Common Conditions Seen by the OBGYN

Hope K. Haefner, MD

Case Presentation

35 y.o. woman complains of severe burning on entire vulva
- She is unable to have intercourse
- She is unable to wear pants
Using the Current Terminology, Your Diagnosis Is?

A. Localized vulvodynia
B. Generalized vulvodynia
C. Vulvar dysethesia
D. Genital retraction syndrome
Localized

Pain noted in red/pink area below
Using the Current Terminology, Your Diagnosis Is?

A. Localized vulvodynia
B. Generalized vulvodynia
C. Vulvar dysethesia
D. Somatoparaphrenia

Definition of Vulvodynia

International Society for the Study of Vulvovaginal Disease (ISSVD)

Chronic discomfort
Burning
Stinging
Irritation
Rawness
April 2015

2015 Consensus terminology and classification of persistent vulvar pain
Jacob Bornstein MD, MPA, Andrew Goldstein MD, and Deborah Coady MD
for the consensus vulvar pain terminology committee

From the International Society for the Study of Vulvovaginal Disease (ISSVD),
the International Society for the Study of Women’s Sexual Health (ISSWSH),
and the International Pelvic Pain Society (IPPS)

Support from the National Vulvodynia Association

2015 Consensus Terminology and Classification of Persistent Vulvar Pain and Vulvodynia

A. Vulvar pain caused by a specific disorder*
  • Infectious (eg, recurrent candidiasis, herpes)
  • Inflammatory (eg, lichen sclerosus, lichen planus, immunobullous disorders)
  • Neoplastic (eg, Paget disease, squamous cell carcinoma)
  • Neurologic (eg, postherpetic neuralgia, nerve compression or injury, neuroma)
  • Trauma (eg, female genital cutting, obstetric)
  • Iatrogenic (eg, postoperative, chemotherapy, radiation)
  • Hormonal deficiencies (eg, genitourinary syndrome of menopause [vulvovaginal atrophy], lactational amenorrhea)

B. Vulvodynia—Vulvar pain of at least 3 months’ duration, without clear identifiable cause, which may have potential associated factors

The following are the descriptors:
  • Localized (eg, vestibulodynia, clitorodynia) or Generalized or Mixed (Localized and Generalized)
  • Provoked (eg, insertional, contact) or Spontaneous or Mixed (Provoked and Spontaneous)
  • Onset (primary or secondary)
  • Temporal pattern (intermittent, persistent, constant, immediate, delayed)

* Women may have both
2015 Consensus Terminology and Classification of Persistent Vulvar Pain and Vulvodynia

Appendix:
Potential Factors Associated with Vulvodyniaa
• Comorbidities and other pain syndromes (e.g., painful bladder syndrome, fibromyalgia, irritable bowel syndrome, temporomandibular disorder; level of evidence 2)
• Genetics (level of evidence 2)
• Hormonal factors (e.g., pharmacologically induced; level of evidence 2)
• Inflammation (level of evidence 2)
• Musculoskeletal (e.g., pelvic muscle overactivity, myofascial, biomechanical; level of evidence 2)
• Neurologic mechanisms
  • Central (spine, brain; level of evidence 2)
  • Peripheral: neuroproliferation (level of evidence 2)
• Psychosocial factors (e.g., mood, interpersonal, coping, role, sexual function; level of evidence 2)
• Structural defects (e.g., perineal descent; level of evidence 3)

a The factors are ranked by alphabetical order.

Etiologies

Topical review
Vulvodynia: Current state of the biological science
Ursula Wesselmann a,b, Adrienne Bonham c, David Foster c,d,e

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c Department of Obstetrics and Gynecology, University of Rochester School of Medicine and Dentistry, Rochester, NY, USA
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e Department of Physical Therapy, University of Rochester School of Medicine and Dentistry, Rochester, NY, USA

Sept. 2014
Not tender; no area of vulva described as area of burning

Alternative diagnosis
Vaginal Lubricants

- Replens
- Astroglide
- KY Liquid
- Probe
- Slippery stuff
- Jo Premium
  ... etc.

