Female dyspareunia

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Training Course in Sexual and Reproductive Health Research
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Female dyspareunia

- Terms and definitions
- Prevalence
- Etiology
- Evaluation and differential diagnosis
- Therapy
- Research

Terms and definitions

- Dyspareunia
- Vaginismus
- Vulvodynia

Dyspareunia - Definitions

- Painful sexual intercourse.
- **Nonorganic (psychogenic) dyspareunia**: dyspareunia (or pain during sexual intercourse) occurs in both women and men. It can often be attributed to local pathology and should then properly be categorized under the pathological condition. This category is to be used only if there is no primary nonorganic sexual dysfunction (e.g. vaginismus or vaginal dryness). Excludes: dyspareunia (organic) (ICD-10[1]).
- Genital pain experienced just before, during or after sexual intercourse (ACOG[2]).
- Recurrent genital pain occurring during, before, or after sexual intercourse in either the male or the female (MeSH[3]).
- Recurrent or persistent genital pain associated with sexual intercourse in either a male or a female. The disturbance causes marked distress or interpersonal difficulty. The disturbance is not caused exclusively by vaginismus or lack of lubrication, is not better accounted for by another Axis I disorder (except another Sexual Dysfunction) and is not due exclusively to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (DSM–IV-TR[4]).
- Persistent or recurrent pain with attempted or complete vaginal entry and/or penile vaginal intercourse (Basson et al, 2004[5]).

1. World Health Organization. ICD-10: International statistical classification of diseases and related health problems. Geneva: World Health Organization; 1992.
2. American College of Obstetricians and Gynecologists. Sexual dysfunction. Technical bulletin no. 211. Washington, D.C.: ACOG,1995.
3. Medical Subject Headings. [Internet]. [cited 2009 Feb 7]. Available from: http://www.nlm.nih.gov/mesh/meshhome.html
4. American Psychiatric Association. Diagnostic and statistical manual for mental disorders, fourth edition, text revision [DSM–IV-TR]. Washington: the Association; 2000.
5. Basson R, Leiblum S, Brotto L, Derogatis L, Fourcroy J, Fugl-Meyer K, Graziottin A, Heiman JR, Laan E, Meston C, Schover L, van Lankveld J, Schultz WW. Revised definitions of women's sexual dysfunction. J Sex Med. 2004 Jul;1(1):40-8.

Vaginismus - Definitions

- Nonorganic (psychogenic) vaginismus: spasm of the pelvic floor muscles that surround the vagina, causing occlusion of the vaginal opening. Penile entry is either impossible or painful. Excludes: vaginismus (organic) (ICD-10[1]).
- Recurrent or persistent involuntary spasm of the outer muscles of the vagina, occurring during vaginal penetration (MeSH[2]).
- Recurrent or persistent involuntary spasm of the musculature of the outer third of the vagina that interferes with intercourse. The disturbance causes marked distress or interpersonal difficulty. The disturbance is not better accounted for by another Axis I disorder and is not due exclusively to the direct physiological effects of a general medical condition (DSM–IV-TR[3]).
- The persistent or recurrent difficulties of the woman to allow vaginal entry of a penis, a finger, and/or any object, despite the woman's expressed wish to do so. There is often (phobic) avoidance and anticipation/fear/experience of pain, along with variable involuntary pelvic muscle contraction. Structural or other physical abnormalities must be ruled out/addressed (Basson et al, 2004[4]).

1. World Health Organization. ICD-10: International statistical classification of diseases and related health problems. Geneva: World Health Organization; 1992.
2. Medical Subject Headings. [Internet]. [cited 2009 Feb 7]. Available from: http://www.nlm.nih.gov/mesh/meshhome.html
3. American Psychiatric Association. Diagnostic and statistical manual for mental disorders, fourth edition, text revision [DSM–IV-TR]. Washington: the Association; 2000.
4. Basson R, Leiblum S, Brotto L, Derogatis L, Fourcroy J, Fugl-Meyer K, Graziottin A, Heiman JR, Laan E, Meston C, Schover L, van Lankveld J, Schultz WW. Revised definitions of women's sexual dysfunction. J Sex Med. 2004 Jul;1(1):40-8.

Vulvodynia - Definitions

- Chronic vulvar discomfort.
- Vulvar discomfort, most often described as burning pain, occurring in the absence of relevant visible findings or a specific, clinically identifiable, neurologic disorder. Classification is based further on whether the pain is generalized or localized and whether it is provoked, unprovoked, or both (International Society for the Study of Vulvovaginal Disease[1]).
- Pain located in the vulvar area of at least 3-6 months' without a definable cause (Bachmann et al, 2006[2]).
- Vulvar discomfort, most often described as burning pain, occurring in the absence of relevant visible findings or a specific, clinically identifiable, neurologic disorder (ACOG[3]).

1. Haefner HK, Collins ME, Davis GD, Edwards L, Foster DC, Hartmann EDH, Kaufman RH, Lynch PJ, Margesson LJ, Moyal-Barracco M, Piper CK, Reed BD, Stewart EG, Wilkinson EJ. The vulvodynia guideline. J Low Genit Tract Dis. 2005 Jan;9(1):40-51.
2. Bachmann GA, Rosen R, Pinn VW, Utian WH, Ayers C, Basson R, Binik YM, Brown C, Foster DC, Gibbons JM, Goldstein I, Graziottin A, Haefner HK, Harlow BL, Spadt SK, Leiblum SR, Masheb RM, Reed BD, Sobel JD, Veasley C, Wesselmann U, Witkin SS. Vulvodynia: a state-of-the-art consensus on definitions, diagnosis and management. J Reprod Med. 2006 Jun;51(6):447-56.
3. ACOG Committee Opinion: Number 345, October 2006: Vulvodynia. Obstet Gynecol. 2006 Oct;108(4):1049-52.

