 30% and is not dependent upon age. This prevalence is 5- to 30-fold greater than in the general population.

Clinical review of 202 patients with vulval lichen sclerosus: A possible association with psoriasis.
Simpkin S, Oakley A
Australas J Dermatol. 2007 Feb;48(1):28-31

Two hundred and two patients with clinically typical or biopsy-confirmed vulval lichen sclerosus were reviewed either at consultation (75%) or by retrospectively examining their chart. At diagnosis, 79% were 50 years or older. Ninety-six per cent complained of itching, pain and/or dyspareunia. Lichen sclerosus most often affected the labia minora and perineum but 50% had perianal and 13% had extragenital disease. Thirty-five patients gave a history of psoriasis (17%), which affected the vulval area in 10.

Thyroid disease was reported in 39 patients (19%), and 33 gave a family history of thyroid disease. Of those tested (142), 20% had elevated thyroid antibodies. Topical clobetasol propionate was very effective but at least intermittent treatment was required long term in 85%. At follow up, 101 of 185 patients (56%) were asymptomatic but 22 (12%) continued to have moderate-to-severe symptoms. Thyroid disease and psoriasis are common associated conditions.

Erosive vulvar lichen planus: retrospective review of characteristics and outcomes in 113 patients seen in a vulvar specialty clinic.
Kennedy CM, Galask RP
J Reprod Med. 2007 Jan;52(1):43-7

OBJECTIVE: To describe the characteristics of women diagnosed with erosive vulvar lichen planus and the outcome of treatment utilized by a single practitioner. STUDY DESIGN: A retrospective review of 113 women with erosive vulvar lichen planus. Data were abstracted, including demographic information, medical history, vulvar symptom scores and treatments utilized. Dyspareunia and vulvar symptom scores before and following treatment were compared. RESULTS: The mean age at presentation for women with lichen planus was 50 years. Comorbid medical and vulvar conditions were commonly noted. Sexually active women noted an improvement in dyspareunia symptom score and report of pain-free intercourse. Other symptoms described by women at the first visit included: burning (n = 76), itching (69), pain (43) and abnormal discharge (71). While these symptoms were significantly reduced at the final visit ($p < 0.05$ for each), the presence of vulvovaginal symptoms commonly waxed and waned in this group. Overall, 33% had resolution of symptoms, and 19% had improvement without resolution of symptoms. CONCLUSION: This cohort extends our understanding of the characteristics of women with erosive vulvar lichen planus and emphasizes its characteristically chronic course. While the recognition of erosive vulvar lichen planus may prevent unnecessary medical and surgical procedures, continued efforts to improve treatment should be investigated.

Topical tacrolimus in the management of lichen sclerosus.
Edey K, Bisson D, Kennedy C
BJOG. 2006 Dec;113(12):1482; author reply 1482-3

No abstract available.

Surgical treatment of clitoral phimosis caused by lichen sclerosus.
Goldstein AT, Burrows LJ
Am J Obstet Gynecol. 2007 Feb;196(2):126.e1-4

OBJECTIVE: The purpose of this study was to examine surgical outcomes for the correction of clitoral phimosis caused by lichen sclerosus. STUDY DESIGN: Eight women with lichen sclerosus underwent surgical repair of clitoral phimosis. They were assessed 12-36 months postoperatively by an independent research assistant. A questionnaire was used to assess the patients' perception of surgical success. RESULTS: Patients reported that they were either very satisfied (88%) or satisfied (12%) with the results of their surgery. All 4 women who had decreased clitoral sensation before surgery regained clitoral sensation and their ability to achieve orgasm. CONCLUSION: This study demonstrates that surgery for clitoral phimosis caused by lichen sclerosus can be performed to restore clitoral sensation and vulvar anatomy. There were few complications and a high degree of patient satisfaction with the procedure.

Early vulvar lichen sclerosus: a histopathological challenge.
Slater DN, Wagner BE
Histopathology. 2007 Feb;50(3):388-9

No abstract available.

Topical testosterone versus clobetasol for vulvar lichen sclerosus.
Ayhan A, Guven S, Guvendag Guven ES, Sakinci M, Gultekin M, Kucukali T
Int J Gynaecol Obstet. 2007 Feb;96(2):117-21. Epub 2007 Jan 19

OBJECTIVE: To compare the effects of topical testosterone and clobetasol treatments on symptoms remission and recurrence rates in patients with vulvar lichen sclerosus (LS). METHODS: A retrospective review of the records showed that, of 140 patients with biopsy-proven vulvar LS, 80 were treated with applications of testosterone propionate 2% in petrolatum and 60 with clobetasol 17-propionate 0.05%. RESULTS: The response rates after 6 months were 77.5% for patients treated with testosterone and 91.7% for those treated with clobetasol (P=0.02). The recurrence rates were 20% and 6.7% in the 2 groups, respectively (P=0.02). Premenopausal patients had higher remission rates and lower recurrence rates than postmenopausal patients (P>0.05). Considering whole patients, low remission rates and high recurrence rates were observed in patients who had had a hysterectomy (P>0.05). CONCLUSION: Treatment of LS with a corticosteroid provided excellent remission rates. In this study, clobetasol 17-propionate 0.05% was superior to testosterone for both remission induction and maintenance therapy.

