Cutaneous Diseases of the External Genitalia

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It is important to perform a thorough skin survey and not focus solely on the area of affected genital skin.

<table>
<thead>
<tr>
<th>PRIMARY LESION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flat</td>
<td></td>
</tr>
<tr>
<td>Macule</td>
<td>A circumscribed, flat discoloration that may be brown, blue, red, or hypopigmented</td>
</tr>
<tr>
<td>Elevated Solid</td>
<td></td>
</tr>
<tr>
<td>Papule</td>
<td>An elevated, solid lesion up to 0.5 cm in diameter of variable color. Papules may become confluent to become plaques</td>
</tr>
<tr>
<td>Nodule</td>
<td>A circumscribed, elevated solid lesion &gt;0.5 cm in diameter</td>
</tr>
<tr>
<td>Plaque</td>
<td>A circumscribed, elevated, superficial, solid lesion &gt;0.5 cm in diameter</td>
</tr>
<tr>
<td>Fluid-Filled</td>
<td></td>
</tr>
<tr>
<td>Vesicle</td>
<td>A circumscribed collection of free fluid up to 0.5 cm in diameter</td>
</tr>
<tr>
<td>Bulla</td>
<td>A circumscribed collection of free fluid &gt;0.5 cm in diameter</td>
</tr>
<tr>
<td>Pustule</td>
<td>A circumscribed collection of leukocytes and free fluid (pus)</td>
</tr>
<tr>
<td>Wheal (hive)</td>
<td>A firm erythematous plaque resulting from infiltration of the dermis with fluid (may be transient)</td>
</tr>
</tbody>
</table>
## Secondary Cutaneous Lesions

<table>
<thead>
<tr>
<th>SECONDARY LESION</th>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>Scale</td>
<td>Excess dead epidermal cells that are produced by abnormal keratinization and shedding</td>
</tr>
<tr>
<td>Crust</td>
<td>A collection of dried serum and cellular debris (a scab)</td>
</tr>
<tr>
<td>Erosion</td>
<td>A focal loss of epidermis. Erosions do not penetrate below the dermoepidermal junction and heal without scarring</td>
</tr>
<tr>
<td>Ulcer</td>
<td>A focal loss of epidermis and dermis which heals with scarring</td>
</tr>
<tr>
<td>Fissure</td>
<td>A linear loss of epidermis and dermis with sharply defined, vertical walls</td>
</tr>
<tr>
<td>Atrophy</td>
<td>A depression in the skin resulting from thinning of the epidermis or dermis</td>
</tr>
<tr>
<td>Scar</td>
<td>An abnormal formation of connective tissue implying dermal damage</td>
</tr>
</tbody>
</table>
DERMATOLOGIC THERAPY

• Useful drug classes: A.B, A.F, A.V, A.I and A.P.

• A lack of familiarity → lower the threshold that leads urologists to prescribe systemic A.B → resistance

• Systemic antifungals
  – extensive area of skin
  – disseminated mycoses with skin involvement
  – infection involving the hair follicles
  – in immunocompromised individuals
• For short-term (≤3 weeks) such as allergic contact dermatitis, a single morning dose of GCS is given to minimize suppression of the hypothalamic-pituitary-adrenal axis

• Longer-term treatment
  – Osteoporosis
  – Cataract
  – Hypertension
  – Obesity
  – Immunosuppression
  – psychiatric changes

• Even topical corticosteroids can have significant adverse effects:
  Epidermal atrophy          Telangiectasias
  Hypopigmentation          Allergic reactions
  Alteration in the usual course of skin infections and infestations.
Steroid atrophy of penile shaft skin after application of corticosteroid under the foreskin for 8 weeks
• Allergic Dermatitis
• Papulosquamous Disorders
• Vesicobullous Disorders
• Noninfectious Ulcers
• Infections and Infestations
• Neoplastic Conditions
• Benign Cutaneous Disorders Specific to the Male Genitalia
• Common Miscellaneous Cutaneous Disorders
ALLERGIC DERMATITIS

Allergy mediated processes leading to pruritic skin lesions
**Differential Diagnosis of Allergic Dermatitis**

<table>
<thead>
<tr>
<th>Disorder</th>
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<tbody>
<tr>
<td>Eczema</td>
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<tr>
<td>Allergic dermatitis</td>
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<tr>
<td>Seborrheic dermatitis</td>
</tr>
<tr>
<td>Intertrigo</td>
</tr>
<tr>
<td>Contact dermatitis</td>
</tr>
<tr>
<td>Irritant dermatitis</td>
</tr>
<tr>
<td>Balanoposthitis</td>
</tr>
<tr>
<td>Zoon balanitis</td>
</tr>
<tr>
<td>Candidal-related illness</td>
</tr>
<tr>
<td>Impetigo</td>
</tr>
<tr>
<td>Herpes simplex</td>
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<tr>
<td>Herpes zoster</td>
</tr>
<tr>
<td>Drug reaction</td>
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</tbody>
</table>
Atopic Dermatitis (Eczema)

