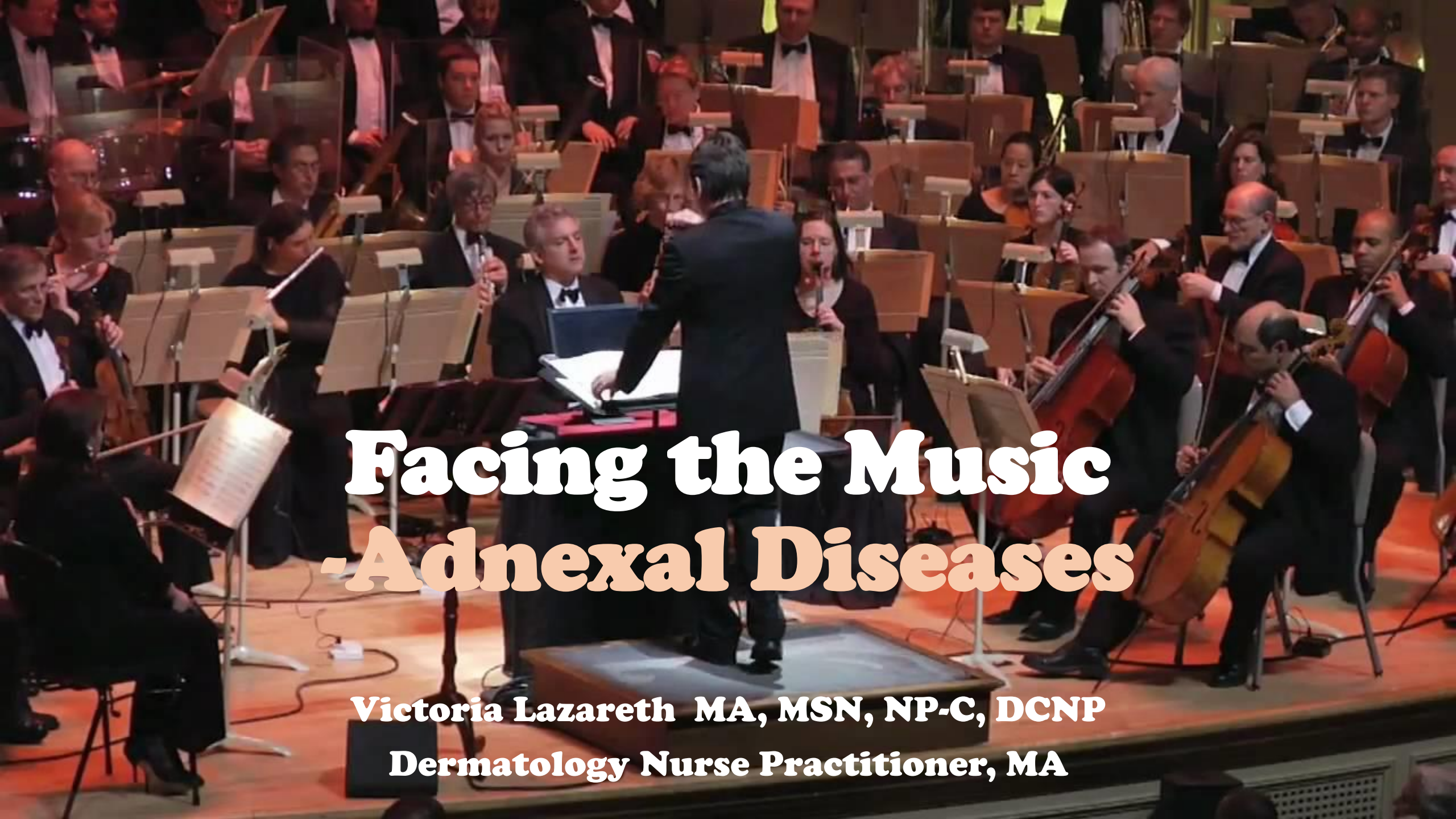


Facing the Music -Adnexal Diseases

Victoria Lazareth MA, MSN, NP-C, DCNP

Dermatology Nurse Practitioner, MA

Disclosures

Advisory Board

- Bristol Myers Squibb -Psoriasis
- Incite -Vitiligo
- JDNPPA -Dermatology
- UCB -Psoriasis

Speaker Panel

- American Association of Nurse Practitioners -Dermatology
- Dermatology Nurses' Association -Dermatology
- MauiDerm NP+PA -Dermatology
- Nurse Practitioner Association for Continuing Education -Dermatology

Objectives

Upon completion of this presentation the participant will

- Design treatment plans with patients which incorporate current guidelines for the management of Acne, Rosacea, Cysts and Hidradenitis
- Formulate differential diagnoses for diseases of the Hair and Nails
- Implement cultural sensitivity into interactions with Sexual-Gender Diverse patients, up-to-date approaches to STDs, and enhanced safety practices in pregnancy

Acne

Photo Courtesy of V.Lazareth NP

Acne

- extremely common, usually self-limited, chronic inflammatory condition of the pilosebaceous unit resulting from (1) increased sebum production, (2) follicular hyperkeratinization and corneocyte hypercohesiveness, (3) proliferation of the bacterium *Cutibacterium acnes*, and (4) inflammation.
- Diseases: PCOS, Cushing's, ectopic ACTH syndrome, congenital adrenal hyperplasia
- Meds: systemic, anabolic, topical corticosteroids, EGFR inhibitors (cetuximab, gefitinib, erlotinib), danazol, stanozolol, testosterone, lithium, quetiapine, iodides, bromides, isoniazid, phenytoin, cyclosporine, granulocyte-colony stimulating factor (G-CSF), medroxyprogesterone, low-estrogen oral contraceptives, progesterone-only birth control, phenobarbital, propylthiouracil, vitamins B2, B6, B12, JAK inhibitors
- Occupations: mask, instrument (violin), sports (helmet), workplace exposures to petroleum, coal-tar products, halogenated aromatic compounds (chloracne)
- classified as being mild, moderate, or severe and is commonly found on areas of skin with the greatest density of sebaceous follicles (face, back, upper chest). In adult women, deeper-seated, tender, red papules are common along the jaw line

Photo Courtesy of V.Lazareth NP

Case Study #1

You are seeing 12-year-old Tamara for follow-up of her persistent moderate comedoneal acne. Today her 8-year-old sister Jasmine is scheduled for evaluation of her acne as well. Their mother has been reminding both girls to apply adapalene (Differin®) lotion at bedtime, but the blackheads are getting worse. She requests prescriptions of trifarotene (Aklief®) cream for both girls as it has worked well for her niece.

You prescribe trifarotene (Aklief®) 0.005% cream for

A. both Tamara and Jasmine

B. only Tamara

C. only Jasmine

D. neither Tamara or Jasmine

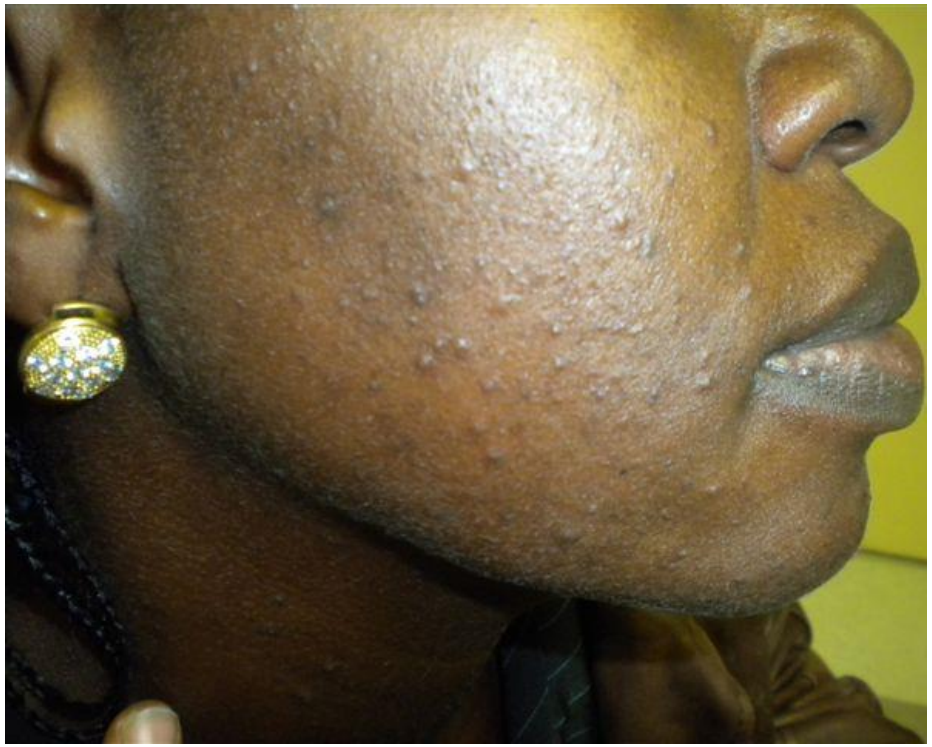


Photo Courtesy of V.Lazareth NP

2024 Acne Guidelines

	MILD
	open & closed comedones
	topical BPO topical retinoid
-or-	BPO+retinoid BPO+abx BPO+retinoid+abx

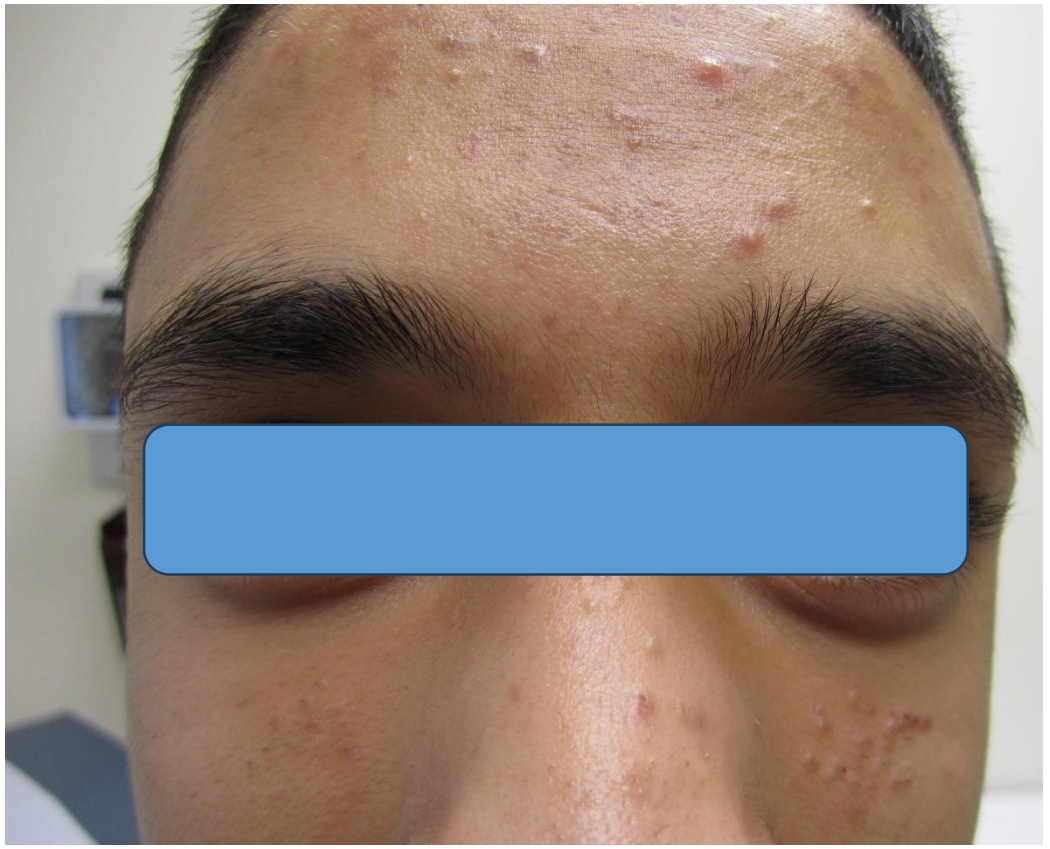


Photo Courtesy of V.Lazareth NP

Acne – topical treatments

- tretinoin (0.025%-0.1% every 24 hours at bedtime)
- tazarotene (0.05%-0.1% cream or gel applied every 24 hours); Cat X
- adapalene gel (0.1%-0.3% every 24 hours at bedtime;
  the 0.1% gel is now available over the counter)
- trifarotene (0.005% every 24 hours in the evening)
- adapalene+BPO+clinda (Cabtreo) combination gel daily >12 yr
- minocycline 4% foam –tetracycline abx; anti-inflammatory, antimicrobial
- dapsone 5% or 7.5% gel -sulfone abx; anti-inflammatory, antimicrobial
- azelaic acid 20% cream BID -dicarboxylic acid that has anti-inflammatory, antioxidant, antimicrobial properties and can prevent dark patches

Photo Courtesy of V.Lazareth NP

Topical Retinoids -Pt. Education

Topical Retinoids
- the mainstay of acne therapy
- clear both open and closed comedones
- minimize hyperpigmentation and scarring

Side Effects
- erythema, dryness, scaling, flaking, stinging, burning

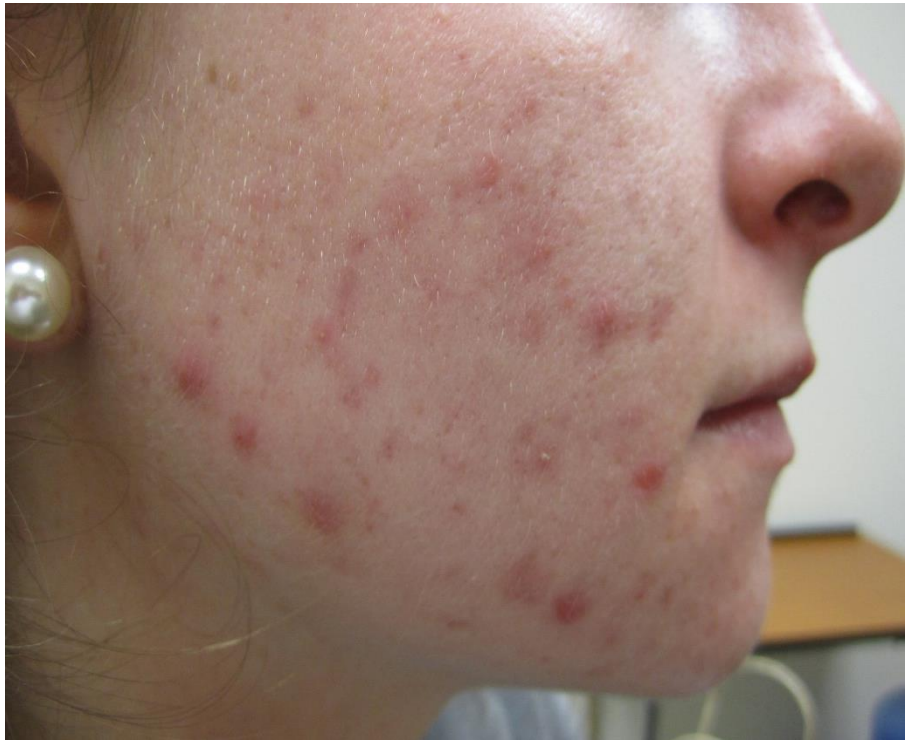
Caution
- Inform your provider if you have eczema or a fish allergy
- Discontinue all retinoids in pregnancy, lactation

