NVA RESEARCH UPDATE NEWSLETTER

June 2005

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This newsletter has been supported, in part, through a grant from the **Enterprise Rent-A-Car Foundation**.

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This newsletter is quarterly and contains abstracts from medical journals published between March and June 2005 (abstracts presented at scientific meetings may also be included). Please direct any comments regarding this newsletter to chris@nva.org.

Vulvodynia / Pain

Vulvar pain in women attending a general medical clinic in Accra, Ghana.
Adanu RM, Haefner HK, Reed BD
J Reprod Med. 2005 Feb;50(2):130-4

OBJECTIVE: To determine the prevalence of vulvar pain and pain related to sexual intercourse among women attending a general medical clinic in Accra, Ghana. STUDY DESIGN: A cross-sectional survey was performed. RESULTS: Forty-six women (22.8%) reported the presence of vulvar pain at the time of the study. There was significant association between the presence of vulvar pain and dissatisfaction with the quality of sexual activity ($p < 0.001$). There was no association between the presence of vulvar pain and the type of underwear used or the menstrual hygiene of the respondents. CONCLUSION: Vulvar pain with some relationship to sexual intercourse appears to be a significant problem among Ghanaian women.

Vulval vestibulitis: a common cause of dyspareunia?
Munday P, Green J, Randall C, Fox D, Singh M, Ismailjee F, Perreira E
BJOG. 2005 Apr;112(4):500-3

The prevalence of vulval vestibulitis was evaluated in a prospective observational study. Four hundred women from West Hertfordshire, 100 each from community family planning, antenatal, general practice and genitourinary clinics were investigated. Participants completed a questionnaire and were examined for vulval erythema and point tenderness. An algesiometer was also used to evaluate tenderness. The prevalence of vestibulitis varied from 2.9% to 9.8% depending on the stringency of diagnostic criteria and the method of ascertaining pain. Vulval vestibulitis cannot be accurately defined by current criteria, but superficial dyspareunia appears to be a frequent problem in the community in women consulting for unrelated matters.

Vulvar clinics: a new initiative in Norway. [article in Norwegian]
Edgardh K
Tidsskr Nor Laegeforen. 2005 Apr 21;125(8):1026-7

BACKGROUND:Women with longstanding vulvar problems have difficulties finding medical care. In 2000, a first Norwegian vulvar clinic was opened at the Olafia centre for venereology in Oslo. The initiative was continued in 2003 by a multi-professional team in the dept. of gynaecology and obstetrics at

Rikshospitalet University Hospital. METHODS:Medical records from the two Vulva clinics have been reviewed in retrospect. RESULTS:During the period 2000 to 2003, a total of 217 patients had 470 visits to the Olafia clinic, mean age 31.4 years. Vulvodynia was diagnosed in 52 % of all patients, 30 % had a genital infection, 22 % a genital dermatitis or dermatosis and 21 % a primary sexual problem. At the multi-professional Rikshospitalet vulva clinic, run by specialists in gynaecology and dermato-venereology, 141 patients had 206 visits in 2003, mean age 42.5 years. Vulvodynia was diagnosed in 38 %, 26 % had a genital skin condition, 11 % primary sexual problems, 10 % a genital infection, and 10 % a gynaecological problem. A few patients were healthy controls. The difference in diagnostic groups is related to the age of the patients. CONCLUSION:The options for vulvar patients have improved in Oslo. Multi-professional cooperation has been achieved in our department, which serves as a national referral centre.