• Chronic relapsing dermatitis, Genetic susceptibility

• Intense pruritus

• Damage to the epidermis

• Erythematous papules and thin plaques with secondary excoriations

• **NO** precise border

• 90% manifest before the age of 5 years

• Tendency to develop asthma and allergic rhinitis
Eczema involving the vulva
• **Intense pruritus** is the hallmark, and controlling the patient’s urge to scratch is critical for successful treatment

• Worse during evening and exacerbated by sweat or wool clothing

• Superinfection with *Staphylococcus aureus* species

• No pathognomonic laboratory test, biopsy result, or single clinical feature

*A variety of “trigger factors”*
Treatments

• Gentle cleaning with non alkali soaps.

• Topical corticosteroids may control pruritus (short courses).

• Topical macrolide immunomodulatory agents such as tacrolimus and pimecrolimus (long-term therapy).

• Antihistamines helpful in breaking the “itch-scratch cycle”.

• Oral antistaphylococcal drugs.
Contact Dermatitis

- **Sharply limited** to an area of skin exposure

- Minutes to hours after exposure

- Burning, stinging, and soreness may be accompanied by erythema, edema, bullae, or frank necrosis.

- Clothing, safe occupational practices.

- Skin barriers such as ointments or emollients

- Long list of common allergens.

- Patch testing → confirm the diagnosis. **Nickel sulfate**

- Oral antihistamines with removal of the inciting allergen.
Contact dermatitis from belt buckle due to nickel allergy.
An example of patch testing with a positive response to nickel.
Erythema Multiforme and SJS

• Generalized skin disease

• Minor and major forms.

• **Minor**: Acute, self-limited (several weeks)

• Abrupt onset of symmetrical fixed red papules that may evolve into target lesions.

• Clinical rather than histologic diagnosis.
• Papules and target lesions are grouped

• EM minor are precipitated by HSV I & II

• Herpetic lesions BEFORE target lesions by 10 to 14 days

• Oral antihistamines may provide symptomatic relief
Targetoid lesions of the hands and penis
• EM major = SJS (controversion)

• SJS is much more serious $\rightarrow$ ICU or burn unit

• Features similar to extensive skin burns

• Mimic life-threatening toxic epidermal necrolysis.

• Prodromal upper respiratory illness $\rightarrow$ blister formation and epidermal necrosis.

• Inciting factors (drugs) NSAIDS, sulfonamides, tetracycline...
• Rarely: infectious agent

• Protracted course of 4 to 6 weeks
• Mortality 30%.

• Vaginal stenosis, urethral meatal stenosis, and anal strictures

• **Treatment**: removal of the offending drug
• Supportive care similar to severe burns.
• No specific therapy for SJS
Typical microscopic picture of erythema multiforme with a normal stratum corneum, necrotic keratinocytes in the epidermis and a lymphoid infiltrate.
Labial erosions in a case of Stevens-Johnson syndrome
Scaly papules and plaques

Psoriasis
Seborrheic dermatitis
Dermatophyte infection
Erythrasma
Secondary syphilis
Pityriasis rosea
Discoid lupus
Mycosis fungoides
Lichen planus
Fixed drug eruption
Reiter syndrome
Pityriasis versicolor
Bowen disease
Extramammary Paget disease
Psoriasis

- 2% of the population, polygenic, family history

- Triggering factors: trauma, infection, stress, or new meds

- Sharply demarcated erythematous plaque with silvery-white scales

- Two peaks: 20 to 30 and 50 to 60 years.

- Impairment quality of life: pruritus and cosmetic

- Lesions on elbows, knees, buttocks, nails, scalp → diagnosis
• Circumcised: plaques on the glans and corona

• Uncircumcised: Hidden under the preputial skin

• Chronic disease: relapsing and remitting

• For genital psoriasis: topical corticosteroid for short courses (2 weeks)

• Vitamin D3 analogues, dithranol, and retinoids, IS

• Photochemotherapy +UV radiation (PUVA) → SCC
Alternating neutrophils and parakeratosis in the stratum corneum of plaque psoriasis (sandwich sign)

Silver scales on an erythematous base
Reiter Syndrome

• Urethritis, arthritis, ocular findings

• Oral ulcers, and skin lesions

• On the genitalia: mistaken for psoriatic lesions

• Preceded by an episode of either urethritis (Chlamydia, Gonococcus) or GI infection (Yersinia, Salmonella, Shigella, Campylobacter, Neisseria, or Ureaplasma species) and common in HIV
• Bacterial antigens and HLA-B27

• Psoriasiform skin lesions present on the penis are referred to as **balanitis circinata** = difficult to differentiate from psoriasis

• Self-limited (few weeks to months)

• Lesions may respond to **topical corticosteroids**, and systemic therapy is rarely required.
Comparison of psoriasis (A) and Reiter syndrome (B; *balanitis circinata*) involving the glans penis.