Counseling
- start using topical retinoids gradually, such as every 3rd night, then slowly increase to nightly as tolerated to avoid excessive irritation and dryness.
- apply sparingly at hs >1 hr after washing
- use a very gentle cleanser
- apply non-comedogenic moisturizer daily
- avoid ultraviolet light, sunlamps, tanning, scrubs, extreme cold, wind

Photo Courtesy of V.Lazareth NP

2024 Acne Guidelines

	MODERATE
	comedones, inflammatory papules & pustules at face, chest, back
	topical BPO topical retinoid
-or-	BPO + oral abx + topical retinoid +/- topical abx
-or-	Isotretinoin



Conditional recommendations:
topical clascoterone, salicylic acid, azelaic acid;
oral minocycline, sarecycline, combined oral contraceptive pills, spironolactone

Photo Courtesy of V.Lazareth NP

Acne – oral treatments

- Limit oral abx to 3-4 months, then for 1-2 months before stopping.
  - doxycycline 100 mg daily-BID –or- 20 mg BID; 40 mg daily modified-release
  - minocycline 100 mg daily-BID
  - tetracycline 500 mg daily-BID
  - sarecycline 60 mg daily (< 55 kg); 100 mg daily (55-84 kg); 150 mg daily (>85 kg)
- Combined oral contraceptives
  - ethinyl estradiol-norgestimate
  - ethinyl estradiol-norethindrone
  - ethinyl estradiol-drospirenone daily
- spironolactone 25-100 mg daily or BID dosing

Photo Courtesy of V.Lazareth NP

Acne – other therapies

- sodium sulfacetamide 10% and sulfur 5%
  - topical suspension, cleanser, cleansing cloths
- Intralesional triamcinolone
  - for acute nodules and inflamed cysts
- 5-ALA photodynamic therapy
- sub-purpuric pulsed dye laser (PDL)
- red (660 nm) and blue (415 nm) light therapy

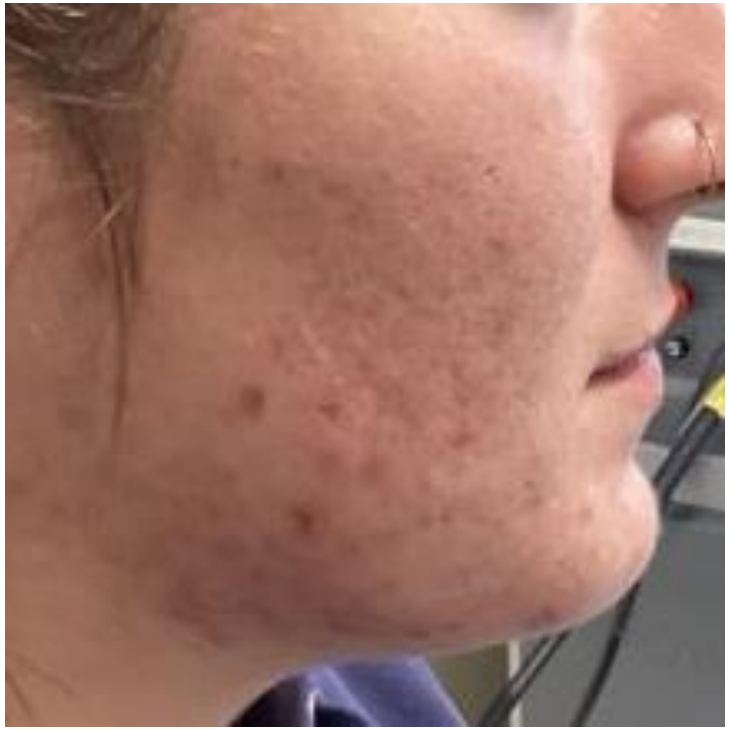


Photo Courtesy of V.Lazareth NP

2024 Acne Guidelines

	SEVERE
	comedones, inflammatory papules & pustules, nodules, cysts, +/- scarring
-or-	BPO + oral abx + topical retinoid +/- topical abx
-or-	Isotretinoin

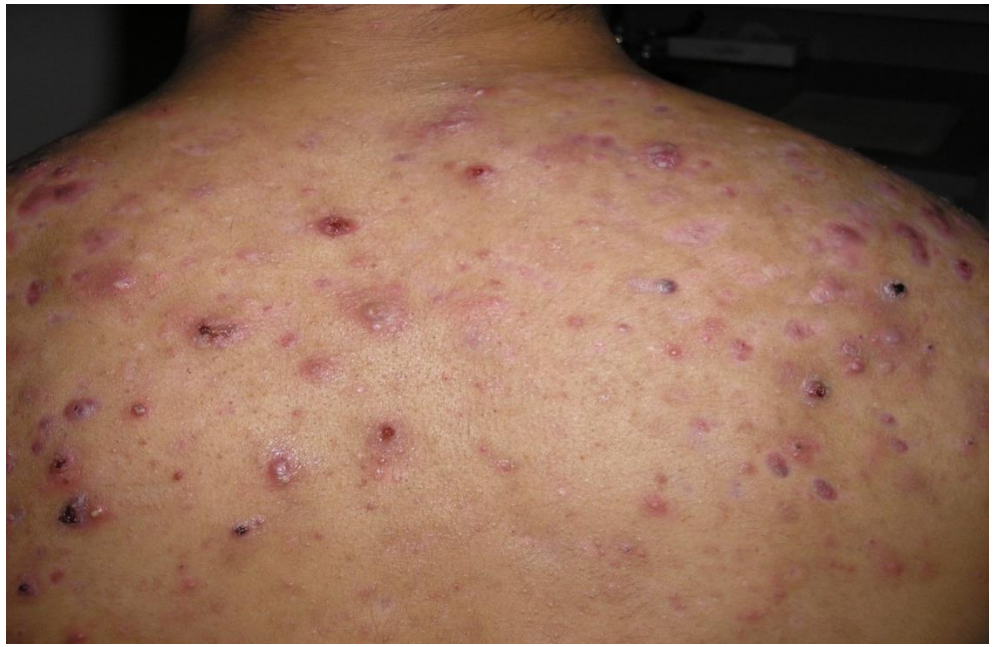


Photo Courtesy of V.Lazareth NP

Acne conglobate

Acne conglobate

- severe form of nodular acne most commonly seen in young males

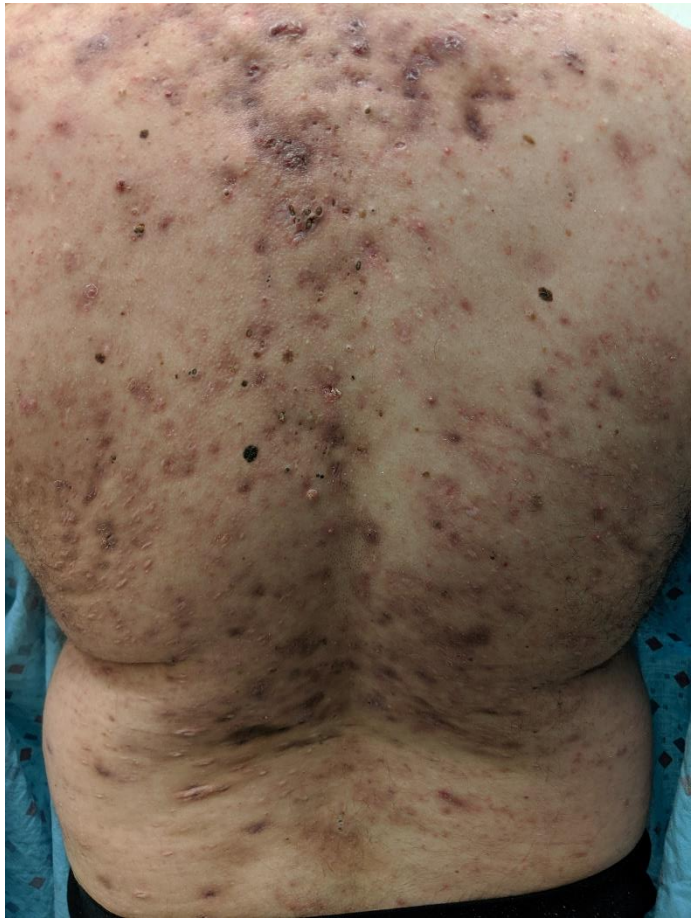


Photo Courtesy of V.Lazareth NP

Acne fulminans

Acne fulminans

- acute eruption of large, inflammatory nodules and friable plaques with erosions, ulcers, and hemorrhagic crusts
- + SYSTEMIC SYMPTOMS (fever, malaise, bone pain, arthralgias),
- leukocytosis, anemia, elevated sed rate, CRP
- osteolytic lesions
- Rx: requires modification of isotretinoin dosing + prednisone

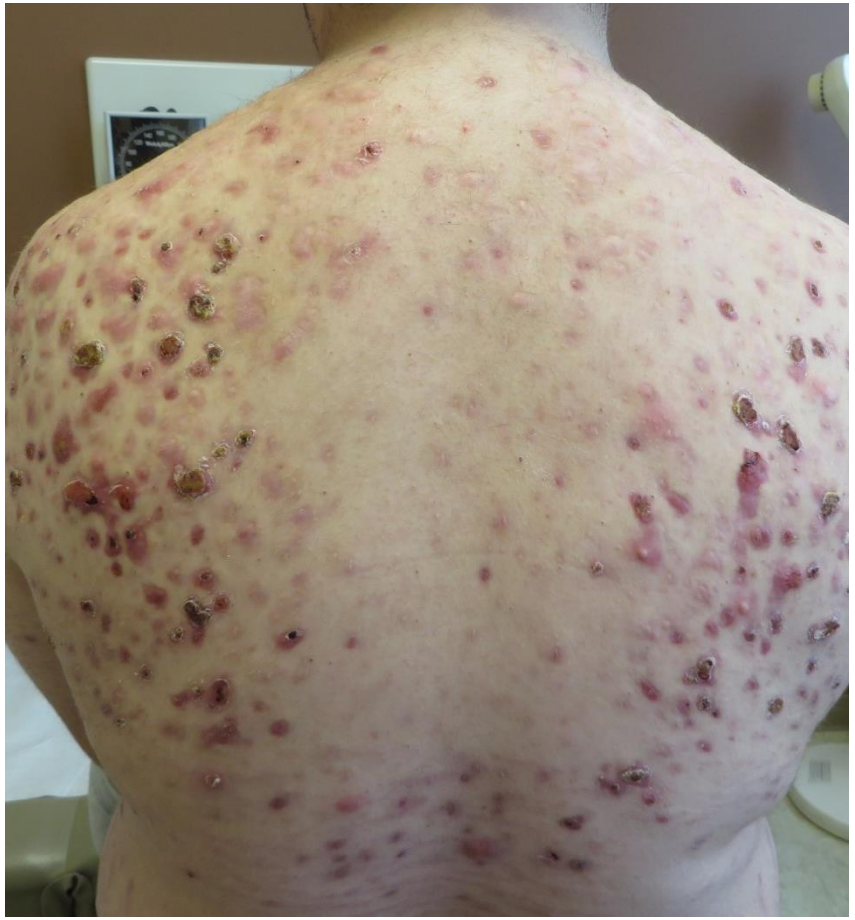


Photo Courtesy of M.Bobonich NP

Acne - isotretinoin

Dosing

Initially: 0.5-1mg/kg/day
Maintenance: 0.5-2mg/kg/day BID dosing
Duration: 16-20 weeks.
Cumulative dose: 120-150 mg/kg

Labs

Baseline: HCG, lipids, LFTs
repeat in 2 mo + CK for athletic males

Consider

Referral to Derm

Adverse Effects

- Teratogenicity
- Pseudomotor cerebri
- Vision changes
- Depression
- Dryness of mucous membranes
- Muscle and joint pain
- Alopecia
- Hypertriglyceridemia
- Photosensitivity
- Liver enzyme elevation

Photo Courtesy of V.Lazareth NP

Acne – iPledge requirements

- TWO forms of birth control methods
  - Primary: Hormonal implant, IUD, Tubal sterilization, Male vasectomy, Hormonal shot, vaginal ring, hormonal patch, birth control pill
  - Secondary: Condoms, cervical cap/diaphragm, vaginal sponge
- TWO negative pregnancy tests for TWO consecutive months then MONTHLY
- Online comprehension test monthly
- Therapy to begin on day two or three after the next normal menstrual period
- Patient must be seen every 30 days during therapy
- Females have 7 days after last registered pregnancy test to pick up prescription/males have 30 days after prescription is written