Common sexual problems in women and men in the UK

Dunn KM, Croft PR, Hackett GI. Sexual problems: a study of the prevalence and need for health care in the general population. Fam Pract. 1998 Dec;15(6):519-24.

Problem	Current (%)	Lifetime (%)
Women (N=979; Age 18-75 years)		
Never or rarely climax	27	
Pain during intercourse	18	45
Vaginal dryness	28	49
Problems with arousal	17	
Sex never or rarely pleasant	18	
Any of these	41	
Any lifetime problem		68
Men (N=789)		
Difficulty getting erection	21	23
Difficulty maintaining erection	24	25
Either or both of these	26	39
Premature ejaculation	14	31
Sex never or rarely pleasant	9	
Any of these	34	
Any lifetime problem		54

Laumann EO, Paik A, Rosen RC. Sexual dysfunction in the United States: prevalence and predictors. JAMA. 1999 Feb 10;281(6):537-44.

Question	Percent
Women (N=1749; Age 18-59 years)	
Lack interest in sex	32
Unable to achieve orgasm	26
Experience pain during sex	16
Sex not pleasurable	23
Anxious about performance	12
Trouble lubricating	21
Men (N=1410)	
Lack interest in sex	15
Unable to achieve orgasm	8
Climax too early	31
Sex not pleasurable	8
Anxious about performance	18
Trouble achieving or maintaining erection	10

Pitts MK, Ferris JA, Smith AMA, Shelley JM, Richters J. Prevalence and correlates of three types of pelvic pain in a nationally representative sample of Australian women. Med J Aust. 2008 Aug 4;189(3):138-43.

OBJECTIVE: To identify the prevalence and correlates of three types of pelvic pain (dysmenorrhoea, dyspareunia, and other chronic pelvic pain [CPP]) in a nationally representative sample of Australian women.
DESIGN AND SETTING: The CPP survey was part of a broader national study of health and relationships. Computer-assisted telephone interviews were administered to a random sample of 8656 Australian households; 4366 women aged between 16 and 64 years were interviewed in 2004 and 2005. Eighteen of the more than 200 potential survey questions related to pelvic pain.
MAIN OUTCOME MEASURES: Self-reports of dysmenorrhoea, dyspareunia, and any other CPP not associated with sexual intercourse or menstruation.
RESULTS: Data on 1983 women aged 16-49 years who were still menstruating and sexually active were analysed. Prevalences were 71.7% for dysmenorrhoea, 14.1% for dyspareunia and 21.5% for other CPP; 23.3% of women reported no pelvic pain of any kind. Severe pain was reported by 15.0% (95% CI, 13.0%-17.1%) of women with dysmenorrhoea, 7.8% (95% CI, 5.0%-11.9%) of women with dyspareunia and 20.0% (95% CI, 16.1%-24.6%) of women with other CPP. Just over a third (34.2%) of women who reported any pain had sought advice from a health professional. Women reporting CPP were also likely to report other health conditions, most notably depression and anxiety. There were clear associations between CPP and sexual difficulties, pregnancy and pregnancy outcomes.
CONCLUSIONS: Rates of pelvic pain in Australian women are high. General practitioners need to be ready to discuss these issues with patients, particularly in relation to underlying anxiety and depression.

Latthe P, Latthe M, Say L, Gülmezoglu M, Khan KS. WHO systematic review of prevalence of chronic pelvic pain: a neglected reproductive health morbidity. BMC Public Health. 2006;6177.

BACKGROUND: Health care planning for chronic pelvic pain (CPP), an important cause of morbidity amongst women is hampered due to lack of clear collated summaries of its basic epidemiological data. We systematically reviewed worldwide literature on the prevalence of different types of CPP to assess the geographical distribution of data, and to explore sources of variation in its estimates.
METHODS: We identified data available from Medline (1966 to 2004), Embase (1980 to 2004), PsycINFO (1887 to 2003), LILACS (1982 to 2004), Science Citation index, CINAHL (January 1980 to 2004) and hand searching of reference lists. Two reviewers extracted data independently, using a piloted form, on participants' characteristics, study quality and rates of CPP. We considered a study to be of high quality (valid) if had at least three of the following features: prospective design, validated measurement tool, adequate sampling method, sample size estimation and response rate >80%. We performed both univariate and multivariate meta-regression analysis to explore heterogeneity of results across studies.
RESULTS: There were 178 studies (459975 participants) in 148 articles. Of these, 106 studies were (124259 participants) on dysmenorrhoea, 54 (35973 participants) on dyspareunia and 18 (301756 participants) on noncyclical pain. There were only 19/95 (20%) less developed and 1/45 (2.2%) least developed countries with relevant data in contrast to 22/43 (51.2%) developed countries. Meta-regression analysis showed that rates of pain varied according to study quality features. There were 40 (22.5%) high quality studies with representative samples. Amongst them, the rate of dysmenorrhoea was 16.8 to 81%, that of dyspareunia was 8 to 21.8%, and that for noncyclical pain was 2.1 to 24%.
CONCLUSION: There were few valid population based estimates of disease burden due to CPP from less developed countries. The variation in rates of CPP worldwide was due to variable study quality. Where valid data were available, a high disease burden of all types of pelvic pain was found.

Danielsson I, Sjoberg I, Stenlund H, Wikman M. Prevalence and incidence of prolonged and severe dyspareunia in women: results from a population study. Scand J Public Health. 2003;31(2):113-8.