Note the highly characteristic coalescence of lesions in this case of Reiter syndrome forming a wavy pattern.
Erosive psoriasiform lesions of the glans penis (Reiter syndrome; *balanitis circinata*) may also lack the wavy pattern, making them difficult to differentiate from genital psoriasis.
Lichen Planus

• The prototype of the lichenoid dermatoses

• Idiopathic inflammatory disease of the skin and mucous membranes.

• Small, polygonal-shaped, violaceous, flat-topped papule, may coalesce into larger plaques, which may ulcerate on mucosal surfaces.

• Flexor surfaces of the extremities, the trunk, the lumbosacral area, the oral mucosa, and the glans penis
• Isolated or grouped papules, a white reticular pattern, or an annular (ringlike) arrangement with or without ulceration

• Linear patterns related to skin trauma (the so-called Koebner phenomenon)

• Biopsy may be necessary to establish the diagnosis when the lesions are ulcerated.

• Spontaneous resolution: 2/3 after one year
• Asymptomatic lesions on the genitalia do not require treatment.

• Topical corticosteroids, with topical calcineurin inhibitors

• For severe cases, systemic corticosteroids (15 to 20 mg per day; 2- to 6-week course.

• Other systemic therapies: cyclosporine, tacrolimus, griseofulvin, metronidazole, and acitretin
Lichen Nitidus

• Discrete, flesh-colored papules arranged in large clusters.

• Histologically distinct.

• Flexor aspects of the upper extremities, the genitals, trunk, and dorsal aspects of the hands.

• Spontaneous resolution in less than one year

• Patients should be reassured BUT if symptomatic pruritus: topical corticosteroids and oral antihistamines
Lichen planus. Various presentations of lichen planus on the male genitalia. **A and B,** Both individual and grouped purple papules on the penile shaft; some oriented in a linear pattern. **C,** A white reticular pattern sometimes seen in lichen planus. **D,** An annular (ring-like) arrangement with a shiny surface.
Lichen Sclerosus et atrophicus

- Chronic inflammatory disease of external genitalia.

- 6 to 10 X in women (menopause) than in men

- Scarring disorder: tissue pallor, loss of architecture, and hyperkeratosis

- Older men (>60 y.o) : pain during voiding or erection.

- Preputial scarring from LS can lead to phimosis, and circumcision is usually curative
• Late stage: *balanitis xerotica obliterans* → penile urethra → urethral stricture

• Associated with scc and may represent a premalignant condition → long-term follow-up

• Specific histologic features.

The application of potent topical steroids (such as clobetasol propionate 0.05%) for long courses (3 months)
Lichen sclerosis et atrophicus (balanitis xerotica obliterans) of the penis.

Note the erythematous and white plaques involving the penile shaft, preputial skin, and glans.
Fixed Drug Eruption

- 1 to 2 weeks after first P.O exposure

- Lips, face, hands, feet, and genitalia: Solitary inflammatory plaque (may be erosive)

- Subsequent re-exposure → exact same location (“fixed”).

- Sulfonamides, NSAIDS, barbiturates, tetracyclines, carbamazepine, phenolphthalein, OCP, and salicylates.

- DDX: herpes simplex infection or an insect bite.

Removing the offending agent
Fixed drug eruptions (Involvement of the penis)

Histologic features include a normal stratum corneum with chronic changes in the superficial dermis including an eosinophilic infiltrate.
Seborrheic Dermatitis

- Sharply demarcated pink-yellow to red-brown plaques with a flaky scale.

- Common dandruff is a mild form of seborrheic dermatitis.

- First few months of life or post-puberty.

- Nasolabial folds, ears, chest, anus, penis, and pubic areas.

- Circumcision may be protective.
• Adult SD has a chronic relapsing course → treatment often must be repetitive

• Parkinson and AIDS

• Extensive and/or severe SD should raise concerns for possible underlying HIV infection

• Differentiation from psoriasis: rarely involves the nails and lesions are thinner
• Autoimmune response to a component of normal skin flora, the yeast *Malassezia furfur*

• Creams containing topical antifungals (i.e., ketoconazole)

“antidandruff” shampoos containing zinc, salicylic acid, selenium sulfide, tar, ciclopirox, olamine, or ketoconazole are effective
Autoimmune damage to the epidermis or basement membrane. On the genitalia, the rupture of blisters and bullae may leave behind erosions.
Pemphigus Vulgaris

- Pemphigus is a family of autoimmune blistering diseases: autoantibodies against keratinocyte cell surface

- Painful oral mucosal erosions and cutaneous blisters of the genitalia.