Topical Anesthetics

- 5% Lidocaine (Xylocaine®) ointment safe, effective short-term symptom relief for vestibulodynia (pre-intercourse)
  - Benzocaine (Vagisil®) not recommended; it is a sensitizing agent, causing rebound vasodilation and pain
- Doxepin (Zonalon®)
- Topical amitriptyline 2% with baclofen 2% in WWB (water washable base) – squirt 1/2 cc from syringe onto finger and apply to affected area WWB. Apply qhs with increase not to exceed tid
- Topical ketamine 2%, topical gabapentin 6%, topical baclofen 2% in WWB. Apply qhs with increase not to exceed tid.
Oral Medications

She is 5 foot 4 inches and 300 pounds. She is concerned about the potential weight gain with tricyclics. She cannot remember to take anything more than twice a day. What would you consider for her pain?

A. Amitriptyline
B. Gabapentin
C. Topiramate
D. Percocet
The 2006 and 2011 International Society for the Study of Vulvovaginal Disease Classifications of Vulvar Dermatoses

<table>
<thead>
<tr>
<th>2011 ISSVD Clinical Classification of Vulvar Dermatological Disorders (Lynch 2011)</th>
<th>2006 ISSVD Classification of Vulvar Dermatoses: Pathologic Subsets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin-colored lesions</td>
<td>Spongiotic pattern</td>
</tr>
<tr>
<td>Red lesions: patches and plaques</td>
<td>Acanthotic pattern</td>
</tr>
<tr>
<td>Red lesions: papules and nodules</td>
<td>Lichenoid pattern</td>
</tr>
<tr>
<td>White lesions</td>
<td>Dermal homogenization/sclerosis pattern</td>
</tr>
<tr>
<td>Dark colored (brown, blue, gray, or black) lesions</td>
<td>Vesiculobullous pattern</td>
</tr>
<tr>
<td>Blister</td>
<td>Acantholytic pattern</td>
</tr>
<tr>
<td>Erosions and ulcers</td>
<td>Granulomatous pattern</td>
</tr>
<tr>
<td>Edema (diffuse genital swelling)</td>
<td>Vasculopathic pattern</td>
</tr>
</tbody>
</table>
What is a lichen?

Lichen Sclerosus
Introduction

- Common chronic vulvar disease
- Inflammation present
- Age range from childhood to elderly (bimodal distribution)
Lichen Sclerosus

Question

The reason “et atrophicus” was dropped from “lichen sclerosus” was:

1. Histologically, LS often is not an atrophic vulvar condition
2. It was too hard to spell
3. Grossly, it does not appear atrophic
4. We use a US terminology and “et atrophicus” is French
Location of Lichen Sclerosus on the Vulva and Adjacent Areas

<table>
<thead>
<tr>
<th>Area</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labia</td>
<td>100%</td>
</tr>
<tr>
<td>Clitoris (prepuce)</td>
<td>70.4%</td>
</tr>
<tr>
<td>Perineum</td>
<td>67.9%</td>
</tr>
<tr>
<td>Buttocks</td>
<td>32.3%</td>
</tr>
<tr>
<td>Perianus</td>
<td>32.1%</td>
</tr>
<tr>
<td>Crural area</td>
<td>8.6%</td>
</tr>
<tr>
<td>Urethra</td>
<td>3.7%</td>
</tr>
</tbody>
</table>


Clinical Findings- Symptoms

- Often asymptomatic
- Most common symptom is pruritus
  - Can be severe, intolerable
  - Can interfere with sleep
  - Pruritus ani
Other Symptoms

- Burning
- Soreness
- Dysuria
- Dyspareunia
- Apareunia
- Pain with defecation
- Constipation (children)

Signs

- Hypopigmentation
- Ivory white papules or plaques
- Cigarette paper appearance
- Cellophane-like sheen to surface
- Hour glass-figure of eight appearance
- Patchy or generalized
  - Vulva, perineum, perianal
  - No vaginal involvement
Signs- Secondary Changes