Adult-onset vulvodynia in relation to childhood violence victimization.
Harlow BL, Stewart EG
Am J Epidemiol. 2005 May 1;161(9):871-80

Researchers have failed to find a consistent association between childhood victimization and vulvodynia, a debilitating, unexplained vulvar pain condition. However, selection bias associated with case ascertainment, and differential reporting bias between clinic-based cases and controls, may explain in part the inconsistent findings. In 2000-2003, the authors identified 125 women experiencing symptoms of vulvar pain consistent with vulvodynia and 125 age- and community-matched controls from the Boston, Massachusetts-area general population. Telephone-administered questionnaires were used to obtain medical, psychiatric, and reproductive histories. Self-administered surveys assessed childhood exposure (age <12 years) to physical and sexual abuse and to poor family support. After author adjustment for socioeconomic position, women with vulvar pain versus controls were 2.6 times more likely to report never/rarely receiving childhood family support, such as comfort, encouragement, and love (95% confidence interval (CI): 1.3, 5.1). Adult-onset vulvodynia was strongly associated with abuse as a child more than a few times physically (odds ratio (OR) = 4.1, 95% CI: 1.7, 10.0) or sexually (OR = 6.5, 95% CI: 1.2, 35.1). When abused women were compared with those with no history of abuse, the association was largely confined to those harmed by a primary family member (OR = 3.6, 95% CI: 1.6, 8.0 for physical abuse; OR = 4.4, 95% CI: 0.9, 22.9 for sexual abuse). Additional population-based studies of clinically confirmed cases of vulvodynia are needed to replicate this association.

Neural correlates of painful genital touch in women with vulvar vestibulitis syndrome.
Pukall CF, Strigo IA, Binik YM, Amsel R, Khalife S, Bushnell MC
Pain. 2005 May;115(1-2):118-27

Vulvar vestibulitis syndrome (VVS) is a common cause of dyspareunia in pre-menopausal women. Recent evidence points to the importance of the sensory component in VVS, particularly the heightened processing of tactile and pain sensation in the vulvar vestibule. The goal of the present study was to examine the neural basis of heightened sensitivity to touch (i.e. allodynia) in women with VVS. Using functional magnetic resonance imaging, we compared regions of neural activity in 14 women with VVS and 14 age- and contraceptive-matched control women in response to the application of mild and moderate pressure to the posterior portion of the vulvar vestibule. Intensity and unpleasantness ratings were recorded after each scan; these ratings were significantly higher for women with VVS than controls. All women with VVS described moderate pressure as painful and unpleasant, and 6 of the 14 women with VVS described mild pressure as painful and unpleasant. In contrast, none of the stimuli was painful for control women. Correspondingly, women with VVS showed more significant activations during pressure levels that they found to be either painful or non-painful than did controls during comparable pressure levels. During pressure described as painful by women with VVS, they had significantly higher activation levels in the insular and frontal cortical regions than did control women. These results suggest that women with VVS exhibit an augmentation of genital sensory processing, which is similar to that observed for a variety of syndromes causing hypersensitivity, including fibromyalgia, idiopathic back pain, irritable bowel syndrome, and neuropathic pain.

Modified vulvar vestibulectomy: simple and effective surgery for the treatment of vulvar vestibulitis.
Lavy Y, Lev-Sagie A, Hamani Y, Zacut D, Ben-Chetrit A
Eur J Obstet Gynecol Reprod Biol. 2005 May 1;120(1):91-5

OBJECTIVE:: To evaluate the success of a simple modified vestibulectomy in treating vulvar vestibulitis. STUDY DESIGN:: Fifty-nine patients with vulvar vestibulitis refractory to nonsurgical treatment underwent modified vestibulectomy. Response was defined as return to normal coitus and was graded as complete, partial or non-responsive. RESULTS:: The postoperative follow-up period was 6 months-10 years. Thirty-nine (73.6%) patients reported complete response, 7 (13.2%) had partial response, and 7 (13.2%) were non-responsive to surgery. CONCLUSION:: Surgery is an effective treatment for vulvar vestibulitis refractory to conservative treatment. Simple modified vestibulectomy is considerably less invasive, technically simpler and probably less time consuming. Postoperative results employing this surgical procedure are found to be in line with postoperative results reported by others who employ surgical methods that are more extensive.