AIMS: The principle aim of this study was to investigate the prevalence and incidence of prolonged (≥ 6 months) and severe dyspareunia in a non-patient population of women.

METHODS: A total of 3,017 women aged 20-60 participating in a screening program for cervical cancer answered a questionnaire about possible painful coitus.

RESULTS: The prevalence was 9.3% for the whole group and 13% for women aged 20-29 and 6.5% for the women aged 50-60, with a risk ratio of 2.0 (95% CI 1.4-2.8) for the youngest age group compared with the oldest. Of the women who had ever had prolonged and severe dyspareunia 28% had consulted a physician for their symptoms; 20% recovered after treatment, while 31% recovered spontaneously.

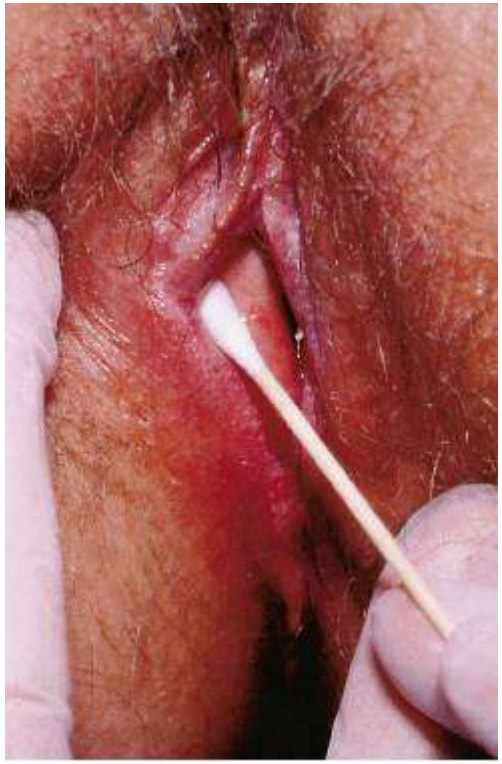
Dyspareunia - Etiology

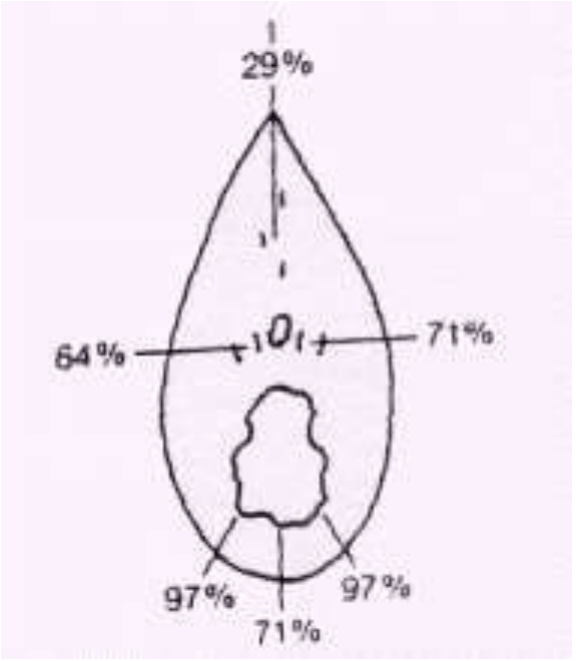
- **Superficial/entry dyspareunia**: pain at the introitus during intercourse.
- **Deep dyspareunia**: deep pain associated with intercourse.

Etiology
Superficial dyspareunia
Chronic vulvar discomfort

- Vulvodynia
  - Generalized vulvodynia
  - Vestibulodynia
- Cyclic vulvovaginitis (candidiasis)
- Vulvar dermatoses
- Neoplastic vulvar lesions

Cotton swab testing





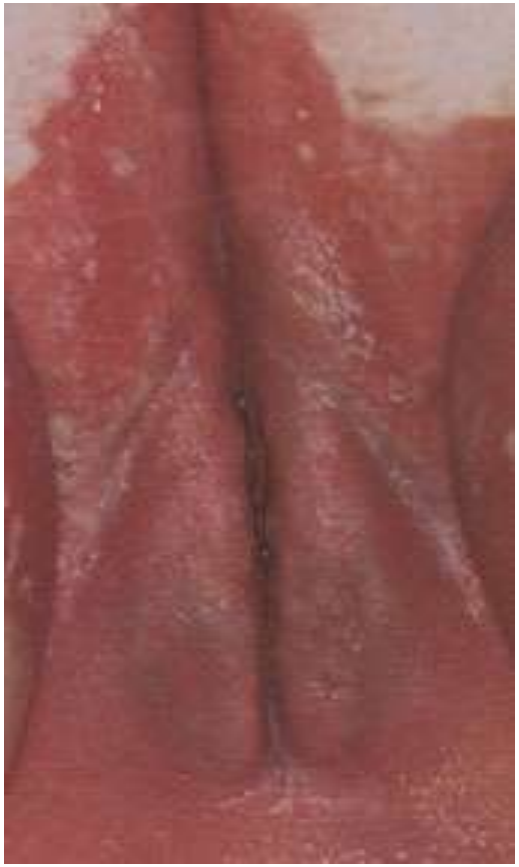
The cotton swab is used to test for pain locations on the vulva. Testing starts at the thighs and moves medially to the vestibule. The vestibule is tested at the 2:00, 4:00, 6:00, 8:00, and 10:00 positions. Each time the vestibule is touched if pain is present, the patient is asked to quantify the pain as mild, moderate, or severe.