- Fusion of labia minora
- Scratching yields open areas causing erosions
Urinary retention
Tearing

Cigarette Paper Appearance
Figure of Eight – Hour Glass

Whitening
Fissure
Loss of labia minora
Question

A patient with vulvar whitening that is completely symmetric and has no loss of the labia minora most likely has:

1. Lichen sclerosus
2. Lichen planus
3. Vitiligo
4. Graft versus host disease

Lichen Sclerosus and Vitiligo
Office Procedures

Biopsy (4 mm)

Histopathology

Thinned epidermis +/- hyperkeratosis

Band of homogenized collagen

Lymphocytic infiltrate under the band
Extragenital Involvement

- Neck
- Shoulders
- Axillae
- Under breasts
- Flexor aspects of wrists
- Scalp
- Palms
- Soles
- Acrochordons
Treatment of Lichen Sclerosus

Thorough assessment

Biopsy to verify diagnosis or rule out cancer

Treat secondary infection (particularly yeast)

Check thyroid function

Lichen Sclerosus - Treatments

General Care Measures
  - Bland emollients
  - 100% cotton underwear
  - Avoid tight, occlusive clothing
  - No soaps to the vulva
Treatment of Lichen Sclerosus

Superpotent steroid ointment (clobetasol propionate 0.05%)
• Twice daily in a thin, invisible film for 1 month then daily for two months
  - Maintain twice weekly Class 1 VERSUS
  - Decrease to Class IV steroid

Steroid Medications

Clobetasol propionate ointment 0.05%
Sig: apply to vulva bid x 1 month, then qd x 2 months
Disp: 30 gms

Triamcinolone acetonide ointment 0.1%
Sig: apply to vulva qd to bid Disp: 80 gms
Consider decreasing gradually to triamcinolone acetonide ointment 0.025% qd to bid
**Tacrolimus**

0.1% ointment  
Apply to skin bid to qd

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**Steroid Medications**

**Oral steroids**  
- Prednisolone  
- Prednisone  
- Methyl prednisolone  

Rarely required  
Significant side effects
Less Common Treatments
Systemic Therapy

- Retinoids
- Potassium para-aminobenzoate (Potoba®)
  - Inhibition of glycosaminoglycan secretion by skin fibroblasts
- Antimalarial agents (chloroquine)
  - Oral or intralesional

Intralesional or Intramuscular Triamcinolone
Intralesional Injections

Bupivacaine (0.25% or 0.5%) and triamcinolone acetonide

Draw up triamcinolone acetonide first

(10 mg/cc vs 40 mg/cc) (can use up to 40 mg steroid in single dose per month) HOWEVER NEED TO ASSESS AREA

Combine with bupivacaine (large area use 0.25%; small area use 0.5%)

Can be repeated monthly
Injections

Intramuscular triamcinolone acetonide

1 mg per kg up to 80 mg into gluteus muscle

Can be repeated monthly up to 3 or 4 times

Surgical Treatment

Limited role (high rate of recurrence)

Surgical division of mucosal adhesions helpful in clitoral phimosis, introital narrowing
DO NOT DO THIS ON LICHEN PLANUS PATIENTS IN CLINIC!
Prepuce Cyst and Lichen Sclerosus
## 2015 ISSVD Terminology of Vulvar Squamous Intraepithelial Lesions

<table>
<thead>
<tr>
<th>Classification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low grade squamous intraepithelial lesion (Flat</td>
<td>condyloma or HPV effect)</td>
</tr>
<tr>
<td>High grade squamous intraepithelial lesion (VIN</td>
<td>usual type)</td>
</tr>
<tr>
<td>Intraepithelial neoplasia, differentiated-type</td>
<td></td>
</tr>
</tbody>
</table>
Lichen Sclerosus and VIN Differentiated V-to-Y Flaps
V-to-Y Flaps

