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A proposed diagnostic and treatment algorithm for vulvodynia, vulvar pain, and dyspareunia. Comments and criticisms are always welcome. It is essential that clinicians and researchers differentiate between different causes of vulvar pain to improve treatment and research.

INTROITAL DYSPAREUNIA & VULVAR PAIN: A diagnostic and treatment algorithm

VESTIBULODYNIA

TENDERNESS THROUGHOUT THE ENTIRE VESTIBULE

PAIN THROUGHOUT ENTIRE VESTIBULE BUT GREATER AT 4,6,8 O'CLOCK → PAIN CONFINED TO THE POSTERIOR VESTIBULE

HORMONALLY MEDIATED VESTIBULODYNIA
PE: Gland ostia are erythematous, mucosal pallor with overlying erythema, decreased size of labia minora and clitoris
LABS: High SHBG, low free testosterone
CAUSES: hormonal contraceptives, spironolactone, Tamoxifen, Aromitase Inhibitors, oophorectomy, amenorrhea, lactation
TREATMENT: Stop medications, topical estradiol combined with topical testosterone. Typically, estradiol 0.01%/testosterone 0.1% in a methycellulose base BID. May substitute estriol 0.03% for the estradiol in women with severe atrophy/tenderness/Sjogrens.

INFLAMMATORY VESTIBULODYNIA
HX: chronic infections, allergic reactions, copious yellowish discharge.
PE: erythema,leukorrhea, induration, vaginal mucosal tenderness, cervicitis/ectropion
CAUSES: desquamative inflammatory vaginitis, chronic candidiasis (see below), Latex allergy/ semen allergy
TREATMENT: Interferon 1.5 million units SQ TIW for 12 doses (if within 6 months), Singulair, Neogyn, Topical Cromolyn, SQ Triamcinolone, Capsaicin 0.025% 20 minutes QHS for 12 weeks. gabapentin 4% cream. Vulvar vestibulectomy if failed conservative treatment

PERSISTENT → ACQUIRED NEUROPROLIFERATIVE VESTIBULODYNIA

DESQUAMATIVE INFLAMMATORY VAGINITIS
HX: Copious yellow vaginal discharge that ruins underwear or requires a pantyliner, vulvar pruritus where discharge dries
PE: Copious leukorrhea, vaginal mucosa erythema, cervicitis, cervical ectropion
CAUSES: Unknown but current hypotheses infection of unknown pathogen, erosive lichen planus, vulvaginal atrophy, cervical ectropion
TREATMENT: estradiol/hydrocortisone/clindamycin cream, cryotherapy if significant ectropion

RECURRENT CANDIDIASIS
PE: erythema, induration, thin fissures, perianal erythema. Discharge is often thin and yellow not "white cottage cheese"
LABS: Hyphae and increased WBCs on wet mount. Postitive cultures
CAUSES: Diet high in simple sugars, antiblotics, OCPs
TREATMENT: Decrease diertary sugars and take probiotics (Probaclac) Oral Nystatin 500,000 units TID for three months + fluconazole 150mg Q3days x 4 doses the Qweek for 3 months.

NEUROPROLIFERATIION

CONGENITAL NEUROPROLIFERATIVE VESTIBULODYNIA
HX: Pain since first tampon use, speculum insertion, and coitarche. No pain free sex. Late coitarche > 25 years old.
PE: tenderness of the entire vestibule from Hart's line to the hymen, often with erythema that worsens after touch with cotten swab. Umbilical hypersensitivity in approximately 60% of women.
LABS: increased density of c-afferent nociceptors if using S-100 of PGP 9.5
TREATMENT: VULVAR VESTIBULECTOMY

ACQUIRED NEUROPROLIFERATIVE VESTIBULODYNIA
HX-allergic reaction
-chronic yeast infection
-polymorphisms in IL1RA, MBL, IL1B
-associated with urticaria, hives, sensitive skin
TREATMENT: Interferon 1.5 million units SQ TIW for 12 doses (if within 6 months), Singulair, Neogyn, Topical Cromolyn, SQ Triamcinolone, Capsaicin 0.025% 20 minutes QHS for 12 weeks. gabapentin 4% cream. Vulvar vestibulectomy if failed conservative treatment

PAIN CONFINED TO THE POSTERIOR VESTIBULE

PAIN EXTENDS OUTSIDE THE VESTIBULE (physical exam only, not subjective)

PUDENDAL NEURALGIA
-PN tender at ischial spine
-unilateral or significantly greater on one side
-history of coccyx trauma
-history of hip pain or labral tear
-better with lying prone/standing, worse with sitting
-pain improved temporarily with PN block
TREATMENT: SERIAL PN BLOCKS, GABAPENTIN, LYRICA, PUDENDAL NERVE NEUROMODULATION

PERSISTENT GENITAL AROUSAL DISORDER
Causes: Pudendal neuralgia, Tarlov cyst, pelvic varicosities, mass along dorsal nerve of clitoris, change in psychotropic medicine
Dx: tendernss at ischial spine, MRI, pudendal nerve block, dorsal clitoral nerve block

HYPERTONIC PELVIC FLOOR MUSCLE DYSFUNCTION
-Pain at 4,8 o'clock if if hypertonus of pubococcygeus
-Pain at 6 o'clock if hypertonus of puborectalis
-urinary symptoms if it involves coccygeus (frequency, sensation of incomplete emptying, hesitancy)
-constipation, rectal fissures, hemorrhoids if it involved puborectalis
-associated with ANXIETY, low back pain, scoliosis, hip pain, "holding urine", excessive core strengthening exercises
TREATMENT: PELVIC FLOOR PHYSICAL THERAPY, DIAZEPAM SUPPOSITORIES, VAGINAL DILATORS, HOME PELVIC FLOOR EXERCISES, BOTOX INJECTION

LICHENIFICATION, ULCERATION, RESORPTION OF THE LABIA MINORA, CLITORAL PHIMOSIS, NARROWING OF THE INTROITUS WITH EVIDENCE OF FISSURING

LICHEN PLANUS
Affects the squamous epithelium of the vulva and causes ulceration in the vestibule (Wickham's stria) Affects mucous membrane of the mouth and vagina. Can cause synechiae/scarring of the vagina.
PREMALIGNANT
TREATMENT: CLOBETASOL, ELIDEL, PROTOPIC, NEED TO TREAT VAGINA- USE MEDS ON VAGINAL DILATORS. SYSTEMIC STEROIDS OR OTHER IMMUNOSUPPRESSANTS MAY BE NEEDED

CAN CO-EXIST

LICHEN SCLEROSUS
Anogenital in a "figure 8" distrubution but does not go inside the vagina.
AFFECTS 1:60 WOMEN
3-5% MALIGNANT TRANSFORMATION (VULVOSCOPY NECESSARY)
BIOPSY BEFORE TREATMENT
TREATMENT: CLOBETASOL OINTMENT, SQ TRIAMCINOLONE. SURGERY FOR PHIMOSIS OR RECURRENT TEARING