Haefner HK, Collins ME, Davis GD, Edwards L, Foster DC, Hartmann EDH, Kaufman RH, Lynch PJ, Margesson LJ, Moyal-Barracco M, Piper CK, Reed BD, Stewart EG, Wilkinson EJ. The vulvodynia guideline. J Low Genit Tract Dis. 2005 Jan;9(1):40-51.

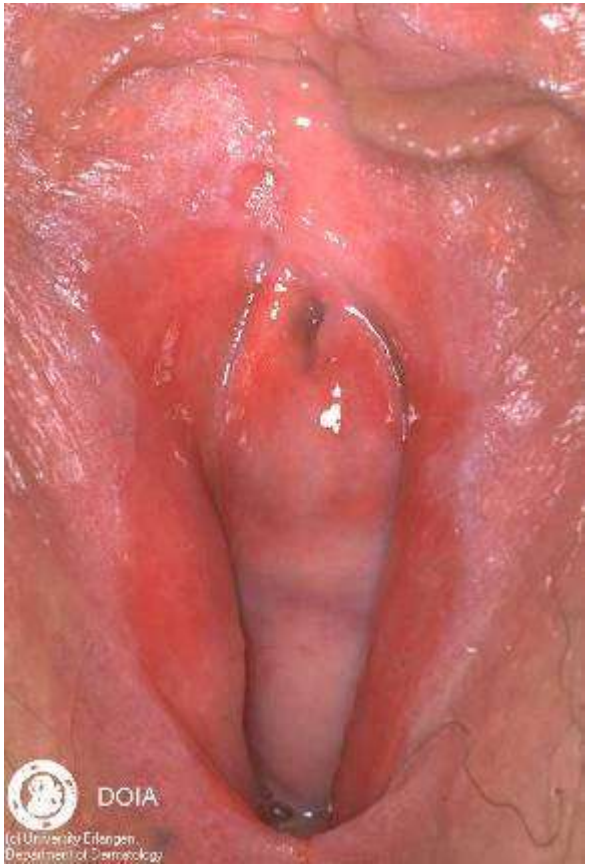
Cyclic vulvovaginitis

- Pain is worse just before or during menses
- Caused by a hypersensitivity reaction to Candida