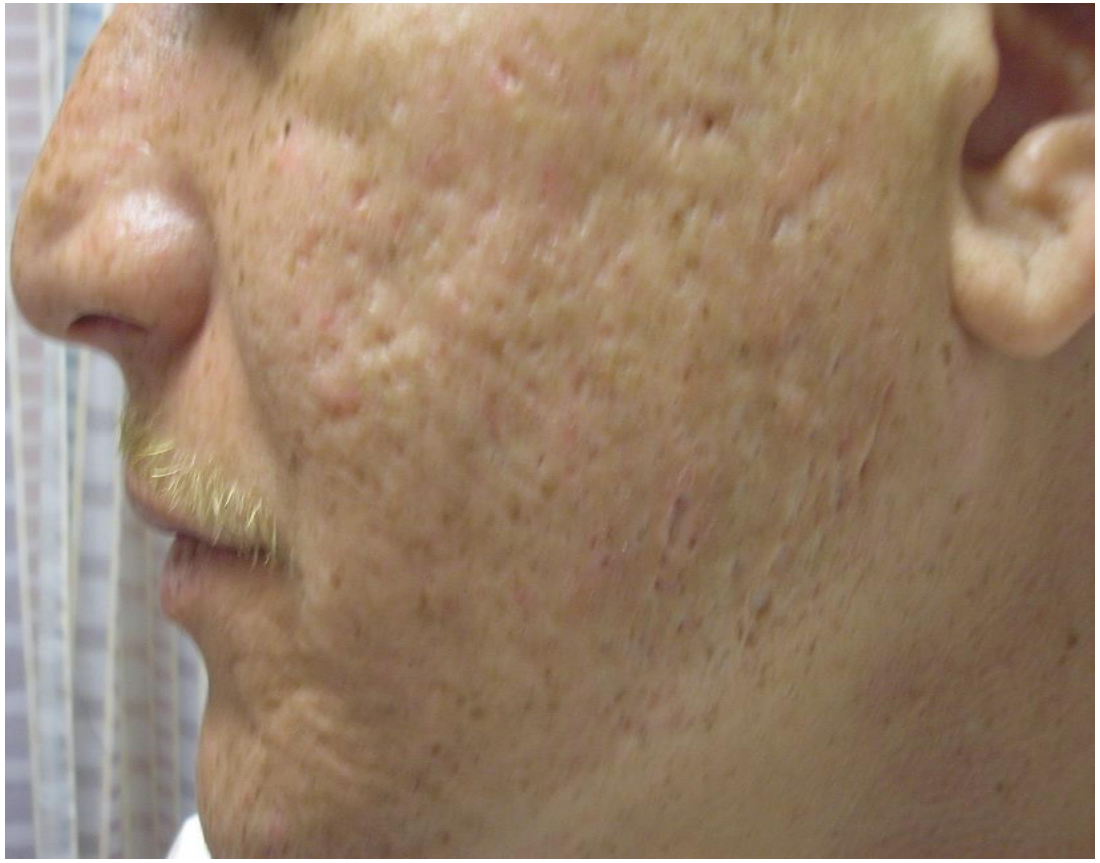
Photo Courtesy of V.Lazareth NP

Isotretinoin Warnings

- Do NOT use or take *any* other acne medications, Rx or OTC, while on treatment
- Do NOT donate blood during therapy
- Do NOT use while breastfeeding
- Avoid use of antibiotics and vitamin A supplements
- Avoid elective surgeries, laser & peels during treatment
- Transient exacerbations can occur initially (10-20%)
- Contact lenses may be irritating
- Depression/suicidal ideation may occur
- Refer to Derm

Photo Courtesy of V.Lazareth NP

Acne scarring



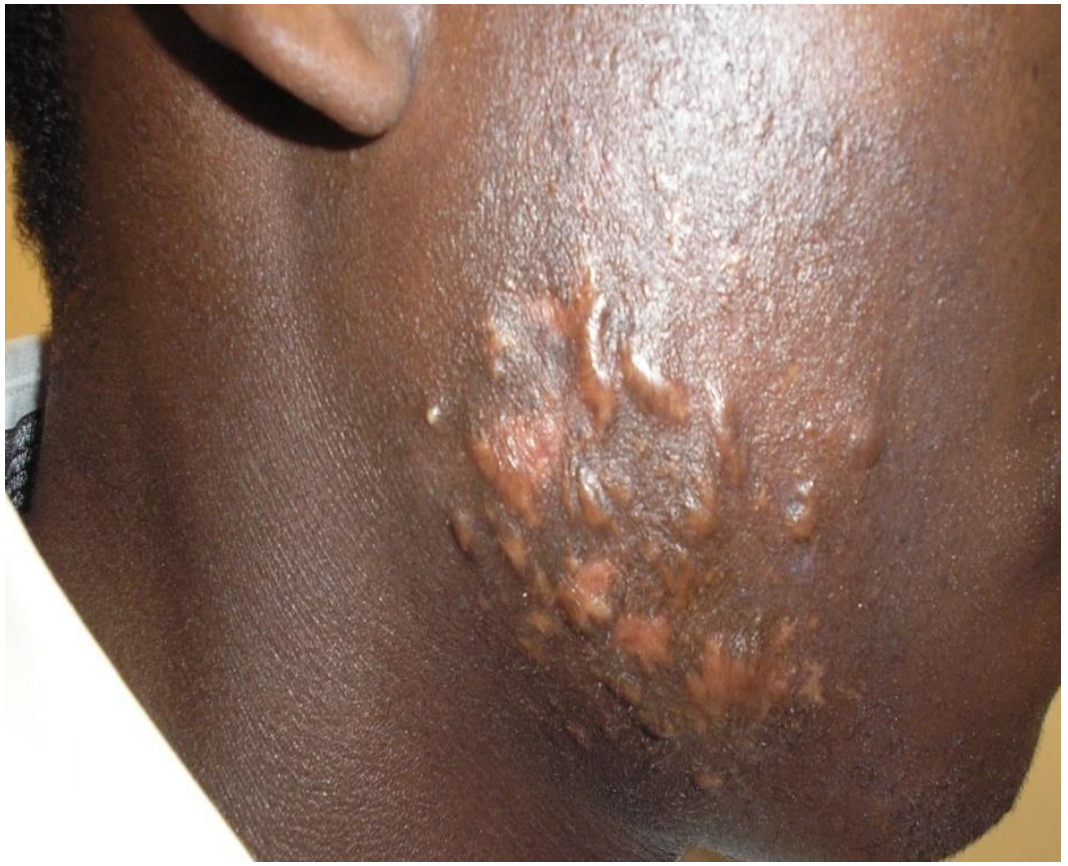


Photo Courtesy of V.Lazareth NP

Treatment of Scarring

- Photodynamic Therapy
- Intense Pulsed Light
- Pulsed dye laser
- Pulsed light and heat energy
- Diode laser
- Deep chemical peels

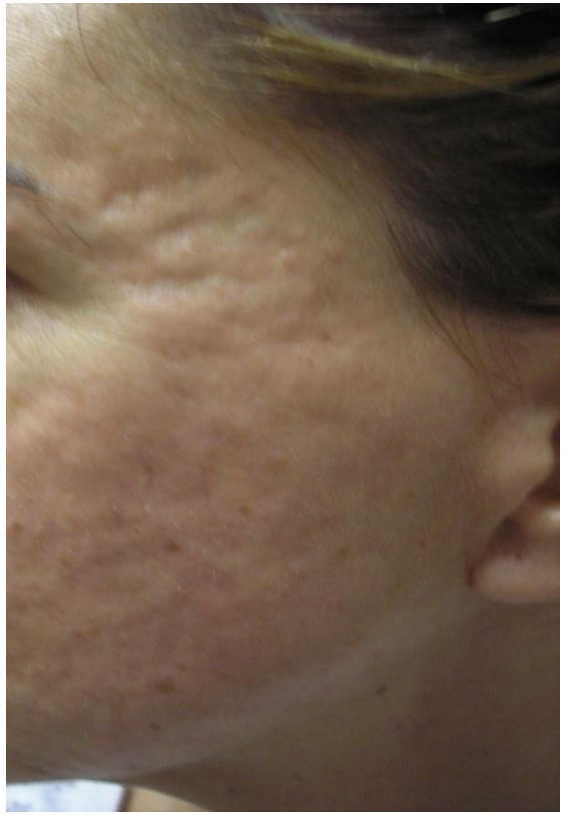


Photo Courtesy of V.Lazareth NP

Acne in Sexual-Gender Diverse Pts

- testosterone (weekly IM) in trans men or non-binary persons seeking masculinizing effects
- cutaneous effects: skin oiliness, acne development, body fat redistribution, facial and body hair growth, deepening of the voice
- acne prevalence increases from 6% before to >31% after testosterone x3 years
- 70% of pts report ongoing acne after 10 yrs of testosterone
- topical clascoterone may be an ideal option topical
- oral spironolactone should not be used; it will antagonize gender-affirming effects

https://thedermdigest.com/video/testosterone-and-acne-in-gender-diverse-patients/

Photo Courtesy of V.Lazareth NP

Acne in Sexual-Gender Diverse Pts

- pts taking testosterone
- isotretinoin is often indicated
- combined oral contraceptives can be used for contraception
- discuss surgical affirmation goals when starting isotretinoin in a trans pt considering delayed wound healing and the preferences of the surgeon
- consider psychiatric comorbidities and balance risks and benefits when considering isotretinoin in these pts with higher rates of anxiety and depression

https://thedermdigest.com/video/testosterone-and-acne-in-gender-diverse-patients/

Photo Courtesy of V.Lazareth NP

Acne in Childhood

Neonatal (<6 weeks)

- most cause by cephalic pustulosis caused by colonization with pityrosporum
- papules and pustules on face, scalp, trunk
- resolves without treatment

Infantile (6 weeks – 1 year)

- papules and pustules, comedones, and nodules on face
- check for precocious puberty (testicular enlargement/pubic hair)
- Rx: topical BPO, topical antibiotics or topical retinoid (adapalene)

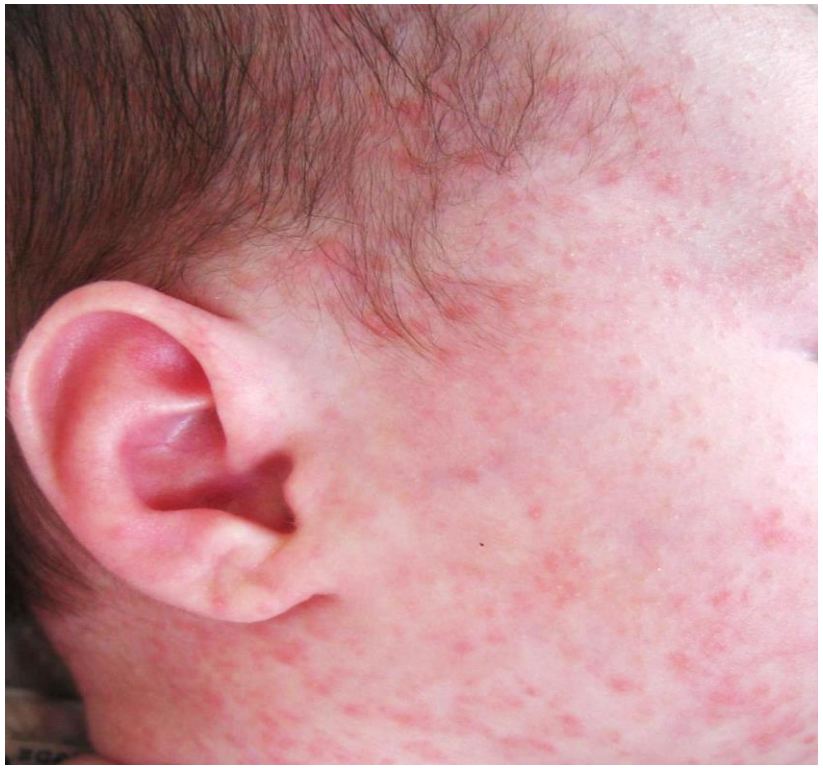


Photo Courtesy of J.Treat MD

Photo Courtesy of V.Lazareth NP

Acne in Childhood

Mid – Childhood (1 – 7 years)

- papules, pustules, and comedones on face
- very rare
- often associated with underlying adrenal disorder
- Rx: BPO, topical antibiotics, topical retinoid (adapelene)

Pre-adolescent (7-12 years old)

- comedones predominate, can have small papules and pustules on face, chest and back
- Rx: BPO, topical antibiotics, or topical retinoids

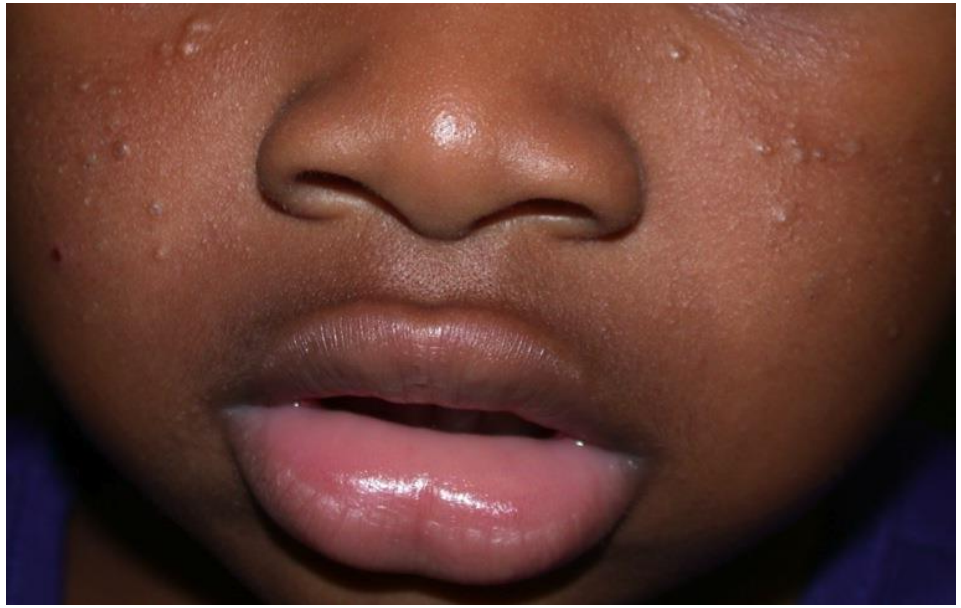


Photo Courtesy of J.Treat MD

Photo Courtesy of V.Lazareth NP

Acne - Pearls

- acne requires consistent, regular care over months to see improvements; set appropriate expectations
- counsel pt to apply topical medication to the entire field of potential acne involvement, not just to individual lesions as spot treatment.
- BPO should be used with abx therapy (oral and topical) to minimize bacterial resistance
- topical dapsone gel used with BPO produces an orange tint to the skin
- rarely, hyperkalemia occurs in women >45 years with spironolactone therapy; there should be appropriate testing.