- Characteristic oral lesions → clue to the diagnosis

- Thin-walled and easily broken, leaving behind a painful erosion.
• Asboe-Hansen sign: spreading of fluid under the adjacent normal appearing skin away from the direction of pressure on the blister

• In severe cases, it may be fatal due to the loss of the epidermal barrier

• Systemic corticosteroids and immunosuppressive agents such as azathioprine and cyclophosphamide
Characteristic painful oral mucosal erosions in pemphigus vulgaris.
Bullous Pemphigoid

• Subepidermal blistering

• Men > 60 years of age

• Autoantibodies against specific proteins involved in cell–cell adhesion $\rightarrow$ tissue damage and blister formation

• Begins with a non-bullous phase: severe itching

• Bullous phase, vesicles and blisters + erythematous plaques
• Flexor surfaces, and may involve the inner thighs and genitalia

• Mucous membranes < pemphigus

• Clinical, histologic, and immunohistochemical

• Treatment similar to pemphigus

• For resistant cases: intravenous immunoglobulin or plasmapheresis
Bullous pemphigoid. Involvement of the inner thighs. Note the confluent plaques and tense blisters in the inguinal area.

Direct immunofluorescence of bullous pemphigoid showing deposition of autoantibodies (IgG) at the dermoepidermal junction.
Dermatitis Herpetiformis and Linear IgA Bullous Dermatosis

- Both blistering autoimmune: IgA at the basement membrane.
- DH is a cutaneous manifestation of celiac disease # LABD

- “herpetiform” groups on an erythematous base.

- Confirmed by biopsy and direct immunofluorescence

- Sulfapyridine or Dapsone and a strict gluten-restricted for DH

- LABD: linear pattern of antibody at the basement membrane

- Vesicles and bullae: circumferential and linear orientations.
Linear IgA bullous dermatosis.

Direct immunofluorescence showing linear deposition of IgA along the dermoepidermal junction.

Typical circumferential and linear patterns of vesicles.
Hailey-Hailey Disease

• Autosomal-dominant blistering dermatosis

• Second or third decade
• Pruritus, pain, and a foul odor (Heat and sweat)

• Superinfection of the blisters with yeast or bacteria
• Histologic examination for DDx

• Treatment: lightweight, breathable clothing to avoid friction and sweating + topical steroids
• If resistant to medical therapy → wide excision
**NONINFECTIOUS ULCERS**

<table>
<thead>
<tr>
<th>Differential Diagnosis of Ulcers</th>
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<tbody>
<tr>
<td>Syphilis</td>
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<tr>
<td>Chancroid</td>
</tr>
<tr>
<td>Herpes simplex</td>
</tr>
<tr>
<td>Crohn disease</td>
</tr>
<tr>
<td>Aphthous ulcer</td>
</tr>
<tr>
<td>Behçet disease</td>
</tr>
<tr>
<td>Granuloma inguinale</td>
</tr>
<tr>
<td>Lymphogranuloma venereum</td>
</tr>
<tr>
<td>Factitial dermatitis</td>
</tr>
<tr>
<td>Wegener granulomatosis</td>
</tr>
<tr>
<td>Leukocytoclastic vasculitis</td>
</tr>
<tr>
<td>Pyoderma gangrenosum</td>
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</tbody>
</table>
Aphthous Ulcers and Behçet Disease

- Small, painful erosions
- If oral + genital: consider (BD).

- Generalized relapsing and remitting,
- Genetic and an autoimmune

- Associated with: epididymitis, thrombophlebitis, aneurysms, and GI, neurologic, and arthritis
• Triad: Mucocutaneous lesions of the oral cavity and genitalia and uveitis

• Genital lesions are larger and more painful than the oral lesions

• Other causes for genital ulceration must be considered before a diagnosis of BD

• Corticosteroids, dapsone, colchicine, and immunosuppressants
Pyoderma Gangrenosum

- Ulcerative skin disease associated with systemic illnesses including IBD, arthritis, collagen vascular disease
- Women between the second and fifth decade
- AI and idiopathic with no specific diagnostic laboratory test
- History of underlying systemic disease
- Painful cutaneous and mucous membrane ulceration with loss of tissue and Pus
- Local and systemic corticosteroid or IS
Pyoderma gangrenosum involving the inner thigh of a woman with rheumatoid arthritis (A) and (B) the penis and scrotum.
Traumatic Causes

• Should be included in the DDx

• Accidental (“innocent trauma”) or self-inflicted (“factitial dermatitis”)

• Trauma during sexual practices, ornamentation (i.e., piercing) or unusual hygiene practices (i.e., cleaning)

• Factitial dermatitis is a psychocutaneous self-inflicts for an unconscious motive.