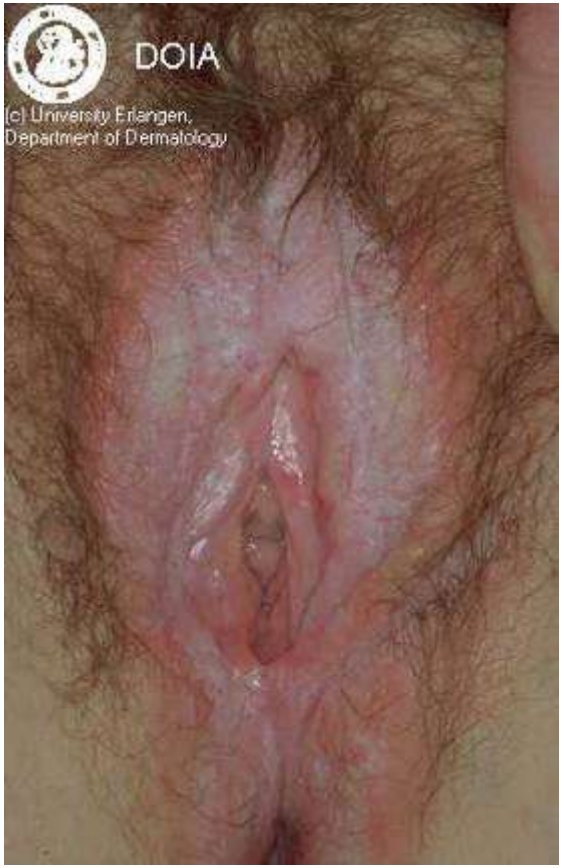
Vulvar dermatoses



Psoriasis

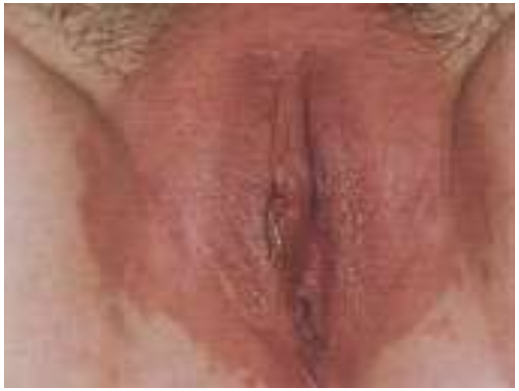


Lichen planus

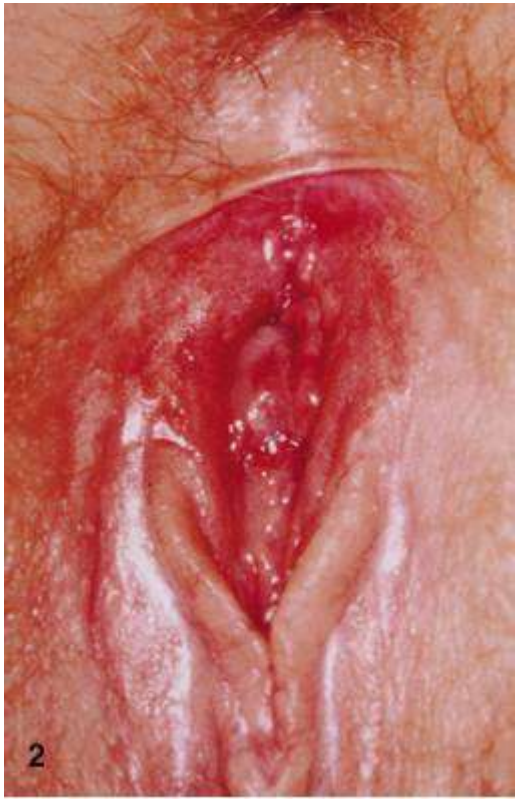


Lichen sclerosus et atrophicus

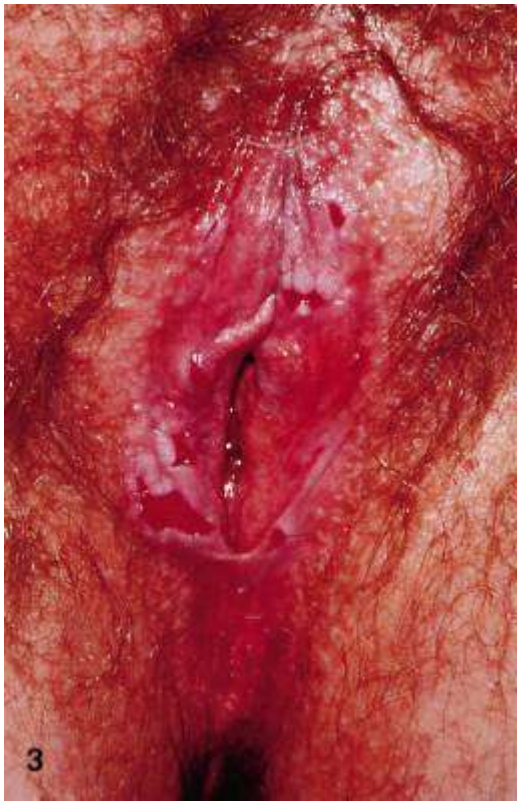
Vulvar dermatoses



Seborrheic dermatitis



Allergic dermatitis

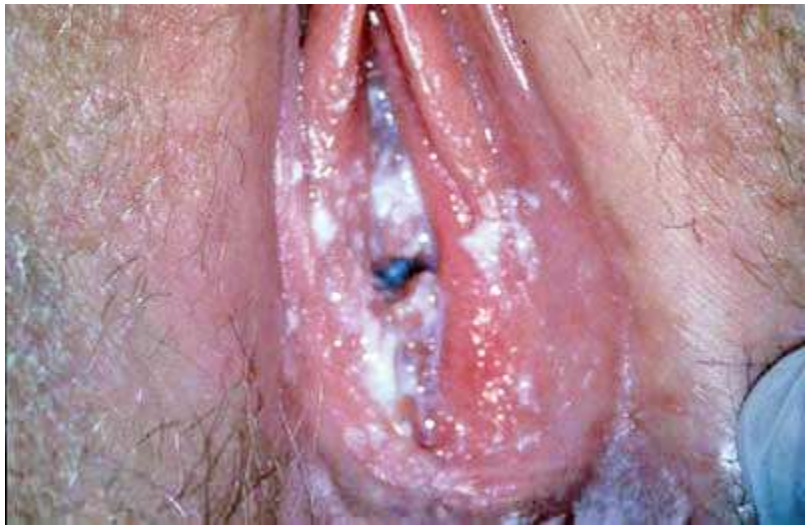


Pemphigus vulgaris

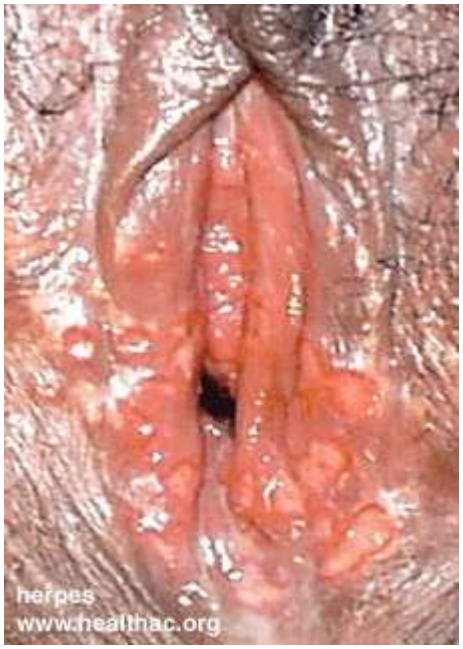
Etiology
Superficial and vaginal dyspareunia

- Causes of vulvodynia/chronic vulvar pain, vulvovaginal infections
- Psychogenic causes (nonorganic or psychogenic dyspareunia)
- Inadequate lubrication
- Vulvovaginal congenital anomalies
- Female genital mutilation
- Obstetric causes (episiotomy scars, vulvar varicosities)
- Vulvovaginal atrophy
- Urologic disorders (interstitial cystitis, urethritis)
- Bowel disorders (constipation, proctitis)
- Neurologic disorders (pudendal nerve lesions)
- Muscular disorders (pelvic floor hypertonus, fibromyalgia)
- Sjögren syndrome
- Iatrogenic and traumatic causes