Photo Courtesy of V.Lazareth NP

Acne - Pearls

- prevention of (sunscreen), and treatment for, post-inflammatory pigmentation (PIH) is integral to acne treatment, especially in pts with SOC
- treatment for PIH includes retinoids, benzoyl peroxide, topical hydroquinone, azelaic acid (10%-20%), glycolic acid, kojic acid, microdermabrasion, light chemical peels.
- intralesional triamcinolone used acutely for inflamed cysts and nodules in individuals with darker skin colors may produce hypopigmentation.
- if there are cysts or scarring, consider timely referral to a dermatologist for isotretinoin therapy to minimize risk for permanent scarring.
- refer to endocrinology if an underlying endocrinopathy is present.

Photo Courtesy of V.Lazareth NP

Answer 1

You are seeing 12-year-old Tamara for follow-up of her persistent moderate comedoneal acne. Today her 8-year-old sister Jasmine is scheduled for evaluation of her acne as well. Their mother has been reminding both girls to apply adapalene (Differin®) lotion at bedtime, but the blackheads are getting worse. She requests a prescription of Aklief® cream for both girls as it has worked well for her niece.

You prescribe trifarotene (Aklief®) 0.005% cream for

A. both Tamara and Jasmine
B. only Tamara
C. only Jasmine
D. neither Tamara or Jasmine

B. only Tamara
trifarotene (Aklief®) 0.005% cream
newly formulated topical retinoic acid
approved for pts > 9 yrs old

Photo Courtesy of V.Lazareth NP

Rosacea

Photo Courtesy of V.Lazareth NP

Rosacea

- common, chronic inflammatory condition with a relapsing-remitting course
- facial flushing and localized erythema, telangiectases, papules, and pustules on the nose, cheeks, brow, and chin.
- differentiate rosacea from acne by the absence of comedones and older pt population (30 - 50 yrs)
- etiology of rosacea likely involves dysregulation of immune and neurocutaneous mechanisms: cutaneous vascular changes, UV and microbial exposure (*Demodex* mites, *Bacillus oleronius, Staphylococcus epidermidis*), and disruption of the epidermal barrier
- can have psychosocial consequences, which may affect quality of life and social and psychological wellbeing.

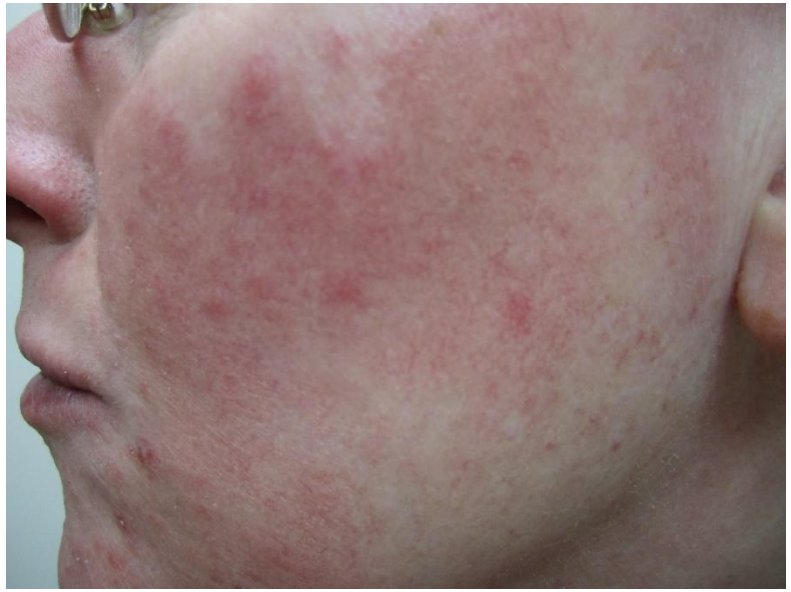
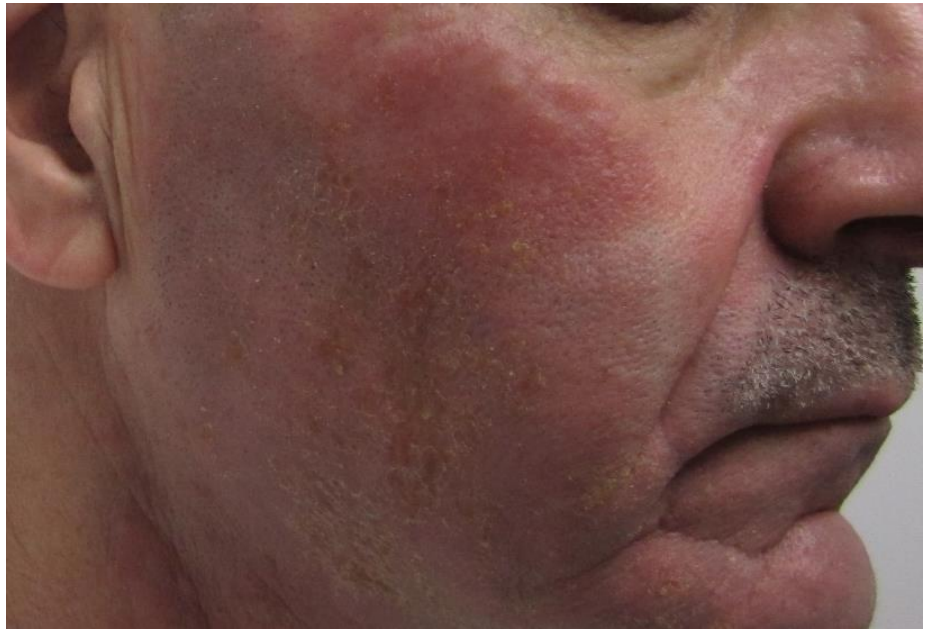


Photo Courtesy of V.Lazareth NP

Rosacea in SOC

- 5.5% global prevalence of rosacea:
  4% Latinos, 2% African, 2% Asian Am descent
- flushing, papules, pustules, phymatous, ocular changes are seen in SOC pts
- fixed centrofacial erythema & telangiectasias are more difficult to detect in darker skin
- Rosacea in AAs: may be associated with granulomatous lesions and misdiagnosed as SLE, dermatomyositis, or sarcoidosis
- skin may appear darker or dusky brown. Telangiectasias may be harder to observe. pustules and textural changes
- in darker skin types, risk of laser therapy often involves dyschromia (hyper- or hypopigmentation).



Rosen T. Rosacea in Skin of Color. Skin of Color Update virtual meeting September 12-13, 2020

Photo Courtesy of V.Lazareth NP

Rosacea

Erythematotelangiectatic

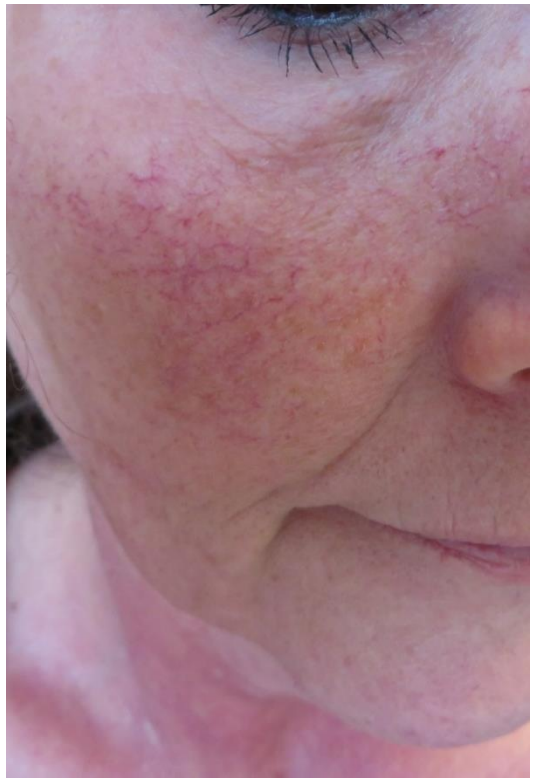


Photo Courtesy of M.Bobonich, NP

Papulopustular

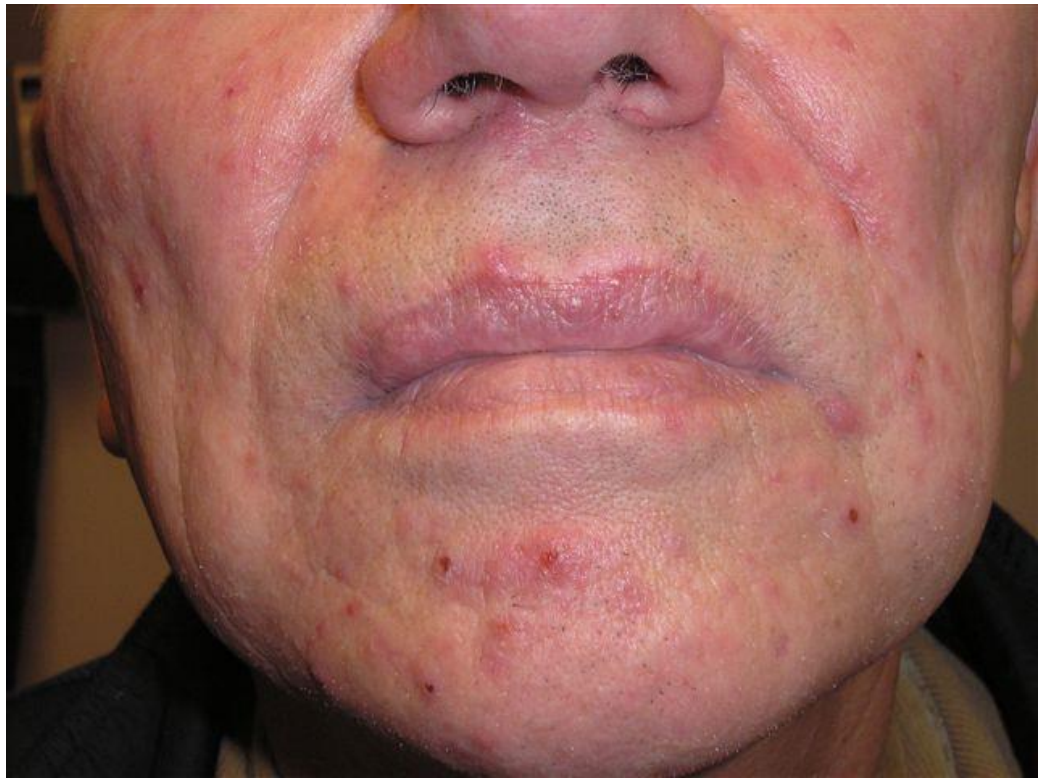
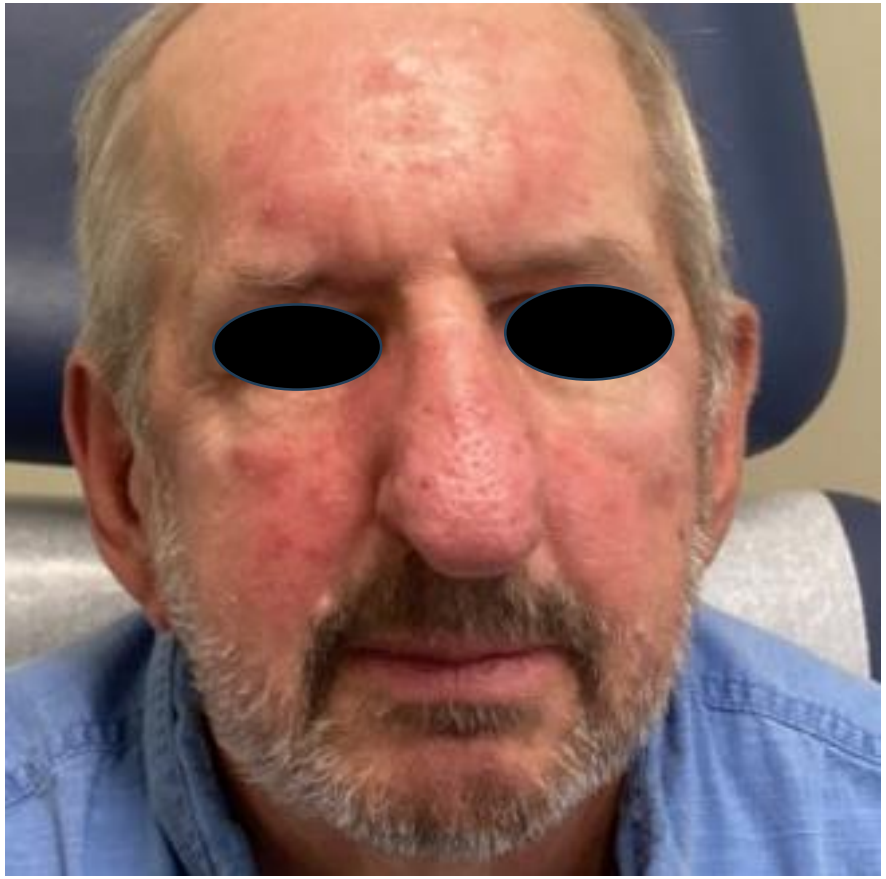