Personality traits associated with perception of noxious stimuli in women with vulvar vestibulitis syndrome.
Granot M
J Pain. 2005 Mar;6(3):168-73

Vulvar vestibulitis syndrome (VVS) is associated with enhanced pain sensitivity. The present study explores the role of personality on the perception of noxious stimuli among women with VVS. More specifically, the aim of the study was to explore whether the personality traits assessed by Cloninger's Tridimensional Personality Questionnaire (TPQ) (harm avoidance [HA], novelty seeking [NS], and reward dependence [RD]) are associated with the augmented pain perception in women with VVS. Quantitative sensory tests were applied to the forearm of 98 women with VVS and 135 control subjects, all of whom completed the TPQ. The women with VVS scored higher than the control subjects on HA and RD with no significant differences in NS. Linear regression analyses revealed that in the VVS group, lower pain thresholds and higher magnitude estimations of suprathreshold pain stimuli were associated with higher HA and RD scores. The enhanced pain perception among women with VVS might reflect their tendency to respond intensely to signals of reward and to elevate the perceived risk. This might lead them to avoid hazards by overestimating the level of potential harm, as represented by greater pain sensitivity. The association between personality traits assessed by Cloninger's Tridimensional Personality Questionnaire, ie, harm avoidance, novelty seeking, and reward dependence, and the enhanced perception of noxious stimuli in vulvar vestibulitis syndrome might suggest neurochemical mechanisms of pain experience affected by personality, with possible application for future treatment approaches toward pain disorders.

Anatomical study of the pudendal nerve adjacent to the sacrospinous ligament.
Mahakkanukrauh P, Surin P, Vaidhayakarn P
Clin Anat. 2005 Apr;18(3):200-5

The pudendal nerve (S3-S5) is a major branch of the sacral plexus. After branching from the sacral plexus, the pudendal nerve travels through three main regions: the gluteal region, the pudendal canal, and the perineum. In the gluteal region, the pudendal nerve lies posterior to the sacrospinous ligament. The relationship of the pudendal nerve to the sacrospinous ligament has important clinical ramifications, but there is a lack of literature examining the variations in pudendal nerve anatomy in the gluteal region. This study investigates the pudendal nerve trunking in relation to the sacrospinous ligament in 37 cadavers (73 sides of pelves) of 21 males and 16 females, ranging from 18-83 years of age. Pudendal nerve trunking could be grouped into five types: Type I is defined as one-trunked (41/73; 56.2%), Type II is two-trunked (8/73; 11%), Type III is two-trunked with one trunk as an inferior rectal nerve piercing through the sacrospinous ligament (8/73; 11%), Type IV is two-trunked with one as an inferior rectal nerve not piercing through the sacrospinous ligament (7/73; 9.5%), and Type V is three-trunked (9/73; 12.3%). In summary, 56.2% of pudendal nerves adjacent to the sacrospinous ligament were one-trunked,

31.5% were two-trunked and 12.3% were three-trunked. Fifteen inferior rectal nerves originated independently from the S4 root and never joined the main pudendal nerve. Eight of fifteen inferior rectal nerves pierced through the sacrospinous ligament, perhaps making it prone for entrapment. We measured the average diameter of the main trunk of the pudendal nerve to be 4.67 +/- 1.17 mm. We also measured the average length of the pudendal nerve trunks before terminal branching to be 25.14 +/- 10.29 mm. There was no significant statistical difference in the average length, average diameter, number of trunks, and pudendal nerve variations between male and female or right or left sides of the pelves. A detailed study of pudendal nerve trunking in relationship to the sacrospinous ligament would be useful for instruction in basic anatomy courses and in relevant clinical settings as well.

Vulvar Dermatoses

Mucous membrane pemphigoid of the vulva.
Goldstein AT, Anhalt GJ, Klingman D, Burrows LJ
Obstet Gynecol. 2005 May;105(5):1188-90

BACKGROUND: Mucous membrane pemphigoid is a rare autoimmune blistering disease primarily affecting mucosal surfaces. Blistering and scarring may occur in the eyes, mouth, esophagus, larynx, and on the vulva. Scarring can result in severe structural changes to the vulva that may mimic the findings of other inflammatory dermatologic disorders of the vulva, including lichen sclerosus and lichen planus. CASE: A 58-year-old woman presented with vulvar erosions, esophagitis, and laryngeal blisters. The clinical picture and the histopathology of a vulvar biopsy were suggestive of erosive lichen planus. Direct immunofluorescence, however, revealed findings diagnostic of mucous membrane pemphigoid. CONCLUSION: This case illustrates the importance of examining extragenital mucosal surfaces of any woman presenting with vulvar lesions. In addition, it demonstrates the importance of vulvar biopsy and the usefulness of direct immunofluorescence to differentiate between conditions with similar clinical and histopathologic changes.