Vulvovaginal infections

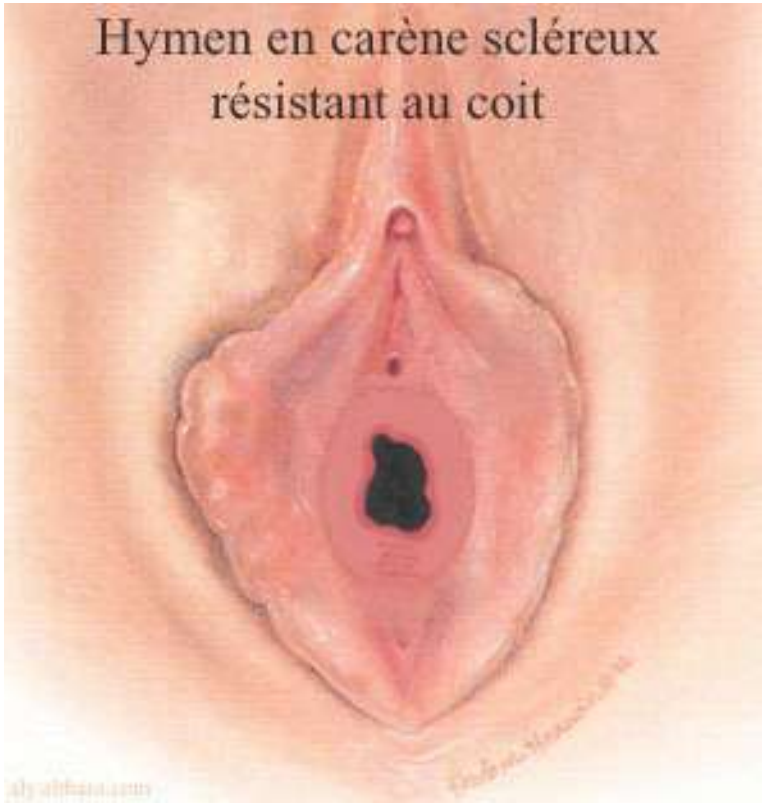


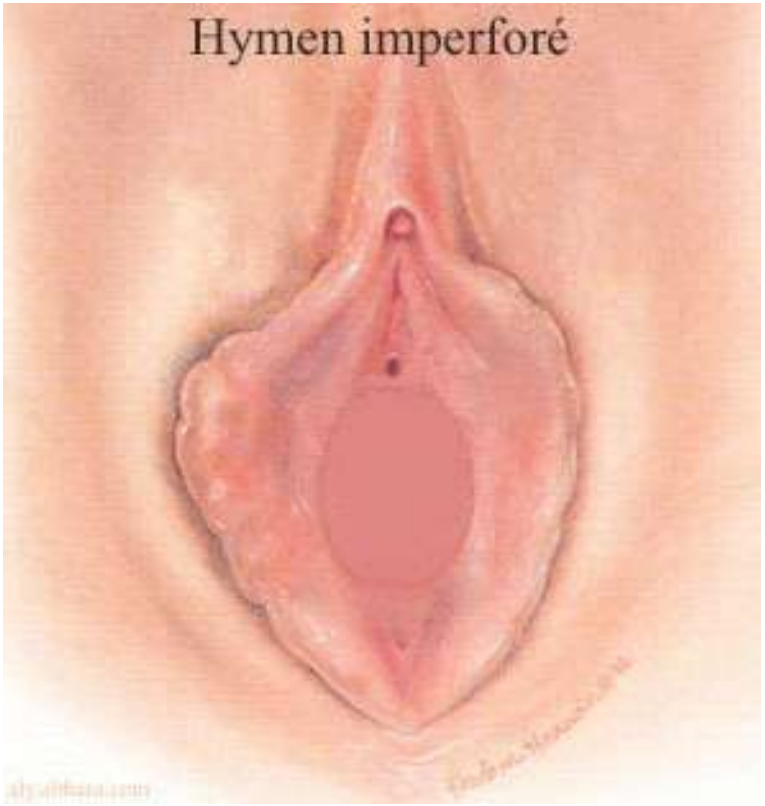
Candida albicans



Herpes genitalis

Congenital anomalies of the hymen

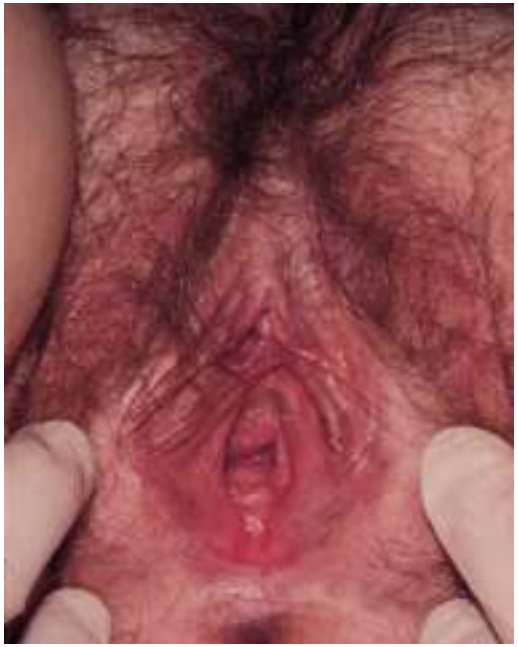


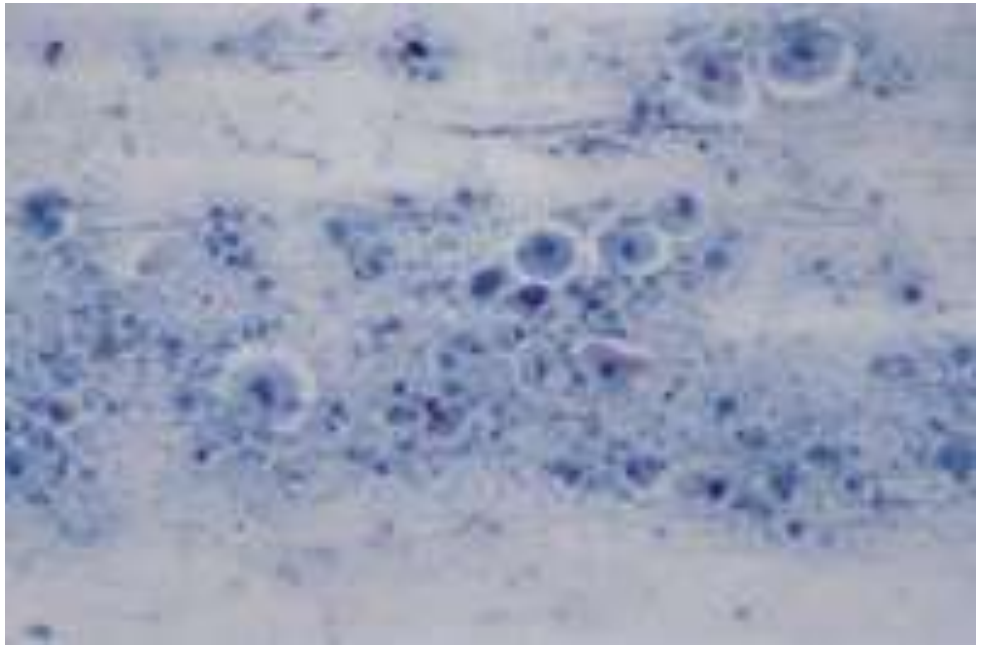


Sartore A, De Seta F, Maso G, Pregazzi R, Grimaldi E, Guaschino S. The effects of mediolateral episiotomy on pelvic floor function after vaginal delivery. Obstet Gynecol. 2004 Apr;103(4):669-73.

	Group A episiotomy (n=254)	Group B no episiotomy (n=265)	Odds ratio (95% CI)
Stress urinary incontinence (%)	12.9	12.1	1.01 (0.61, 1.69)
Anal incontinence (%)	2.8	1.9	1.47 (0.46, 4.7)
Dyspareunia (%)	7.9	3.4	2.43 (1.08, 5.45)
Perineal pain (%)	6.7	2.3	3.09 (1.2, 7.99)

Atrophic vaginitis





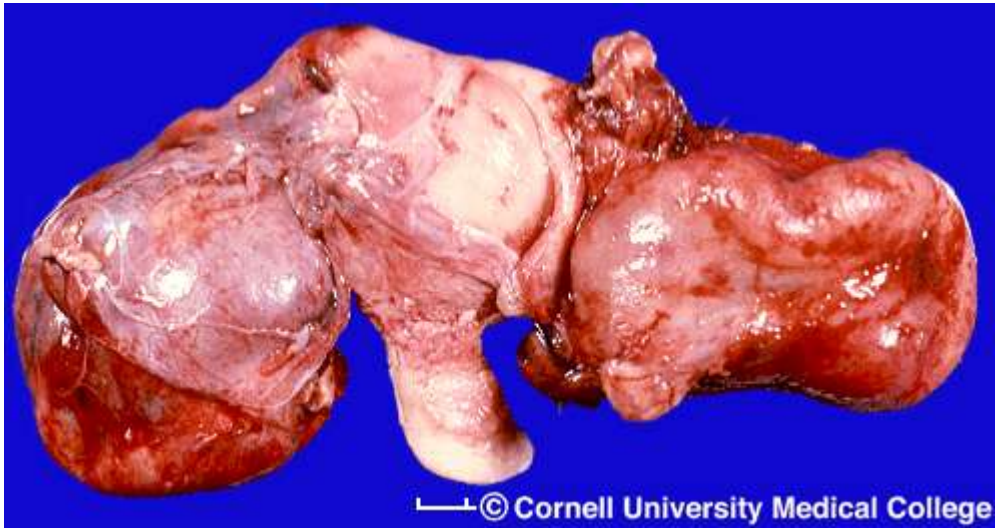