Photo Courtesy of V.Lazareth NP

Rosacea

Phymatous



Ocular

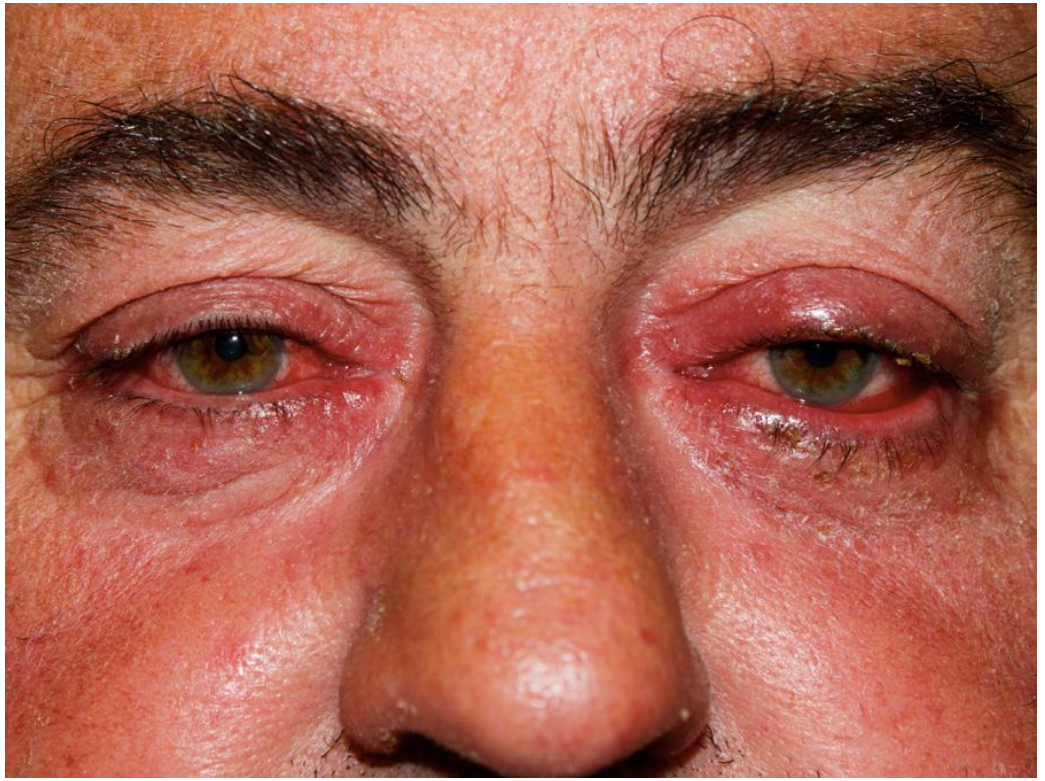
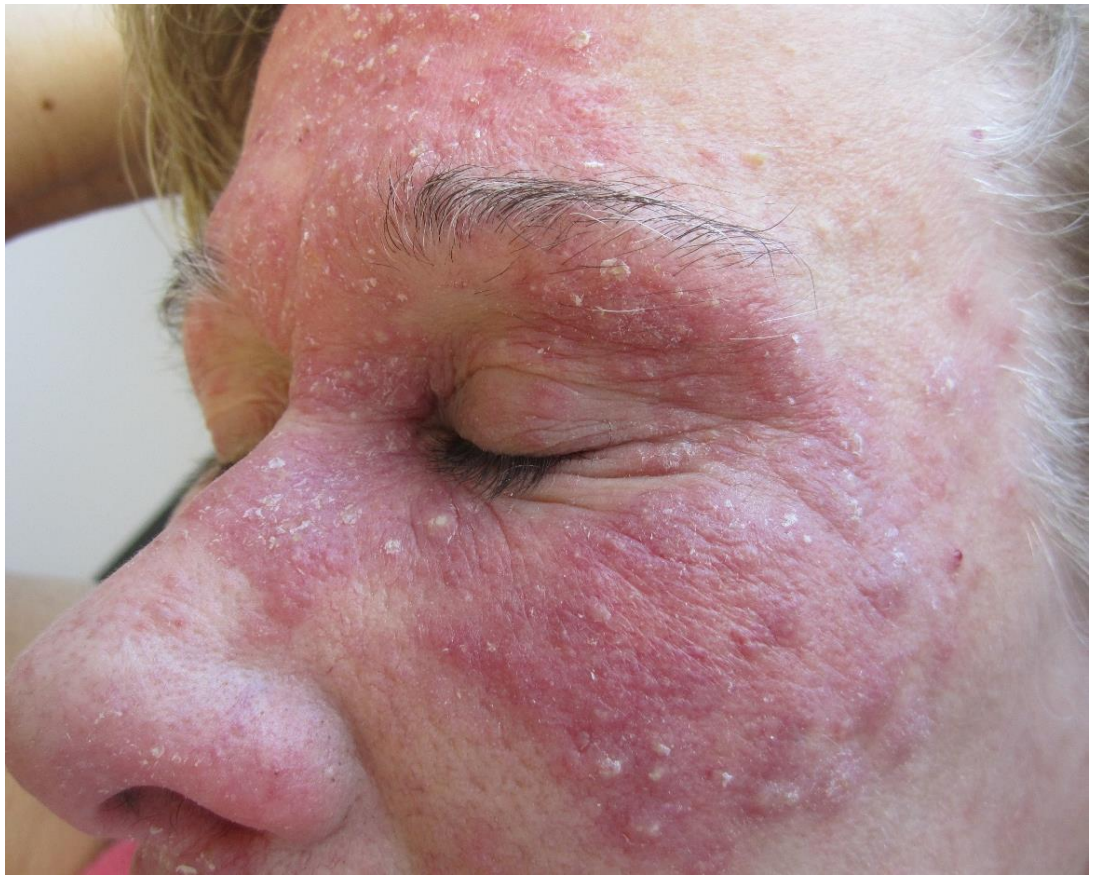


Photo Courtesy of N.Bort NP

Photo Courtesy of V.Lazareth NP

Rosacea

Rosacea Fulminans



Rosacea Triggers

- Sun exposure
- Emotional Stress
- Hot Weather
- Wind
- Heavy exercise
- Alcohol
- Hot bathes
- Cool/cold weather
- Spicy foods
- Humidity
- Heat
- Skin care products/cosmetics
- Medications

Photo Courtesy of V.Lazareth NP

Rosacea: Topical Treatment

papulopustular rosacea:

- metronidazole 0.75% gel BID (oily skin); metronidazole 0.75% cream BID (dry skin); metronidazole 0.75% lotion BID (normal skin)
- azelaic acid 15% foam/gel: improves both acniform eruptions and flushing
- sodium sulfacetamide with 5% sulfur lotion/cream/suspension/cleanser
- minocycline foam 1.5%, erythromycin or clindamycin lotion/solution
- calcineurin inhibitors (tacrolimus ointment, pimecrolimus cream)
- ivermectin 1% cream, permethrin 5% cream

facial erythema:

- brimonidine 0.33% topical gel daily (may result in rebound erythema)
- oxymetazoline 1% cream daily (may result in rebound erythema)

Photo Courtesy of V.Lazareth NP

Rosacea: Systemic Treatment

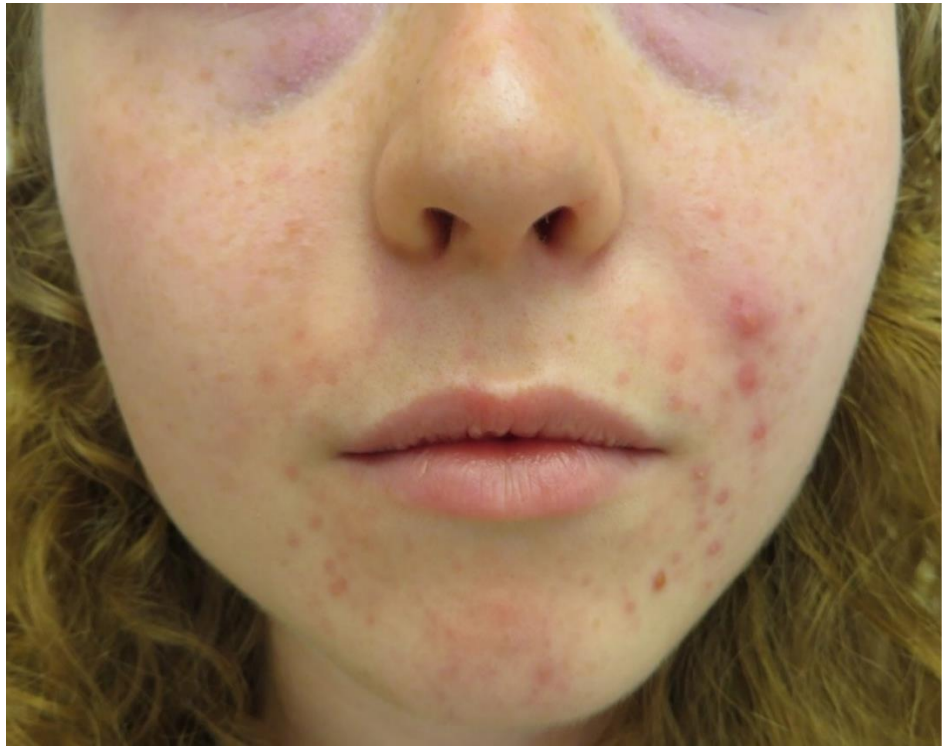
- Antibiotics
  Tetracycline antibiotics are a mainstay of therapy in rosacea. Recommendations include doxycycline 40 mg daily (30 mg immediate release and 10 mg delayed release taken together OR 20 mg twice daily) OR minocycline 50 mg twice daily for 12 weeks
- Alternative regimens:
  Oral metronidazole 200 mg twice daily or Azithromycin 250-500 mg daily 3 times weekly
- Isotretinoin
  effective in treating severe papulopustular rosacea and rosacea fulminans.
- combination therapy is widely used by dermatologists. Combinations include topical metronidazole with oral doxycycline 40 mg modified release, topical brimonidine and topical ivermectin, and topical ivermectin and oral doxycycline 40 mg modified release.

Photo Courtesy of V.Lazareth NP

Other Acniform Eruptions

Photo Courtesy of V.Lazareth NP

Periorificial Dermatitis (POD)



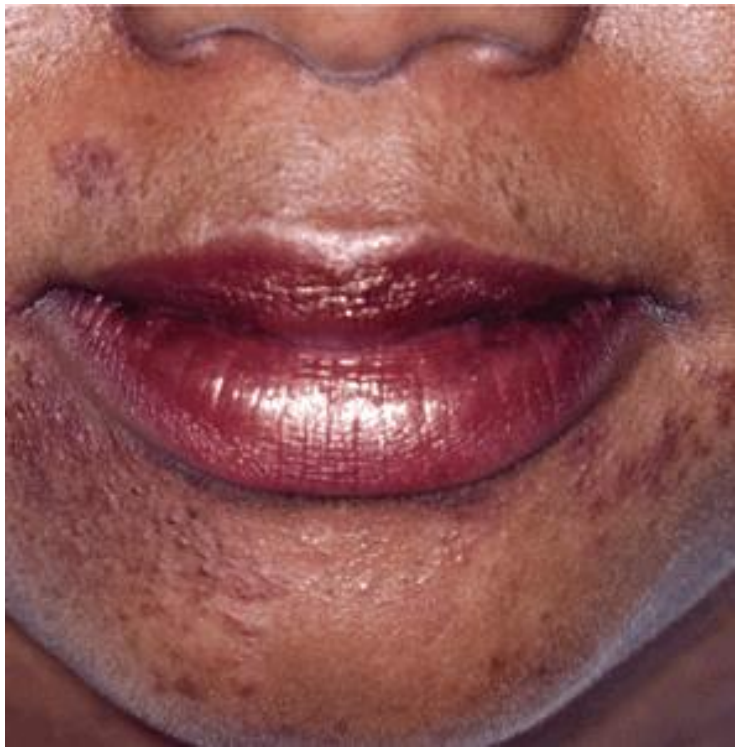


Photo Courtesy of N.Bort NP

Photo Courtesy of V.Lazareth NP

POD: Treatment

- avoid moderate, potent, fluorinated corticosteroids and fluorinated toothpaste
- Taper and d/c topical corticosteroids
- metronidazole 0.75% or 1% BID
- erythromycin 2% or clindamycin 1% BID
- pimecrolimus 1% or tacrolimus 0.1% BID
- azelaic acid 20% cream BID
- ivermectin cream BID
- minocycline 100 mg bid ≥8 wks then taper off
- doxycycline 100mg bid ≥8 wks then taper off
- erythromycin 250mg BID ≥8 wks then taper off
- low-dose oral Isotretinoin (start 0.2 mg/kg/day, then decrease dose to 0.1 or 0.05 mg/kg/day)

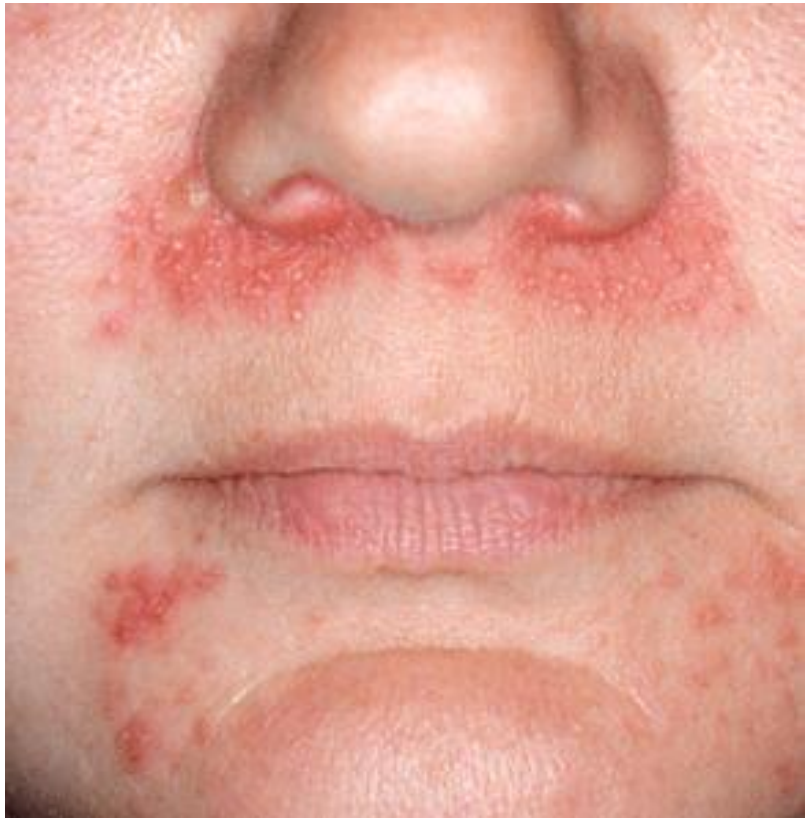


Photo courtesy of M.Bobonich NP

Sebaceous Hyperplasia

- Hypertrophic sebaceous glands
- Benign, yellow papules with central umbilication
- Ddx BCC; Biopsy if unsure
- Treatment is cosmetic in nature
    - Shave excision
    - Electrodesiccation
    - Isotretinoin
    - Cryosurgery
    - Laser ablation
    - Topical Retinoids (off label)