V-to-Y Flaps
V-to-Y Flaps
**Lichen Planus**

- Autoimmune
- Histology and morphology resemble other hyperimmune conditions (GVH, lichenoid drug eruption)
- More difficult to treat than LS; may respond to immunosuppressive therapy
Lichen Planus

- On keratinized skin, pruritic papule
- Vulva, vagina and mouth-often erosive disease

Lichen Planus Symptoms

Pruritus
Irritation
Rawness
Burning
Dyspareunia
Apareunia
Lichen Planus Signs

Non-erosive (often extremities)

Erosive
  Changes on mouth and vulva and vagina

Non-erosive LP
Erosive Lichen Planus
Question

Erosive lichen planus can occur in the

1. Ear
2. Esophagus
3. Mouth
4. All of the above
Lichen Planus

Diagnosis

– Biopsy when indicated; often nonspecific
– Biopsy white epithelium; otherwise the edge of an erosion
– Consider immunofluorescent study
Lichen Planus

Treatment

- Intravaginal dilator
- Topical corticosteroids
  
  Hydrocortisone acetate suppositories or cream 25 to 50 mg per vagina qhs

  or

  Clobetasol 0.05% ointment inserted per vagina

  Taper
**Tacrolimus**

0.1% ointment
Apply bid to skin to qd

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**Lichen Planus**
Other treatments

- Anti-inflammatory antibiotics
- Misoprostol
- Hydroxychloroquine (Plaquenil)
- Retinoids
- Cyclosporine
- Cyclophosphamide
- Azathioprine
- Etanercept (Enbrel)
- Mycophenolate mofetil (CellCept)
- Methotrexate
Soft Type Backer Rods

- Ideal for irregular joints, particularly where free flowing and self-leveling sealants are employed
- Google
Lysis of Vulvovaginal Adhesions in Lichen Planus

- Surgical lysis of adhesions
  - Goal
    - Improve urine flow, decrease risk of UTI
    - Allow intercourse, reduce dyspareunia
  - Best if disease controlled (koebnerization)
  - Results
    - N=22, 11 patients who underwent surgery for vulvovaginal adhesions and 11 age matched controls
    - 6 months to 6 years post-lysis of adhesions
    - 91% satisfied with procedure
    - 75% of patients with decreased urinary difficulties
    - 55% able to have intercourse
    - 50% continued to fear pain
  - Post op dilator 48-72 hours, long term dilation and steroids

## Postoperative management recommendations

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Dosing</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intravaginal corticosteroids</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydrocortisone 100 mg/g in</td>
<td>300 mg q.i.d per vagina</td>
<td>First week postoperatively</td>
</tr>
<tr>
<td>emollient cream base</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>400 mg q.i.d per vagina</td>
<td>Second week postoperatively</td>
</tr>
<tr>
<td></td>
<td>500 mg q.i.d per vagina</td>
<td>Third week postoperatively</td>
</tr>
<tr>
<td></td>
<td>400 mg q.i.d per vagina</td>
<td>Fourth week postoperatively</td>
</tr>
<tr>
<td></td>
<td>300 mg q.i.d per vagina</td>
<td>Fifth week postoperatively</td>
</tr>
<tr>
<td></td>
<td>200 mg q.i.d per vagina</td>
<td>Sixth week postoperatively</td>
</tr>
</tbody>
</table>
|                               | 100 mg q.i.d per vagina | Starting week 7, indefinitely  

### Dilatation

| Largest size tolerated        | QHS for 20–25 min fr 6 mg with silicone lubricant, then consider daily dilation with a water soluble lubricant in the shower (dilator placed into vagina and immediately removed to prevent adhesion formation) |

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- *Depending on disease severity, patients may eventually decrease to 100 mg hydrocortisone suppositories nightly per vagina if tolerated and have 25 mg hydrocortisone suppositories nightly per vagina. The long-term goal is to utilize hydrocortisone suppositories 2–3 times per week. Any medical-grade dilator set is acceptable.*

*Vaginal dilatation is associated with vasomotor symptoms and a sensation of mild to severe pain or discomfort. These symptoms should be carefully explained to the patient before treatment.*