Nappi RE, Verde JB, Polatti F, Genazzani AR, Zara C. Self-reported sexual symptoms in women attending menopause clinics. Gynecol Obstet Invest. 2002;53(3):181-7.

Age, years (n=355)	Pain during intercourse
46-50 (n=115)	26 (22.6%)
51-55 (n=188)	57 (30.3%)
56-60 (n=52)	23 (44.2%)
Time since menopause, years (n=295)	
<1.1 (n=72)	18 (25.0%)
1.1-2,1 (n=72)	15 (20.8%)
2.2-5.2 (n=78)	22 (28.2%)
>5.2 (n=73)	38 (52.1%)

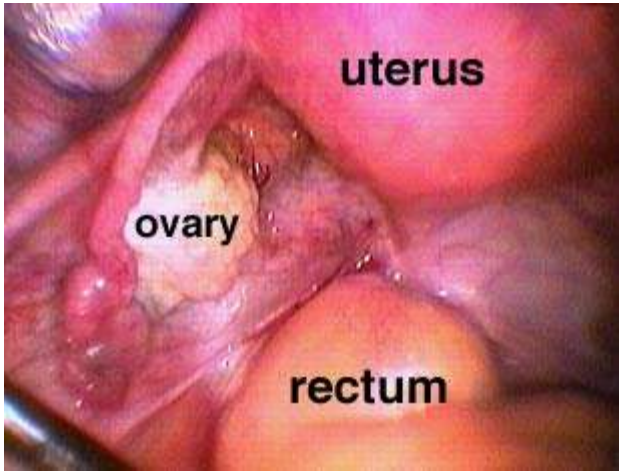
Etiology
Deep dyspareunia

- Genital infections: cervicitis, pelvic inflammatory disease
- Pelvic adhesions
- Endometriosis, adenomyosis
- Retroverted uterus, uterine fibroids
- Postpartum: Allen-Masters syndrome (broad ligament laceration)
- Pelvic congestion
- Genital prolapse
- Inflammatory bowel disease