• Munchausen syndrome by proxy and malingering
INFECTIONS AND INFESTATIONS
SEXUALLY TRANSMITTED INFECTIONS
## Genital Ulcer Disease

<table>
<thead>
<tr>
<th>DISEASE</th>
<th>LESIONS</th>
<th>LYMPHADENOPATHY</th>
<th>SYSTEMIC SYMPTOMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary syphilis</td>
<td>Painless, indurated, with a clean base, usually singular</td>
<td>Nontender, rubbery, nonsuppurative bilateral lymphadenopathy</td>
<td>None</td>
</tr>
<tr>
<td>Genital herpes</td>
<td>Painful vesicles, shallow, usually multiple</td>
<td>Tender, bilateral inguinal adenopathy</td>
<td>Present during primary infection</td>
</tr>
<tr>
<td>Chancroid</td>
<td>Tender papule, then painful, undermined purulent ulcer, single or multiple</td>
<td>Tender, regional, painful, suppurative nodes</td>
<td>None</td>
</tr>
<tr>
<td>Lymphogranuloma</td>
<td>Small, painless vesicle or papule progresses to an ulcer</td>
<td>Painful, matted, large nodes develop, with fistulous tracts</td>
<td>Present after genital lesion heals</td>
</tr>
</tbody>
</table>
HERPES SIMPLEX VIRUS INFECTION

• HSV-2 in 90% and HSV-1 in 10%

• HSV 1: common cold sores but can be transmitted via oral secretions during oral-genital sex.

• 80% of women with HSV-2 antibodies have no history of clinical infection

• Primary infection manifests as painful ulcers of the genitalia or anus and bilateral painful inguinal adenopathy.
• A group of vesicles on an erythematous base that does not follow a neural distribution

• Urethral lesions may cause transient urinary retention in women.

• The diagnosis of genital herpes should not be made on clinical suspicion alone

• Women especially may present with atypical lesions such as abrasions, fissures, or itching

• Viral culture with subtyping: gold standard → PCR
### Recommended Oral Treatment for Genital Herpes Simplex Virus Infection

<table>
<thead>
<tr>
<th>AGENT</th>
<th>FIRST CLINICAL EPISODE</th>
<th>EPISODIC THERAPY</th>
<th>SUPPRESSIVE THERAPY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acyclovir</td>
<td>400 mg tid for 7-10 days or 200 mg five times a day for 7-10 days</td>
<td>400 mg tid for 5 days or 800 mg tid for 2 days or 800 mg bid for 5 days</td>
<td>400 mg bid</td>
</tr>
<tr>
<td>Famciclovir</td>
<td>250 mg bid for 7-10 days</td>
<td>125 mg bid for 5 days or 1000 mg bid for 1 day or 500 mg once, followed by 250 mg bid for 2 days</td>
<td>250 mg bid</td>
</tr>
<tr>
<td>Valacyclovir</td>
<td>1 g bid for 7-10 days</td>
<td>500 mg bid for 3 days or 1 g sid for 5 days</td>
<td>500 mg sid or 1 g sid</td>
</tr>
</tbody>
</table>

Figure 13-1. Typical vesicular eruption of herpes simplex virus.

Figure 13-2. Herpes simplex virus infection on the penis.
Vulvovaginal herpes simplex virus infection
CHANCROID

- *Haemophilus ducreyi*

- Most common ulcerative STI worldwide

- Painful, non indurated ulcer with friable base covered with a gray or yellow purulent exudate and a shaggy border → inner thighs and buttocks

- Inguinal ADP: unilateral & tender → suppurative & fistulize

- Gram stain of edge of the ulcer → diagnosis
Chancroid with regional adenopathy.
• **Treatment.** azithromycin, 1 g PO, or ceftriaxone, 250 mg IM

• Alternative regimens: cipro, 500 mg BID for 3 days, or erythro, 500 mg PO TID for 7 days.

• Resistance to cipro and erythro in some regions.

• Ulcers generally heal completely in 7 to 14 days.

• Sexual partners

• Symptomatic relief of inguinal tenderness can be provided by needle aspiration or incision and drainage
SYPHILIS

• Spirochete *Treponema pallidum*.

• Infectious lesions or body fluids, in utero and transfusion

• Primary: single painless, indurated ulcer 3 weeks → 4 to 6 weeks with bilateral, non tender inguinal or regional lymphadenopathy → unnoticed.

• Secondary 4 to 10 weeks: maculopapular rash on the trunk and arms with nontender lymphadenopathy → necrotic and pustular
Secondary syphilis affecting the genitalia
• Untreated → tertiary syphilis. (very rare) almost any organ or system

• Darkfield microscopy and direct fluorescent antibody (DFA)

• Venereal Disease Research Laboratory (VDRL)

• Treponemal testing using *T. pallidum* particle agglutination (TP-PA) or fluorescent

• Treponemal antibody absorbed (FTA-ABS) testing.
Figure 13-7. Syphilis with penile chancre.