*References:*

Other Treatments Lichen Planus (and Lichen Sclerosus)

- Hydrodissection with reverse V plasty technique
- Cryosurgery
- Ultrasound therapy
- Use of split thickness skin grafts or full thickness skin grafts
- Release of urethral strictures (oral mucosa grafts)

- Use of acellular human dermal allograft
- Role of adipose derived mesenchymal cells and platelet rich plasma in tissue regeneration
- Stem cell lift
Case Presentation

A 49y.o. G4P2 presents with chronic vulvar pruritus and irritation. Her vaginal pH is 4.0. She has had 3 other identical episodes this year.

<table>
<thead>
<tr>
<th></th>
<th>pH (3.0-4.5)</th>
<th>WBC</th>
<th>Parabasals</th>
<th>Features</th>
<th>Discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>3.0-4.5</td>
<td>Few or none</td>
<td>no</td>
<td>NI lactobacilli</td>
<td>Creamy, mucous, white</td>
</tr>
<tr>
<td>Yeast</td>
<td>3.0-4.5</td>
<td>no</td>
<td>no</td>
<td>Hyphae Spores (400x)</td>
<td>Curdy</td>
</tr>
<tr>
<td>Bacterial Vaginosis (Amsel Criteria)</td>
<td>&gt;5.0</td>
<td>No to small</td>
<td>no</td>
<td>Clue Cell</td>
<td>Yellow, grey w/ odor</td>
</tr>
<tr>
<td>Trichomoniasis</td>
<td>&gt;5.0</td>
<td>yes</td>
<td>maybe</td>
<td>Motile trich</td>
<td>Green, yellow, bubbly</td>
</tr>
<tr>
<td>DIV</td>
<td>&gt;5.0</td>
<td>yes</td>
<td>yes</td>
<td>Mixed bacteria, absent or reduced lacto</td>
<td>yellow</td>
</tr>
<tr>
<td>Atrophic Vaginitis</td>
<td>&gt;5.0</td>
<td>likely</td>
<td>yes</td>
<td>Scant cells, few bacteria</td>
<td>Scant, dry</td>
</tr>
</tbody>
</table>
Culture Positive for Candida Glabrata

• Low vaginal virulence
• Rarely causes symptoms, even when identified by culture
  – 50% of the time non-albicans yeast is an innocent bystander and is not causing the patient’s symptoms
    Nyirjesy 2016
• Exclude other co-existent causes of symptoms and only then treat for C. glabrata
Other Antifungals
Boric Acid

- Puratronic, 99.99995% (metals basic)
- Formula
  \[ H_3BO_3 \]
- Formula Weight
  61.83
- Form
  Crystalline Powder
- Melting Point
  170.9°
- Merck Number
  11,1336
Boric Acid Capsule or Suppository
PER VAGINA

Fill 0-gel capsule halfway (600 mg)
For treatment of acute infection; insert *per vagina* qhs x 14 days
For prevention of recurrence; insert *per vagina* twice weekly

KEEP AWAY FROM CHILDREN
CONTRAINDICATED IN PREGNANCY

Before Treatment
After Treatment

Does she qualify for the diagnosis of recurrent Candida

A. Yes
B. No
Yeast/Candida iphone App

Contributors

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Vulvovaginal Candidiasis

CANDIDIASIS

- General Information
- Simple Candida
- Recurrent Infections
- Treatment by Type
- Pregnancy Considerations

INFORMATION

- Wet Mount Examples
- Clinical Images
- Patient Information
- About
Vulvovaginal Candidiasis

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INFORMATION
- Wet Mount Examples
- Clinical Images
- Patient Information
- About

Treatment by Type

Yeast Culture/Species Results

- Candida albicans
- Candida glabrata
- Candida parapsilosis
- Candida tropicalis
- Candida lusitaniae
- Trichosporon
- Saccharomyces cerevisiae
- Candida kefyr
- Candida dubliniensis

There are limited data on some of the treatment regimens. The compounded medications generally are suggestions to consider when other agents are not working. The compounded medications are generally used for resistant strains of Candida.
Yeast Culture/Speciation Results

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There are limited data on some of the treatment regimens. The compounded medications generally are suggestions to consider when other agents are not working. The compounded medications are generally used for resistant strains of Candida.