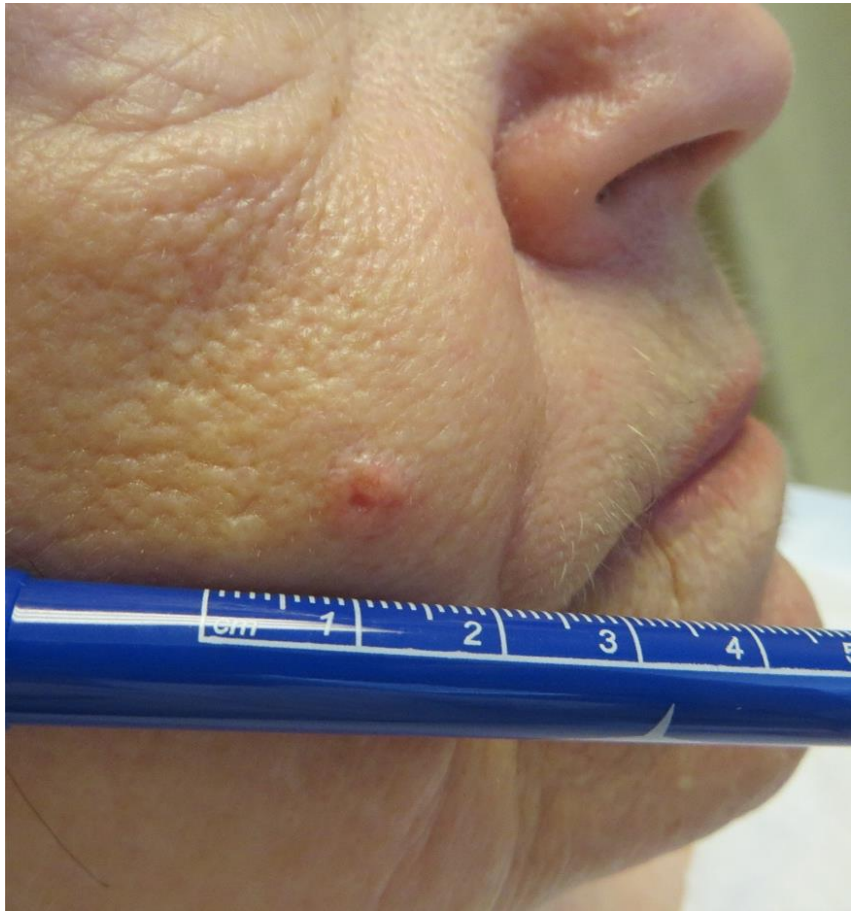


Photo Courtesy of V.Lazareth NP

Pseudofolicular Barbae
Acne Keloidalis Nuchae

- Pseudofolliculitis barbae is a chronic inflammatory disease of hair-bearing areas incited by shaving.
- close shaving of curly hair causes hair to penetrate the wall of the follicle and extend into the dermis as it grows back or curves back on itself and pierces the skin.
- primarily a cosmetic concern, but it can lead to scarring, infection, hyperpigmentation, keloid formation.

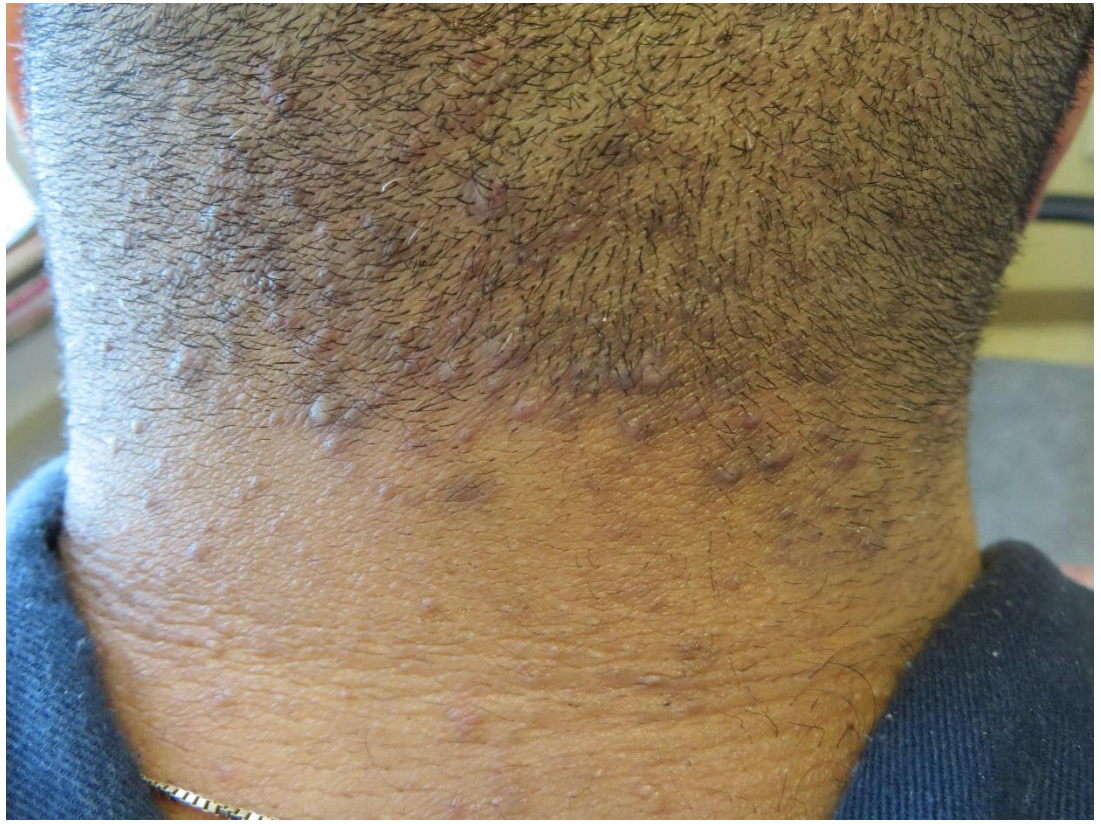


Photo Courtesy of V.Lazareth NP

Pseudofolicular Barbae: Counseling

- If possible, stop shaving.
- If shaving cessation is not possible, instruct the patient to soak the face with a warm, wet cloth prior to shaving and to use shaving gels.
- There are specialized razors that allow for a less close shave and, thereby, prevent the hairs from growing inward.
- Shaving should be done in the direction of hair growth and without pulling the skin taut. A sharp razor is recommended, and care should be taken to avoid shaving over the same area.
- Shave with either a single-blade razor or an electric razor on the highest setting. Alternatively, hair clippers or a safety razor can be used on its gentlest setting.

Photo Courtesy of V.Lazareth NP

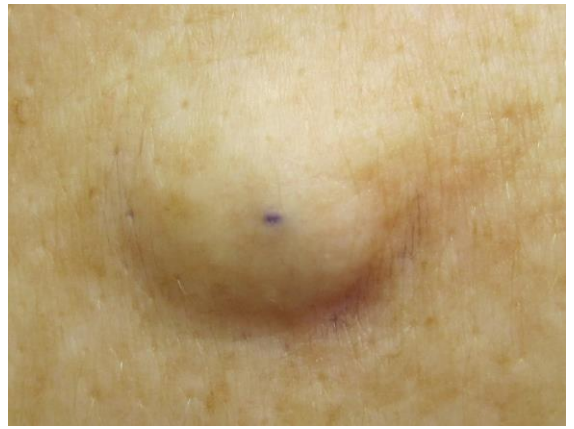
Pseudofolicular Barbae: Treatment

- Topical retinoids such as tretinoin (0.025%-0.1%) applied nightly
- clindamycin 1% lotion or gel, benzoyl peroxide 5%, hydrocortisone 1%
- short course of doxycycline 100 mg BID
- Intralesional corticosteroids for persistent papules
- Electrolysis, laser, chemical peels, surgical depilation
- Laser treatment, long-pulsed diode and Nd:YAG laser
  - performed by experienced provider
  - especially in pts with darker skin

Photo Courtesy of V.Lazareth NP

Epidermal Inclusion Cysts

- common, benign lesion, firm consistency, a pore-like opening, contains macerated keratin and lipid-rich debris
- can arise on the face, trunk, extremities, in the mouth, on the genitals, at any age, M > F
- usually asymptomatic, but painful if ruptured or infected
- asymptomatic lesions require no treatment, though some patients may request removal.
- Pilar (trichilemmal) cysts are common, benign, smooth, mobile, keratin filled cysts of hair follicle origin
- frequently multiple, may become large, tender, associated with overlying alopecia.



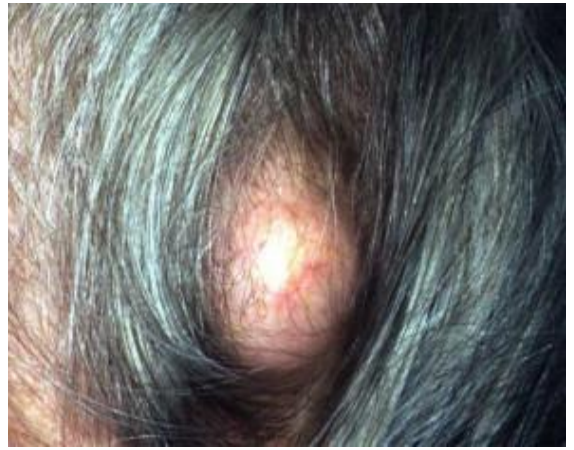


Photo Courtesy of N.Bort NP

Photo Courtesy of V.Lazareth NP

EIC: Treatment

- Infection is rare but should be treated with incision & drainage, and if fluctuant, oral antibiotics (cephalexin, doxycycline, trimethoprim-sulfamethoxazole)
- Excision should be delayed until the infection has subsided
- Inflamed (non-infected) cysts may respond to intralesional triamcinolone though intralesional steroids may cause hypopigmentation hypopigmentation or atrophy.
- Incision and drainage can provide immediate reduction in pressure and discomfort, but without removing the epidermal lining, the cyst will refill with new layers of soft keratin.
- Using a punch biopsy to create a small skin opening and then using a curette to remove the cyst wall is sometimes effective.
- Alternatively, the entire cyst, along with the wall, can be excised surgically

Photo Courtesy of V.Lazareth NP

Hidradenitis Suppurativa (HS)

- (acne inversa) common, chronic destructive inflammatory disorder of hair follicles
- follicular rupture initiates interaction between the follicular microbiome and innate immune system, triggering an inflammatory response.
- F > M, 30-40 yrs, African American, socioeconomically disadvantaged
- onset occurs soon after puberty, pts report recurring "boils" at the axillae, breasts, groin, buttocks
- pain, pruritus, drainage, odor, fatigue, arthralgias
- triggers: friction from tight clothing or shaving, menses, pregnancy, postpartum
- associations: obesity, smoking, metabolic syndrome, major cardiovascular events, cardiac death, diabetes, Crohn’s, depression, anxiety, risk of suicide

Photo Courtesy of V.Lazareth NP

HS: HURLEY STAGE 1

- recurring tender, nodules and abscesses
- without tunnels or significant scar
- disease progression (tunnels, scars, chronic purulent drainage) may occur within weeks to years
- erythema can be difficult to discern so lesions may appear dark brown, violaceous, or gray in darker skin

Rx:

- Antiseptic wash QD- BID
- Topical Clindamycin BID x2-3 months
- Intralesional kenalog injections

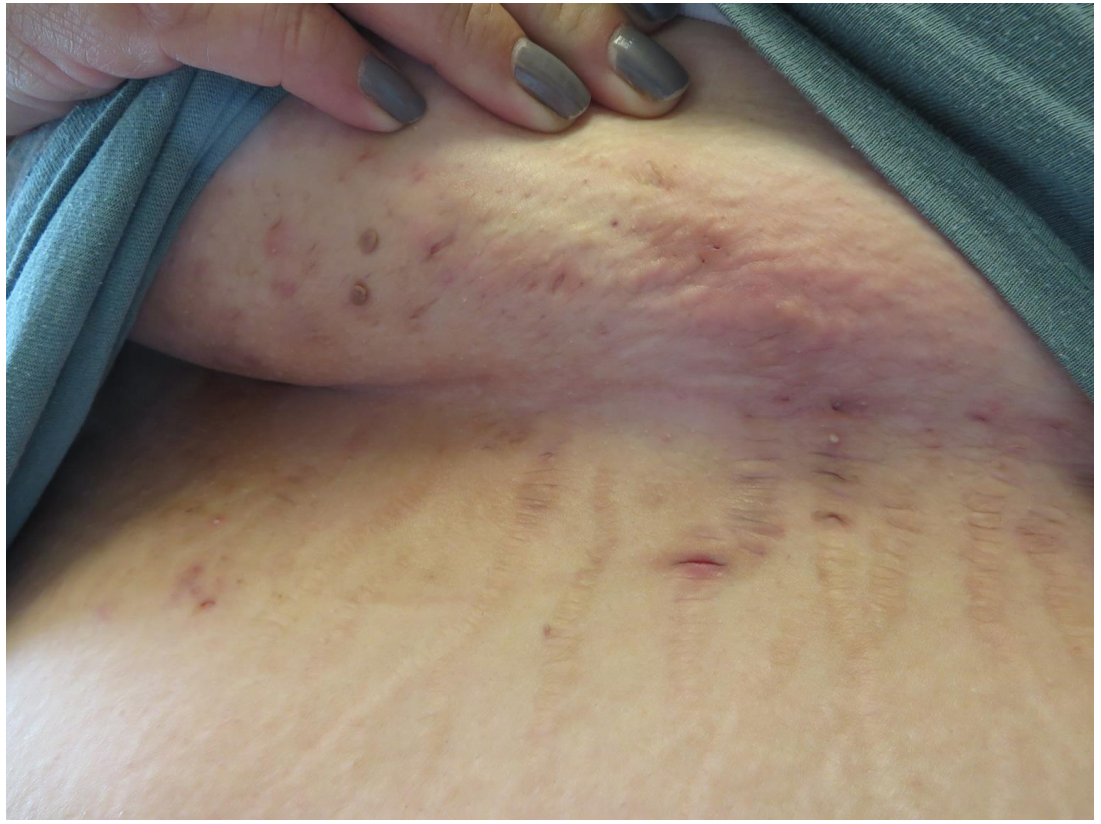


Photo Courtesy of V.Lazareth NP

HS: HURLEY STAGE 2

- multiple and/or interconnected tunnels or extensive scars
- Post inflammatory hyperpigmentation occurs with greater frequency and severity and tends to persist longer in darker skin