Infectious Disease

Prevalence of bacterial vaginosis: 2001–2004 national health and nutrition examination survey data.
Allsworth JE, Peipert JF
Obstetrics & Gynecology 2007;109:114-120

OBJECTIVE: To estimate the prevalence and correlates of bacterial vaginosis among women between the ages of 14 and 49 years in the United States. METHODS: Data from the 2001–2001 and 2003–2004 National Health and Nutrition Examination Surveys were combined. Correlates of bacterial vaginosis evaluated included sociodemographic characteristics (age, race or ethnicity, education, poverty income ratio) and sexual history (age of first intercourse, number of sexual partners). Crude and adjusted odds ratios and 95% confidence intervals were estimated from logistic regression analyses. RESULTS: Almost one third of women (29%) were positive for bacterial vaginosis. Bacterial vaginosis prevalence varied with age, race or ethnicity, education, and poverty. Black, non-Hispanic (odds ratio [OR] 3.13, 95% confidence interval [CI] 2.58–3.80) and Mexican-American (OR 1.29, 95% CI 0.99–1.69) women had higher odds of bacterial vaginosis than white, non-Hispanic women after adjustment for other sociodemographic characteristics. Douching in the past 6 months was also an important predictor of bacterial vaginosis prevalence (OR 1.93, 95% CI 1.54–2.40). CONCLUSION: Bacterial vaginosis is a common condition among U.S. women, and the prevalence is similar to that in many treatment-seeking populations. Further studies are needed to disentangle the interactions between race or ethnicity and other sociodemographic characteristics. LEVEL OF EVIDENCE: III

Do panty liners promote vulvovaginal candidiasis or urinary tract infections? A review of the scientific evidence.
Farage M, Bramante M, Otaka Y, Sobel J
Eur J Obstet Gynecol Reprod Biol. 2007 Jan 2; [Epub ahead of print]

Panty liners are used to absorb light menstrual flow, vaginal discharge, or urine leakage, or to maintain a clean, dry feeling. Allegations that panty liners may trap heat and moisture to promote vulvovaginal candidiasis (VVC) or promote colonization by microbes that contribute to urinary tract infections appear to be unfounded. As reviewed herein, measurements of the impact of panty liners on skin temperature and skin surface moisture had no clinically meaningful effect on cell densities of genital microflora. Epidemiological investigations of a potential link to VVC were either negative or were inconclusive because of confounding factors. Although enteric microbes reside on the vulva and perineum, no evidence exists that panty liner use promotes urethral colonization by enteric microbes. Moreover, a

series of 13 randomized prospective trials of panty liners or ultra-thin pads demonstrated no clinically significant adverse effects either on the skin or on isolation frequencies or cell densities of representative genital microflora. Post-market surveillance systems suggest a low incidence of complaints. Evidence from vulvar clinic patients reveals no significant contribution of these products to persistent vulvar symptoms. Taken together, the scientific evidence supports the conclusion that panty liners are safe when used as intended and do not promote VVC or urinary tract infections.

Recurrent group A streptococcal vulvovaginitis in adult women: family epidemiology.
Sobel JD, Funaro D, Kaplan EL
Clin Infect Dis. 2007 Mar 1;44(5):e43-5. Epub 2007 Jan 22

Group A beta-hemolytic streptococcal (GAS) vulvovaginitis has been reported in prepubertal girls. In adult women, a vaginal carrier state has been described, but vulvovaginitis is rarely reported. We describe 2 cases of recurrent GAS vulvovaginitis in women whose husbands were gastrointestinal carriers of GAS. Characterization of the isolated strains demonstrated that identical emm types of GAS were shared by partners. Treatment of both partners resulted in resolution of vaginitis. On the basis of negative vaginal culture results obtained after treatment of each individual episode of vaginitis, we believe that the female patients were reinfected as a result of exposure to their husbands, with shedding likely to have occurred in bed. These cases reiterate the necessity for adequate screening of the patient's family and contacts in cases of recurrent GAS infection by culturing all potential areas of GAS carriage.

Basic Science

Reactive oxygen species (ROS) are involved in enhancement of NMDA-receptor phosphorylation in animal models of pain.
Gao X, Kim HK, Chung JM, Chung K
Pain. 2007 Feb 19; [Epub ahead of print]

Recent studies indicate that reactive oxygen species (ROS) play an important role in neuropathic pain, predominantly through spinal mechanisms. Since the data suggest that ROS are involved in central sensitization, the present study examines the levels of activated N-methyl-d-aspartate (NMDA) receptors in the dorsal horn before and after removal of ROS with a ROS scavenger, phenyl-N-t-butyl nitrone (PBN), in animal models of pain. Tight ligation of the L5 spinal nerve was used for the neuropathic pain model and intradermal injection of capsaicin was used for the inflammatory pain model. Foot withdrawal thresholds to von Frey stimuli to the paw were measured as pain indicators. The number of neurons showing immunoreactivity to phosphorylated NMDA-receptor subunit 1 (pNR1) and the total amount of pNR1 proteins in the spinal cord were determined using immunohistochemical and Western blotting techniques, respectively. Hyperalgesia and increased pNR1 expression were observed in both neuropathic and capsaicin-treated rats. A systemic injection of PBN (100mg/kg, i.p.) dramatically reduced hyperalgesia and blocked the enhancement of spinal pNR1 in both pain models within 1h after PBN treatment. The data suggest that ROS are involved in NMDA-receptor activation, an essential step in central sensitization, and thus contribute to neuropathic and capsaicin-induced pain.