Figure 13-9. Secondary syphilis affecting the soles of the feet.
• **Treatment.** Penicillin G (2.4 million units IM single dose: primary, secondary, or early latent syphilis.

• **Jarisch-Herxheimer reaction:** headache, myalgia, fever, tachycardia, and increased respiratory rate in the first 24 hours after treatment.

• Penicillin allergy, doxycycline, 100 mg PO BID for 14 days, or tetracycline, 500 PO for 14 days

• Tertiary syphilis: repeat weekly for a total of three doses (total dose of 7.2 million units)
LYMPHOGRAVLULOMA VENEREUM

• *Chlamydia trachomatis* L1, L2, and L3

• 3 to 30 days

• Single, painless ulcer

• Painful unilateral suppurative inguinal adenopathy

• Labial fenestration, urethral destruction, anorectal fistulae, and elephantiasis of the penis, scrotum, or labia
Lymphogranuloma venereum with inguinal adenopathy
• Diagnosis: clinical/cultures+ in 30% to 50%

• Complement fixation (titer>64) or indirect fluorescence antibody titers can confirm diagnosis

• 3 weeks: doxycycline, 100 mg BID, or erythromycin 500 mg four times daily

• Sexual partners should be examined
GENITAL WARTS

- HPV: skin-to-skin contact

- Most are subclinical and asymptomatic

- External visible warts (HPV types 6 and 11) → low risk for conversion to invasive carcinoma

- Nontender papillomatous acetowhitening with 3% to 5% acetic acid: may show subclinical (not specific)

- Biopsies in all instances of atypical, pigmented, indurated, fixed, or ulcerated warts
Treatment

• Observation remains an option

• Patient-applied therapies are less expensive and may be more effective than provider-applied therapy

• Podofilox 0.5% solution or gel, imiquimod 5% cream, or sinecatechins 15% ointment.

• Cystoscopic evaluation: infection beyond the urethra and into the bladder

• HPV Vaccine
Figure 13–13. Penile warts.

Figure 13–14. Vaginal condylomata caused by human papillomavirus.
MOLLUSCUM CONTAGIOSUM

• Poxviridae: skin-to-skin, fomites, or self inoculation.

• In children, clusters on the face and neck, chest, back, and extremities.

• Adult: genital and inguinal regions, the inner thighs, and perineum.

• Smooth, round, pearly papules of 2 to 5 mm, with central umbilication
• Diagnosis is clinical

• If confirmation is necessary, hematoxylin and eosin staining of a biopsy → Henderson-Patterson

• benign and self-limiting → no treatment.

• If particular concern, destructive therapy with cauterity, curettage, or cryotherapy with liquid nitrogen
Balanitis and Balanoposthitis

- Inflammatory disorder of the glans penis and preputial skin in uncircumcised men

- In children: bacterial

- In adult men: intertrigo, irritant contact dermatitis, local trauma, or candidal and bacterial infections

- Treatment: removal of irritating agents, improved hygiene, topical antibiotics, and antifungals

- Phimosis ➔ circumcision if recurrent
Figure 15–21. Candidal balanoposthitis. (From Korting GW. Practical dermatology of the genital region. Philadelphia: WB Saunders; 1981. p. 159.)
Cellulitis and Erysipelas

- Infection of the deep dermis and subcutaneous

- gram-positive organisms (S. pyogenes and S. aureus→ break in the skin

- Systemic and local infectious signs→ Treatment: systemic antibiotics

- Erysipelas is a superficial bacterial skin infection limited to the dermis with lymphatic involvement.

- # has a raised and distinct border at the interface with skin.
Figure 15–22. Penoscrotal cellulitis. (From Korting GW. Practical dermatology of the genital region. Philadelphia: WB Saunders; 1981. p. 37.)
Fournier Gangrene (Necrotizing Fasciitis of the Perineum)

- Potentially life-threatening progressive infection of the perineum and genitalia

- Mixed bacterial flora: alcoholism, diabetes, malnutrition, advanced age, and peripheral vascular disease.

- Rapid progression from cellulitis to foul-smelling necrotic lesions → fascial planes

- Surgical emergency: → abdominal wall within hours
• During every consultation of soft tissue infection of the genitalia

• Pain out of proportion to the visible extent

• Gas bubbles within the tissue

• Imaging should not delay surgical intervention

• Broad-spectrum AB and extensive surgery

Testicles & structures within the tunica vaginalis always spared
Figure 15-23. Fournier gangrene of the scrotum. A, Surface appearance of scrotum and perineum showing area of frank necrosis. B, Extent of soft tissue debridement required to achieve margins of viable tissue. Note that the testes within their tunica vaginalis compartment are spared.
Folliculitus

- Perifollicular pustules on an erythematous base

- Exacerbated by local trauma from shaving, rubbing, or clothing irritation

- S. aureus, Pseudomonas sp., fungi, and HSV

- TRT: good hygiene, removal of offending irritants, and appropriate topical or systemic antiviral, antibiotic, or antifungal agents.
Pseudomonal folliculitis caused by the use of a hot tub.
Furunculosis

- Walled-off collections of pus.