Rx

- topicals *plus*
- oral antibiotics
- hormonal agents
- adalimumab
- may consider surgical excision

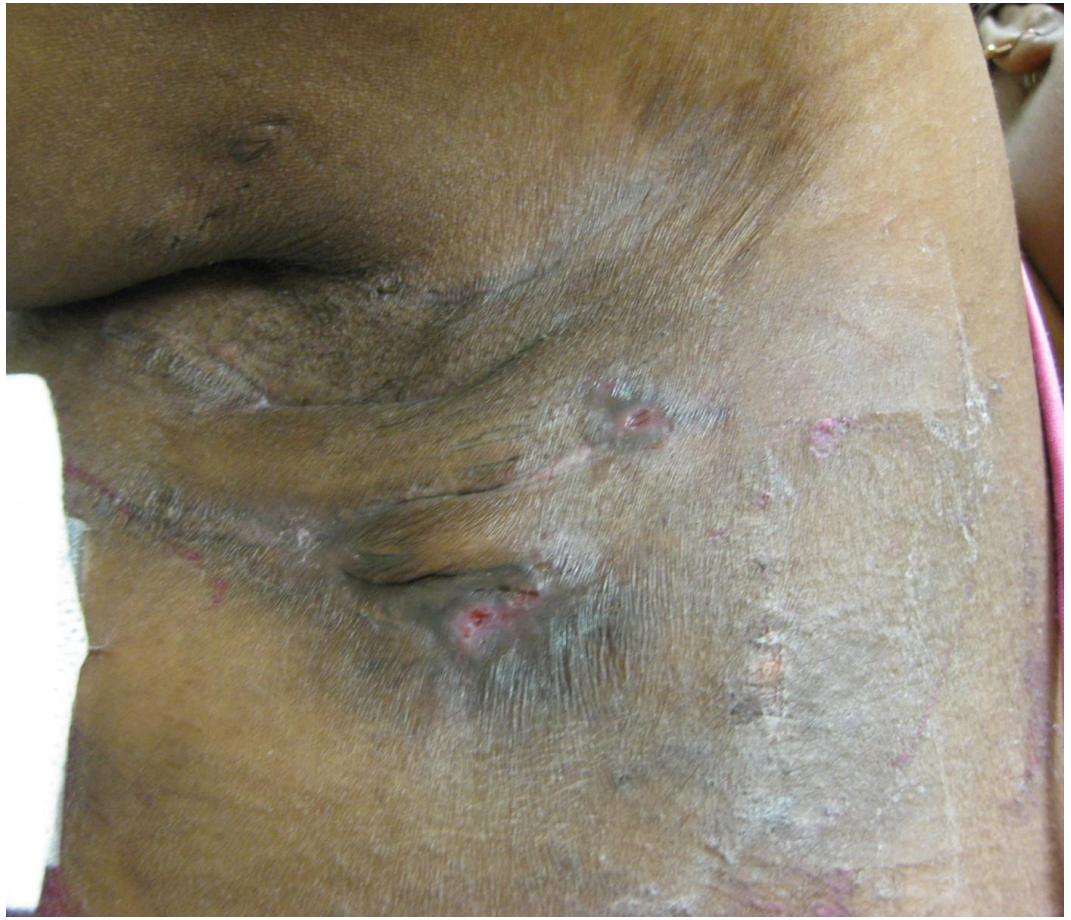


Photo Courtesy of V.Lazareth NP

HS: HURLEY STAGE 3

- lesions form inflammatory plaques, interconnected sinus tracts, abscesses and scarring

Rx

- topicals *plus*
- oral antibiotics
- hormonal agents
- adalimumab, secukinumab
- may consider surgical excision

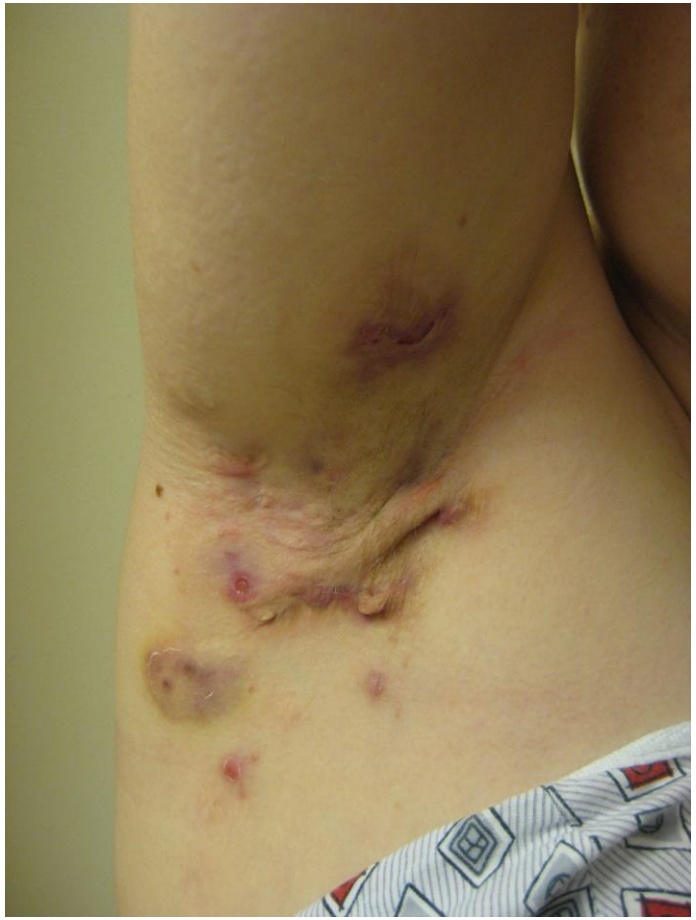


Photo Courtesy of V.Lazareth NP

HS Counseling

- Advise patients that treatment can be challenging but that disease can typically be stabilized and improved over time.
- A combination approach of behavioral, medical and procedural interventions is key to optimal management.
- The chronic inflammation can affect other organs. Consider screening for comorbid metabolic syndrome, DM, smoking, anxiety, depression, IBD, PCOS, inflammatory arthropathies, autoinflammatory syndromes.
- Refer patients with perianal disease and/or gastrointestinal symptoms to GI
- behavioral: Mediterranean diet, weight loss, smoking cessation, avoid restrictive clothing. hygiene
- Because of the severity of the disease and the foul odor of the drainage, pts are at risk for social isolation, depression and suicide. Attention should be given to pain management, social factors, and referrals for mental health support

Photo Courtesy of V.Lazareth NP

HS Treatment

- Topical: clindamycin, benzoyl peroxide, chlorhexidine
- Oral antibiotics: doxycycline or minocycline 100 mg BID, clindamycin 300 mg BID
- The addition of rifampin 300 mg BID or 600 mg daily may be beneficial.
- Combination: metronidazole, fluoroquinolones, rifampin
- Hormonal: oral contraceptives, spironolactone, and finasteride
- Spironolactone 100-200 mg daily
- Finasteride 5 mg daily
- isotretinoin may be preferred in patients with concomitant acne

Photo Courtesy of V.Lazareth NP

HS Treatment

- Biologic therapies: mild-to-moderate disease failing 1st line therapies or as 1st line therapy in severe and extensive disease.
- adalimumab for pts ≥12 years (loading dose 160 mg on day 1, 80 mg on day 15, then 40 mg weekly –or- 80 mg q 2 weeks starting on day 29)
- adalimumab for pedi pts <60 kg (80 mg day 1, 40 mg day 15, then 40 mg qow)
- secukinumab for adult pts with moderate-severe HS (300 mg dose every 2-4 wks)
- Treatment using follicular destruction: Nd:YAG laser, but more limited data exist for the alexandrite laser, intense-pulsed light, and diode laser.
- Surgical excision or deroofing for chronically inflamed nodules and tunnels, either focal or involving an entire region.
- Incision and drainage in managing acute abscesses to relieve pain. Wound packing after these procedures should generally be avoided

Photo Courtesy of V.Lazareth NP

Primary Focal Hyperhidrosis

Diagnostic Criteria

- Visible and excessive sweating for >6 months without underlying cause

- + 2 of the following
  - bilateral and symmetric distribution
  - impairment of normal daily activities
  - occurring at least once a week
  - onset younger than 25 years old
  - does not occur during sleep
  - positive family history

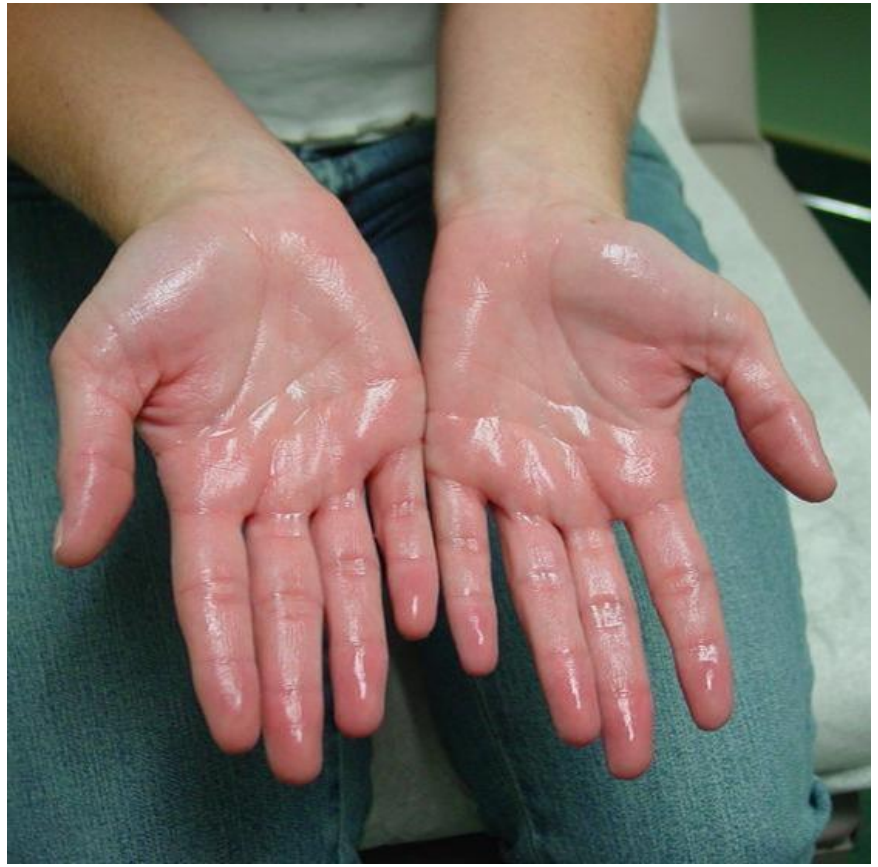


Photo Courtesy of V.Lazareth NP

2nd Hyperhidrosis

- can cause significant anxiety, embarrassment, disrupt social and professional activities
- concomitant derm conditions: eczematous dermatitis, dermatophytosis, pitted keratolysis, verrucae

Secondary hyperhidrosis

- substance abuse
- COPD
- CHF
- endocrine disorders
- febrile illness
- spicy food
- malignancies
- medications
- neurological
- menopause
- psychiatric

Photo Courtesy of V.Lazareth NP

Hyperhidrosis: Treatment

Topical: apply nightly to affected areas

- 12% aluminum chloride
- 15% aluminum chloride and 3% salicylic acid gel solution
- 20% aluminum chloride and ethanol (can be irritating)
- glycopyrrolate 0.5%-1% solution
- 2.4% glycopyrronium cloth wipes daily (>9 years)
- oxybutynin 3% gel for the axillae (young adults)

Systemic

- glycopyrrolate 1-2 mg qd-bid (inhibits the action of acetylcholine)
- oxybutynin 5 mg qd-bid
- clonidine 0.1 mg bid alpha-adrenergic receptor agonist
- propranolol 5-10 mg prn prior to episodes of projected increased sweating
- diazepam 5-20 mg daily

Photo Courtesy of V.Lazareth NP

Hyperhidrosis: Procedural Rx

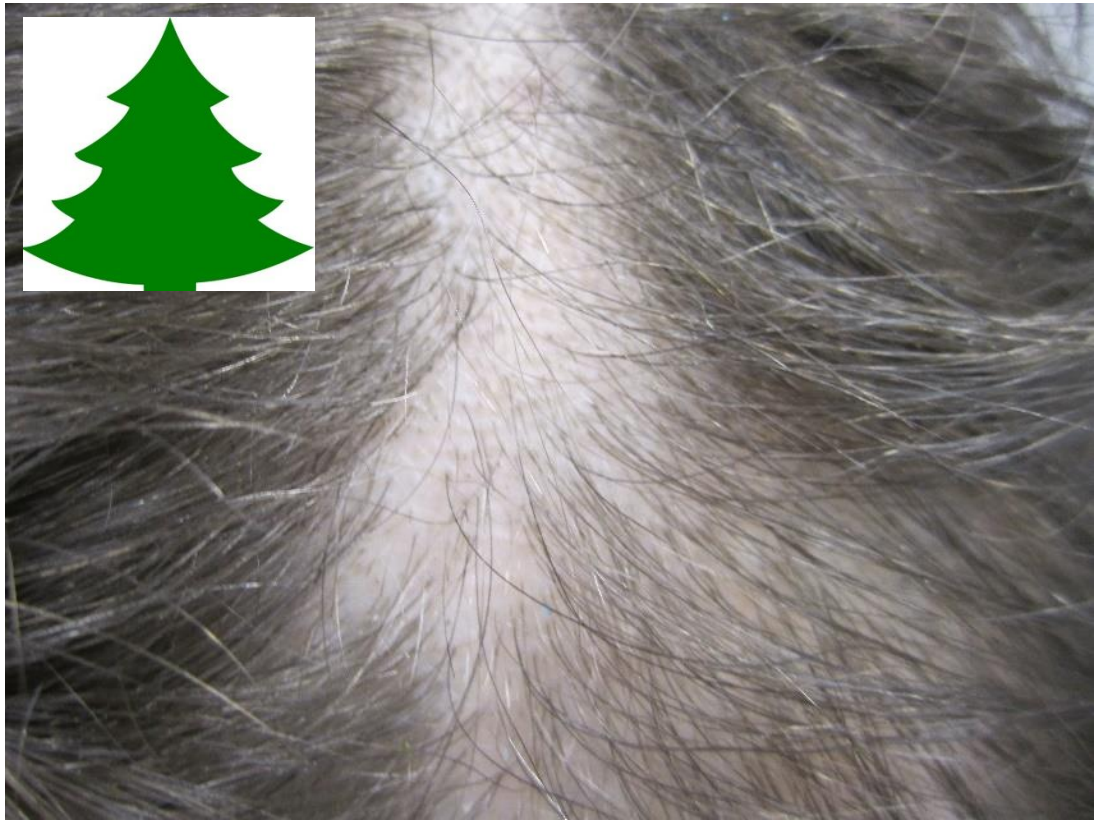
- Botulinum toxin:
  inhibits the release of acetylcholine from sympathetic nerve endings at the eccrine sweat glands, resulting in an anhidrotic effect.
- Tap water iontophoresis:
  utilizes a device to apply direct current to intact skin with an ionized substanc
- Microwave thermolysis (MiraDry):
  microwave technology to permanently destroy the sweat gland
- Surgical Procedures
  Local surgery
- Axillary curettage or liposuction
- Endoscopic thoracic sympathectomy