Candida lusitaniae

Topical creams can be irritating; vaginal tablets or suppositories may be less irritating. One-day products may be more irritating than longer-use products. Ketocanazole is not included in this list due to the availability of more efficacious and less toxic medications.

Use as directed by package labeling. All pharmacies may not carry all products. The creams and suppositories are often oil-based and might weaken latex condoms and diaphragms.

**Oral**

Fluconazole

Additional information on drug interactions with fluconazole can be obtained in the CDC Guidelines [http://www.cdc.gov/std/guidelines/candidiasis.htm](http://www.cdc.gov/std/guidelines/candidiasis.htm)

In pregnancy, fluconazole is not to be used, instead use topical creams for treatment.

Recurrence:

- 150 mg oral tablet every 3 days for three times, then 150 mg orally weekly for up to six months

At times, other dosing may be required such as 100 mg oral tablet every 3 days for three times (day 1, 4, and 7), then 100 mg orally weekly for up to six months; or 200 mg oral tablet every 3 days for 3 times (day 1, 4, and 7) then 200 mg orally weekly for up to six months.

If fluconazole cannot be used, (liver disease, Steven’s-Johnson syndrome, or side effects such as headaches or nausea) consider:

- Boric acid
- Maintenance creams for recurrent yeast

**Itraconazole**

In pregnancy, itraconazole is not to be used, instead use topical creams for treatment.

100mg oral tablet daily for 2 weeks, then twice weekly for up to 6 months.

**Topical**

Clotrimazole

Clotrimazole 1% vaginal cream: 1 applicatorful per vagina nightly for 7 nights

Clotrimazole 2% vaginal cream: 1 applicatorful per vagina nightly for 3 nights
Miconazole 7 day cream 2% (100 mg per dose)
- One applicatorful per vagina nightly for 7 nights

Miconazole 7 day cream 2% (100 mg per dose) plus miconazole nitrate cream 2%
- One applicatorful per vagina nightly for 7 nights
- Miconazole nitrate 2% cream to the vulva twice a day for up to 14 days

Miconazole 3 day cream, suppository, ovule 4% (200 mg per dose)
- One applicatorful, suppository or ovule per vagina nightly for 3 nights

Miconazole 3 day cream, suppository, ovule 4% (200 mg per dose) plus miconazole nitrate cream 2%
- One applicatorful, suppository or ovule per vagina nightly for 3 nights
- Miconazole nitrate 2% cream to the vulva twice a day for up to 14 days

Miconazole 1 day insert (ovule) (1200 mg per dose) plus miconazole nitrate cream 2%
- One insert (ovule) per vagina for one day or night
- Miconazole nitrate cream 2% cream to the vulva twice a day for up to 14 days

Miconazole nitrate topical 2% cream to the vulva twice a day for up to 14 days

For some recurrent infections, consider using Miconazole 2% vaginal cream: 1 applicatorful per vagina nightly for 14 nights, followed by 1 applicatorful twice weekly for up to six months.

Compounded

Boric acid suppositories
In pregnancy, boric acid is not to be used, instead use maintenance creams for recurrent yeast.

Vaginal boric acid suppositories 600 mg per vagina for 14 nights; if recurrent, consider suppression after retreatment with twice weekly boric acid 600 mg per vagina.

Boric acid capsules can be FATAL if swallowed/taken orally.
ERYTHEMA FROM CANDIDA INFECTION OF SKIN OVERLYING SACRUM

Vulvovaginal Candidiasis

- General Information
- Simple Candida
- Recurrent Infections
- Treatment by Type
- Pregnancy Considerations

- Wet Mount Examples
- Clinical Images
- Patient Information
- About
Case Presentation

85 y.o. woman presents with vulvar discoloration

- No itching or pain
- Biopsy performed
Your Diagnosis Is?