- **Abscesses:** anywhere on the body, BUT furuncle is associated with a hair follicle.

- *S. aureus* and anaerobes

- Immunosuppression

- Warm compresses, incision and drainage as for any abscess + antibiotic
A large furuncle located on the buttocks.
Hidradenitis Suppurativa (Acne Inversa)

- Chronic disease of apocrine gland-bearing skin after puberty

- Bacterial infection is not the primary initiator.

- Hair follicles become plugged and swollen.

- Rupture of follicular contents into surrounding dermis → abscesses and sinus tracts

- Painful inflammatory nodules and sterile abcess.
• Serious complications: hypoproteinemia, secondary amyloidosis, fistulae to the urethra bladder, peritoneum, and rectum.

• Treatment: hygiene, weight reduction, and minimize friction and moisture

• Topical clindamycin or the combination of oral clindamycin and oral rifampicin

• Incision and drainage of HS lesions is discouraged BUT wide excision and skin grafting has been effective
Figure 15–26. Hidradenitis suppurativa. 
A, Characteristic painful papules and draining sinus tracts. 
B, Histology shows follicular plugging and connection to a dilated apocrine duct. 
Ecthyma Gangrenosum

• Cutaneous manifestation of pseudomonal septicemia

• Tender, grouped, erythematous macules → bullae → gangrenous ulcer

• *Candida, Aspergillus, Citrobacter, Escherichia coli, Aeromonas hydrophila,* and *Fusarium*

• Poor prognosis

• Immediate treatment with intravenous antipseudomonal AB
Candidal Intertrigo

• Macerated skin folds

• Affected pruritic skin is reddened

• Treatment with imidazoles for at least 2 weeks

• Occasionally oral antifungals are required

• Decrease moisture and skin maceration
Figure 15–29. Candidal intertrigo with erythema, areas of tissue maceration and satellite lesions. (From Callen JP, Greer DE, Hood AF, Paller AS. Color atlas of dermatology. Philadelphia: WB Saunders; 1993. p. 318.)
Dermatophyte Infection

- Fungi (*Trichophyton*, *Microsporum*, *Epidermophyton*) invade and grow within keratinized tissues: “jock itch.”

- Hot, humid environments and concomitant *tinea pedis*

- Sharply demarcated with a raised erythematous border

- Skin scrapings and a KOH preparation.

- Good hygiene, loose clothing, cleaning of contaminated garments, weight reduction, and topical powders to keep areas dry → Post inflammatory hyperpigmentation
INFESTATION
• Crab louse (*Phthirus pubis*) → pediculosis pubis, a pruritic disorder of the genitalia

• Crab lice attached to hairs

• Sexual contact, although contaminated

• Clothing, bedding, and towels

• 5% permethrin cream overnight to all affected areas with a repeat application one week later
Scabies

- Female itch mite *Sarcoptes scabiei*.
- Overcrowding, delayed treatment of primary cases, and poor public awareness

- Close contacts and family.
- Severe pruritus at night or after bathing

- Thin, gray or white burrows
- 5% permethrin cream applied to the entire body overnight with a second application after 1 week

- Pruritus→several weeks
NEOPLASTIC CONDITIONS
Erythroplasia of Queyrat. Squamous cell carcinoma involving the glans penis. (From Callen JP, Greer DE, Hood AF, Paller AS. Color atlas of dermatology. Philadelphia: WB Saunders)
Basal cell carcinoma involving the vulva.
Pseudoepitheliomatous, keratotic and micaceous balanitis. The glans becomes covered with mica (asbestos-like) scales and horny crusts.
Mycosis fungoides (a cutaneous T-cell lymphoma) involving the buttocks. **A,** Limited plaque stage. **B,** A more advanced case with plaques, patches, and tumors present.
BENIGN CUTANEOUS DISORDERS SPECIFIC TO THE MALE GENITALIA
Angiokeratoma of Fordyce

• Vascular ectasias of dermal blood vessel

• 1- 2 mm red or purple papules with generalized scrotal redness

• No systemic manifestations

• Rarely scrotal bleeding

• Treatment is unnecessary
Angiokeratoma of Fordyce showing purple scrotal vascular malformations.
Fabry disease: a glycogen storage deficiency with associated purple vascular malformations on the penile shaft.
Pearly Penile Papules

• White, dome-shaped, closely spaced small papules

• Circumferentially at the corona.

• Young postpubertal, if not circumcised

• If cosmetic concerns → CO2 laser

• Histologically: angiofibromas similar to the lesions seen on the face
Pearly penile papules located on the corona of the glans penis
Zoon Balanitis

• Called plasma cell balanitis

• Uncircumcised third decade

• Smooth, moist, erythematous, well circumscribed plaques on the glans penis

• SCC should be excluded, often by biopsy.