Infectious Disease

Fungal species changes in the female genital tract.
Martens MG, Hoffman P, El-Zaatari M
J Low Genit Tract Dis. 2004 Jan;8(1):21-4

BACKGROUND.: Candidal vaginitis has traditionally been associated with Candida albicans. OBJECTIVE.: Two changes occurred over the past decade: first, the dispensing of over-the-counter (OTC) topical antifungals, and second, the approval of oral fluconazole 5 years later. Both have excellent activity versus C. albicans, but less activity versus nonalbicans species. MATERIALS AND METHODS.: To determine if there has been a shift in species causing vaginitis, swabs were obtained from 156 symptomatic patients during the period after the release of OTC antifungals, but before fluconazole's approval. Specimens were inoculated onto nonselective mycotic agar, with growth transferred to selective media. RESULTS.: One hundred eleven patients had a diagnosis of vulvovaginal candidiasis confirmed with yeast isolated. Ninety (81.1%) were identified as C. albicans. Of the 21 nonalbicans species, 15 (71.4%) were Candida glabrata. CONCLUSIONS.: Therefore, it appears that after decades of the predominance of Candida albicans, a change may be occurring resulting in an increase in nonalbicans species.

Frequency of interleukin-4 (IL-4) -589 gene polymorphism and vaginal concentrations of IL-4, nitric oxide, and mannose-binding lectin in women with recurrent vulvovaginal candidiasis.
Babula O, Lazdane G, Kroica J, Linhares IM, Ledger WJ, Witkin SS
Clin Infect Dis. 2005 May 1;40(9):1258-62. Epub 2005 Mar 11

BACKGROUND: A C-->T substitution at position -589 in the interleukin-4 (IL-4) gene is associated with increased production of IL-4. Associations between this polymorphism and recurrent vulvovaginal candidiasis (RVVC), as well as vaginal concentrations of IL-4 and the anticandidal compounds nitric oxide (NO) and mannose binding lectin (MBL), were evaluated. METHODS: Vaginal samples obtained by lavage from 42 women with RVVC during the acute stage of the disease and 43 control samples were assayed by enzyme-linked immunosorbent assay for IL-4 and NO metabolites. The -589 IL-4 gene polymorphism was detected by polymerase chain reaction and endonuclease digestion. Data were analyzed by Fisher's exact test, the nonparametric Mann-Whitney and Kruskal-Wallis tests, and Spearman rank correlation. $P < .05$ was considered significant. RESULTS: Candida albicans was identified in 38 patients with RVVC; 3 others had infection due to Candida tropicalis, and 1 had infection due to Candida krusei. The IL-4 T,T genotype was detected in 59.5% of patients with RVVC and in 7.0% of control subjects ($P < .0001$). The frequency of IL-4*T was 76.2% in patients with RVVC and 23.3% in control subjects ($P < .0001$). The median concentration of vaginal IL-4 was elevated in patients with RVVC, compared with control subjects ($P < .0001$). Conversely, vaginal concentrations of NO metabolites ($P = .02$) and MBL ($P < .0001$) were reduced in patients with RVVC. There was a positive association between IL-4*T homozygosity and vaginal IL-4 levels ($P < .0001$) and negative associations between this genotype and vaginal NO ($P = .01$) and MBL ($P < .0001$) concentrations. CONCLUSIONS: Reduced vaginal levels of anticandidal factors in IL-4*T homozygotes may increase susceptibility to RVVC.

Basic Science

N/A