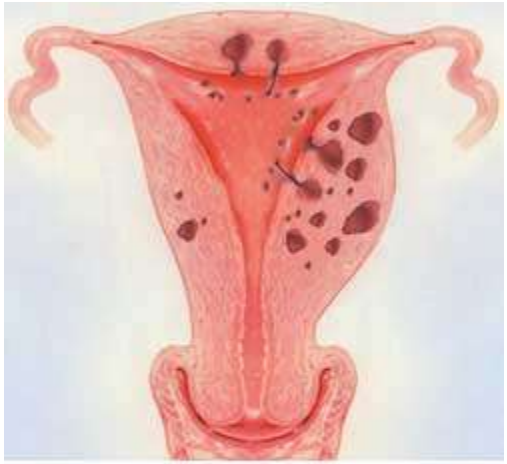
Deep dyspareunia - Etiology



Pelvic inflammatory disease



Endometriosis



Adenomyosis. Note thickened wall of uterus which can be mistaken for fibroids.

Adenomyosis

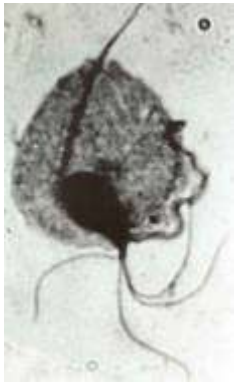
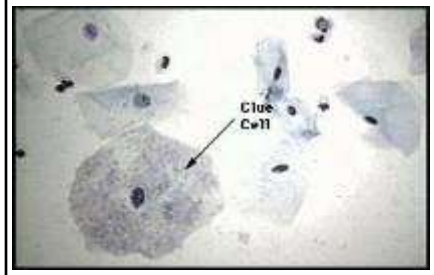
History

- Age, general history, gynecologic and obstetric history, psychologic factors, sexual history
- Dyspareunia
  - Superficial, vaginal, deep
  - Primary or secundary
  - Permanent or intermittent
  - Situational or generalized (occurs only with certain partners/situations or with all encounters)
  - With or without vulvodynia

Gynecological exam
Perineum, vulva, vagina

- Vaginal stenosis, atrophy, episiotomy scars, signs of vulvovaginitis or other vulvovaginal lesions
- Pain location, swab test
- Vaginal swab
- If indicated: culture, colposcopy, biopsy

Vulvovaginitis

	Trichomonas	**Candida**	**Bacterial vaginosis**
Vulvar pain	Present	Important	Absent
Discharge	Copious, malodorous, yellow-green (or discolored), pH≥4.5	Thick, white ("cottage cheese"), normal pH	Gray or yellow, positive whiff test, pH≥4.5
Vaginal swab			

Gynecological exam
Cervix, uterus, adnexa

- Cervix
  - Signs of cervicitis, hypertrophy, obstetric scars
  - Cervix tender to palpation
  - If indicated: cervical swab, culture
- Uterus
  - Position, size, consistency, tenderness
  - If indicated: vaginal ultrasound
- Adnexa
  - Size, tenderness
  - If indicated: vaginal ultrasound, laparoscopy

Therapy

Etiology	**Therapy**
Cyclic vulvovaginitis	Antifungal treatment
Papulosquamous vulvar dermatoses	Topical corticosteroids or testosterone (lichen sclerosus)
Vulvovaginal atrophy	Estrogen therapy
Contact vulvitis	Removal of the causative agent
Infections	Specific antimicrobial treatment
Endometriosis	Pharmacological or surgical treatment
Retroverted uterus, fibroids, adhesions	Surgery

ACOG and ASCCP issue joint opinion on vulvodynia

There are very few randomized trials of vulvodynia treatments and most treatment information is based on clinical experience, descriptive studies, or reports of expert committees. Some treatments that have been used include medication, biofeedback training, physical therapy, dietary modifications, cognitive behavioral therapy, sex counseling, and surgery. Newer treatments include acupuncture, hypnotherapy, nitroglycerin, and botulinum toxin.

Women with vulvodynia are advised to minimize vulvar irritation by wearing 100% cotton underwear; using mild soaps while bathing with no soap applied directly to the vulva; avoiding perfumes, dyes, shampoos, and detergents around the vulva; avoiding douching; refraining from using hair dryers on the vulvar area; using adequate lubrication during intercourse; and patting the vulva area dry after bathing and then applying a topical emollient without preservatives (such as vegetable oil or plain petroleum jelly) to the vulva to hold moisture in the skin.

No single treatment is successful in all women, according to the joint opinion. Expectations for improvement need to be realistically addressed with each patient. Rapid resolution of pain is unusual. Pain reduction may take weeks to months and may not resolve completely. Emotional and psychological support are important for many patients, and sex therapy and counseling may be beneficial.

ACOG Committee Opinion: Number 345, October 2006: vulvodynia. Obstet Gynecol. 2006 Oct;108(4):1049-52.

American College of Obstetricians and Gynecologists. Available from: http://www.acog.org/from_home/publications/press_releases/nr09-29-06-1.cfm

PubMed: Dyspareunia OR Vulvodynia
Randomized controlled trials (124) – February 7, 2009

Main subject of the study	N. of papers
Endometriosis	38
Menopause	21
Labor complications	17
Urinary or fecal incontinence/genital prolapse	10
Vulvar vestibulitis (vestibulodynia)	8
Chronic pelvic pain/dysmenorrhea	4
Genital infections	4
Hysterectomy	4
Vulvodynia	4
Breast cancer	3
IUD	2
Uterine fibroids	2
Diabetes	1
Interstitial cystitis	1
Lichen sclerosus	1
Male circumcision	1
Radiotherapy	1
Retroverted uterus	1
Sexual inadequacy	1