• Circumcision cure the majority of cases
Zoon balanitis of the glans penis
Sclerosing Lymphangitis

• Indurated, slightly tender cord of the coronal sulcus and adjacent penile skin flesh-colored or red.

• Thrombosis of lymphatic vessels

• Association with vigorous sexual activity

• Resolution usually occurs within several weeks
Sclerosing Lymphangitis of the penis
Median Raphe Cyst

- Young men on the ventral aspect of the penis, near the glans
- Develop from aberrant urethral epithelium
- Do not communicate with the urethra
- Treatment is by surgical removal.
Ectopic Sebaceous Glands

• Ectopic sebaceous glands on the penile shaft

• Pin-sized popular lesions that may be mistaken for verruca
Ectopic sebaceous glands on the penile shaft
COMMON MISCELLANEOUS CUTANEOUS DISORDERS
Skin Tags (acrochordons, fibroepithelial polyps)

- Soft, skin colored, pedunculated lesions

- Asymptomatic, but painful secondary to local trauma or torsion and infarction

- Important to be distinguished from hamartomatous skin lesions (multiple fibrofolliculomas) associated with Birt-Hogg-Dube syndrome
Acrochordon (skin tag)
Epidermoid Cysts

• Cutaneous cysts

• The term “sebaceous cyst” should be avoided: not derived from a sebaceous origin

• Not painful at baseline but rupture → severe inflammatory reaction extremely painful.

• Definitive treatment requires surgical excision of the entire cyst wall to prevent cyst recurrence.
Epidermoid cysts of the scrotum.
Seborrheic Keratosis

• Common brown macules, plaques and papules

• Over 30 Y.O

• Confused with melanoma or warts

• Waxy, “stuck-on” appearance

• Excision or nitrogen destruction for cosmetic reasons
A characteristic seborrheic keratosis showing the “stuck-on” waxy appearance.
Lentigo Simplex

• Brown-pigmented macules unrelated to sunlight

• Smaller than nevi.

• Biopsy evaluation if atypical shape or coloration.

• Combination of multiple pigmented lesions and intestinal polyposis → Peutz-Jeghers Sd
Lentigo simplex involving the glans penis (penile melanosis)
Mole (Nevus)

• Slightly altered melanocytes

• Junctional nevi: between epidermis and dermis, flat, small (<5 mm), and sharply bordered

• Intradermal nevi: within the dermis and are usually small (<5 mm) and lighter

• Irregularity in coloration or border and rapid change over time → excisional biopsy.
A compound melanocytic nevus in the inguinal crease
Dermatofibroma

• Small hyperpigmented nodules

• Pinching of these lesions causes a downward movement of the tumor (“dimple sign”)

• Benign with a characteristic histologic pattern

• Surgical excision is unnecessary and may leave a scar < original lesion
Dermatofibroma
Neurofibroma

- Neuromesenchymal tissue with residual nerve axons
- Skin-colored, soft or rubbery, nodular
- Digital pressure causes invagination or so-called “button-holing”
- If multiple: suspicion for neurofibromatosis or von Recklinghausen
Pedunculated neurofibroma
Capillary Hemangioma

• Proliferations of blood vessels: at birth or neonatal

• Can involve the anogenital region and lead to bleeding or cause obstruction of the urethra, vagina, or anus

• The majority will involute during childhood or early adolescence
Vitiligo

- Skin depigmentation: 0.5% to 2%
- Large patches are amelanotic although normal.
- Sharp and well defined.
- Tendency to enlarge circumferentially
- Treatments include repigmentation with topical cosmetics, ultraviolet light exposure, and skin grafting.
Vitiligo involving the penile shaft
Key Points

- The diagnosis of cutaneous diseases of the external genitalia depends critically on a thorough history and physical examination. Extragenital findings may provide the key to diagnosis. The urologist should perform a thorough skin survey and not focus solely on the area of affected genital skin.
- The side effects of topical corticosteroids are significant, both from systemic absorption and locally. Adverse effects may be worsened if these agents are applied under the foreskin, which may serve as an occlusive dressing. In general, when applied to genital skin, only low-potency topical corticosteroids should be used for short treatment courses.
- Cutaneous disorders of the external genitalia can be broken down into the general categories of allergic, papulosquamous, vesicobullous, ulcerative, infectious, neoplastic, and miscellaneous diseases.
- Histopathologic analysis of biopsy specimens plays an important role in differentiating cutaneous diseases with similar clinical features and in excluding malignancy.
- Local treatment modalities, including the use of laser energy, photodynamic therapy, ultraviolet radiation, and cryotherapy are being applied successfully to a variety of genital cutaneous disorders and offer an alternative to surgical excision in some cases.