A. Seborrheic keratosis
B. LSIL
C. HSIL
D. Squamous cell carcinoma
**HPV**

- Non-enveloped double stranded DNA virus
- Genome of 8000 base pairs encoding 2 protein types

**Late proteins:**
- L1 and L2 (from viral capsid)
- Expressed only during initial infection
- Involved in packaging of the virus

**Early proteins:**
- E1,2,4,5,6,7
- Expressed throughout its life cycle
- Regulate the replication of viral DNA

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**Anogenital HPV Infection**

- Over 180 HPV types; approximately 40 infect the anogenital region
- Anogenital HPV are divided in two groups
  - Low risk: HPV 6,11
  - High risk: HPV 16,18 (31, 33, 35, 45, 51, 52, etc.)
- Many HPV infections are not associated with visible lesions; long latency is possible
- Incidence has been gradually rising over the last 50 years
  - But it is now falling (however, only in younger individuals) due to vaccine protection
LSIL (HPV Effect)

Spiked (acuminate) warts were recognized as abnormalities of the genitalia in ancient Greece and Rome
HPV Types Causing Genital Warts

Low-risk HPV types

Your Treatment Is?

A. Trichloroacetic acid
B. Imiquimod
C. Laser therapy
D. No treatment, just monitor

CDC STD Treatment Guidelines 2015
http://www.cdc.gov/std/tg2015

Recommended Regimens for External Anogenital Warts (i.e., penis, groin, scrotum, vulva, perineum, external anus, and perianus)

Patient-Applied:
- Imiquimod 3.75% or 5% cream
  OR
- Podofilox 0.5% solution or gel
  OR
- Sinecatechins 15% ointment

Provider-Administered:
- Cryotherapy with liquid nitrogen or cryoprobe
  OR
- Surgical removal either by tangential scissor excision, tangential shave excision, curettage, laser, or electrosurgery
  OR
- Trichloroacetic acid (TCA) or bichloroacetic acid (BCA) 80%–90% solution
Silk Touch Laser
Hand held device
Laser Fumes

- Mask protection
- CDC STD Treatment Guidelines
# STD Treatment Guidelines Tables: Health Care Workers

<table>
<thead>
<tr>
<th>Author/Citation</th>
<th>Study Design</th>
<th>Population, Sample Size, Methods</th>
<th>Outcome measures</th>
<th>Summary Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abramson Arch Otolaryngol Head Neck Surg 1990</td>
<td>Cross-sectional</td>
<td>7 patients w laryngeal papilloma 1 had suction tip applied directly to papilloma, 6 had tip held above during laser therapy, and smoke collected into phosphate buffered saline collection trap 5/6 then had suction tip placed onto papilloma and plaque collected</td>
<td>HPV detected via Southern blot</td>
<td>No HPV detected unless contact made directly with papilloma 2 samples had HPV DNA via Southern blot (not using sensitive techniques, laryngeal papilloma also with low copies of viral DNA compared to EGW)</td>
</tr>
<tr>
<td>Andre J Am Acad Dermatol 1990</td>
<td>Case series</td>
<td>3 patients treated by CO2 laser for EGW Biopsies obtained from warts and plaques collected in buffered saline, DNA extracted</td>
<td>Presence of HPV by blot hybridization</td>
<td>2/3 patients had HPV DNA detected in both the lesion and laser plume</td>
</tr>
<tr>
<td>Bergbrant Acta Derm Venereol 1994</td>
<td>Cross-sectional</td>
<td>19 physicians performing electrocoagulation of EGW 11 physicians CO2 laser of EGW</td>
<td>Presence of HPV DNA 6, 11, 16,18, or 33 via PCR pre and post procedure</td>
<td>No conjunctival HPV noted Post Electrocoagulation Nontzilal: 2/76 to 4/19 post-procedure Nootnil: 0/19 to 3/19 post-procedure</td>
</tr>
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