Photo Courtesy of V.Lazareth NP

Hair & Nail Disease

Photo Courtesy of V.Lazareth NP

Androgenetic Alopecia



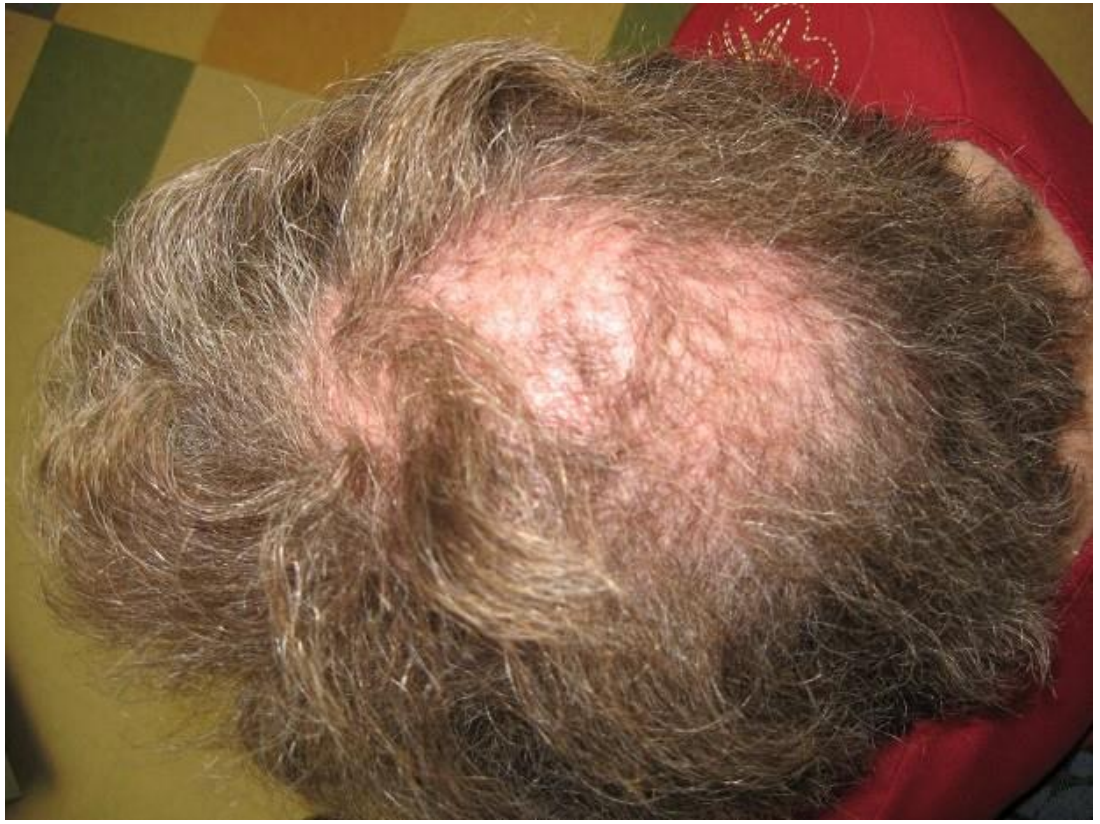
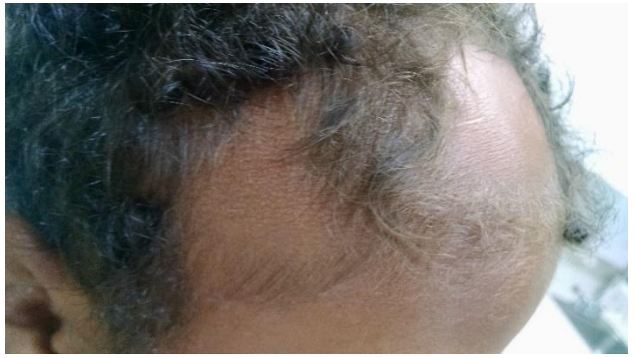


Photo Courtesy of V.Lazareth NP

Alopecia: Treatment



- low dose oral minoxidil (1.25-2.5 mg/d) stimulates hair growth by shortening the telogen and prolonging the anagen phases (reducing hair shedding and increasing hair length); increases hair fiber diameter (increasing strength, reducing breakage); reverses hair miniaturization (increasing hair counts)
- methotrexate 1% gel
- IL triamcinolone, prednisone
- cyclosporine
- Excimer or Fractional Laser
- oral JAK inhibitors: FDA approved for Alopecia Areata
- platelet-rich plasma

Photo Courtesy of V.Lazareth NP

Traction Alopecia

- hair loss due to recurrent tension on the hair; may scar over time
- tender, itchy scalp and headaches may be reported
- associated with tight braids, cornrows, extensions and weaves, helmets, hair caps, headbands, turbans, excessive brushing or heat at the roots, especially in chemically relaxed hair
- Rx: rotate hairstyles, lesional or high potency topical steroids, topical/oral minoxidil

Photo: https://www.hairline.com/learn-about-traction-alopecia-prevention-and-treatment.html

Dadzie OE, Petit A, Alexis AF. Ethnic Dermatology: Principles and practice. John Wile & Sons: 2013. “What's New in Traction Alopecia, Alopecia Areata and CCCA,” Victoria Holloway Barbosa, MD, FAAD. AAD Annual Meeting; March 17–21, 2023; New Orleans, LA

Photo Courtesy of V.Lazareth NP

Traction Alopecia: Treatment

Patient Education

- African hair is drier, asymmetrical, and helical in shape, which lead to points of weaknesses along the hair shaft. This makes it more susceptible to breakage during combing and to TA when hair is worn in tight styles for prolonged periods.
- TA is worsened if the hair is chemically relaxed because relaxers weaken the tight disulfide bonds, rendering the hair shaft thinner and drier.

Pediatrics

- stop the traction
- mid-potency topical steroid

Adults: combination of the following:

- topical minoxidil
- potent topical steroids
- intralesional steroids (hypopigmentation, atrophy)
- oral tetracycline (anti-inflammatory)

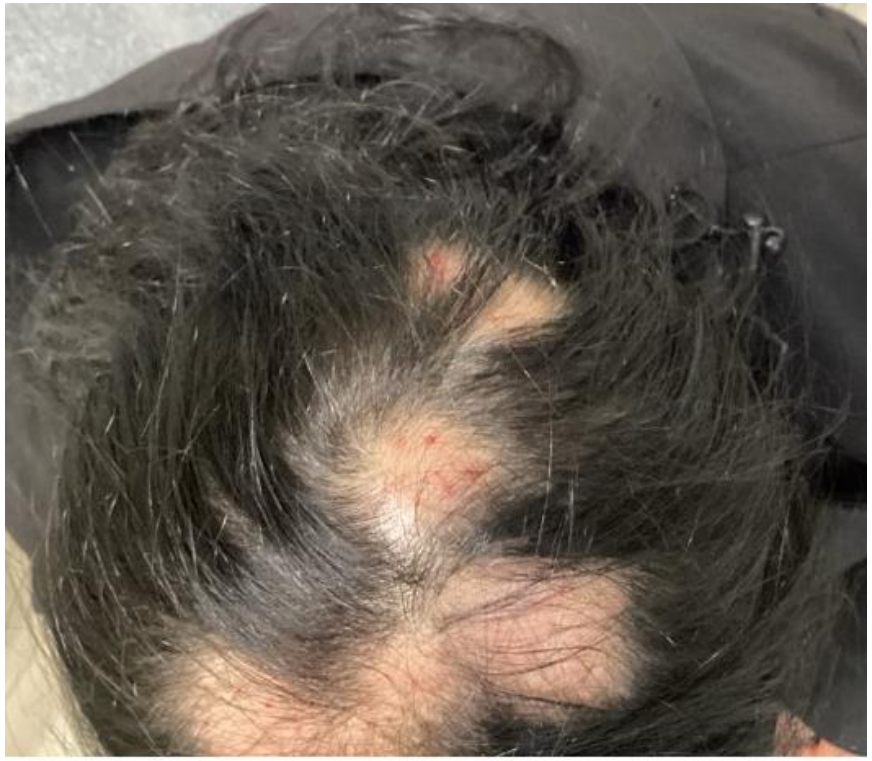
Advanced cases with fibrosis

- punch grafts, rotation flaps, scalp reduction, hair transplantation

Photo Courtesy of V.Lazareth NP

Central Centrifugal Cicatricial Alopecia

- scarring alopecia from hair follicle destruction
- hair loss starts at vertex and spreads centrifugally
- incidence 5-22% in AA females
- scarring, burning, pruritus, erythema, tenderness, scaling, flaking, pustules
- multifactorial etiology influenced by environmental and genetic factors
- associated breast cancer, uterine leiomyomas, high cholesterol, diabetes, acne, high blood pressure



George, E.A., Matthews, C., Roche, F.C. *et al.* Beyond the Hot Comb: Updates in Epidemiology, Pathogenesis, and Treatment of Central Centrifugal Cicatricial Alopecia from 2011 to 2021. *Am J Clin Dermatol* 24, 81–88 (2023).“What's New in Traction Alopecia, Alopecia Areata and CCCA,” Victoria Holloway Barbosa, MD, FAAD. “Central Centrifugal Cicatricial Alopecia (CCCA): Advances in Diagnosis and Treatment,” Loren Krueger, MD, FAAD. AAD Annual Meeting; March 17–21, 2023; New Orleans, LA

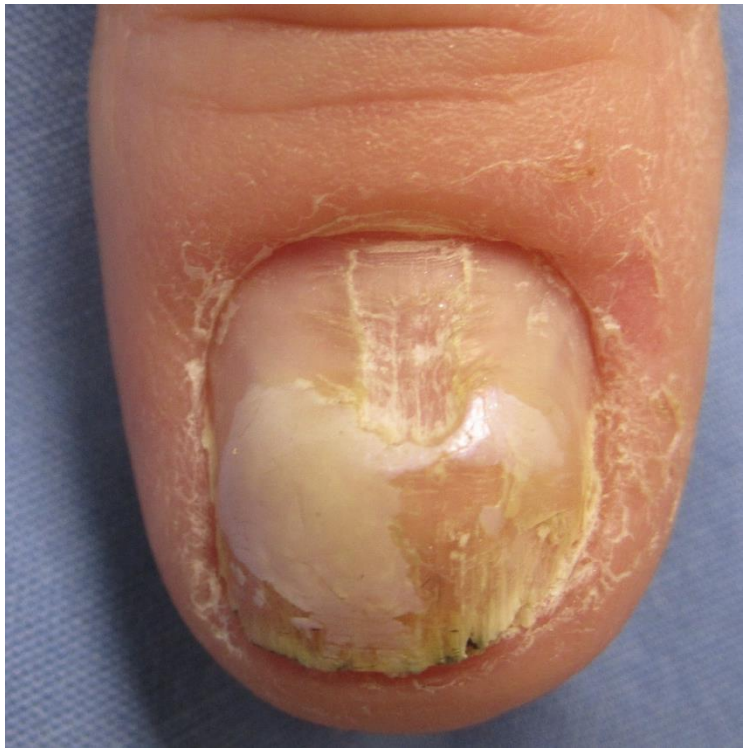
Photo Courtesy of V.Lazareth NP

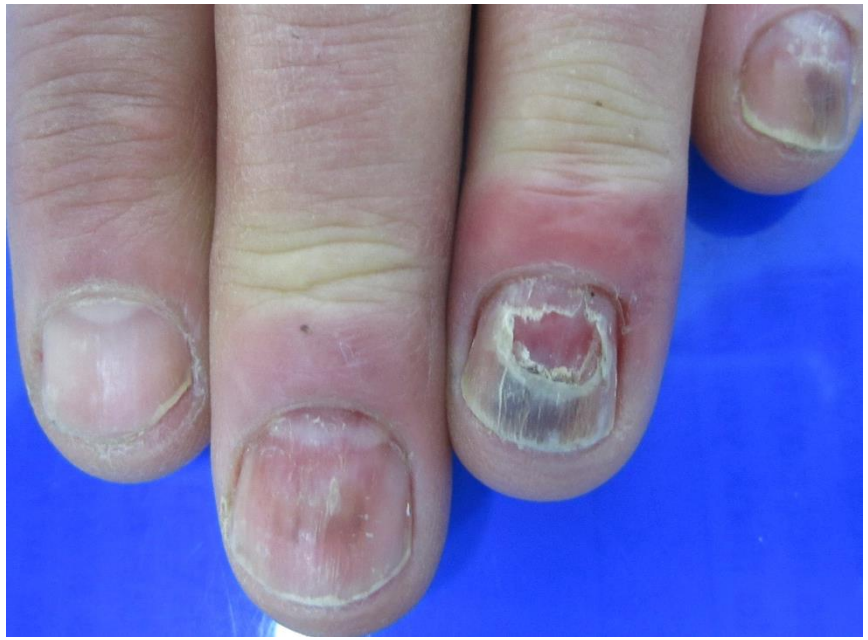
CCCA: Treatment

- 1. multi-pronged anti-inflammatory approach:
  topical corticosteroids + IL triamcinolone (5-10 mg q 4-6 wk x 3-6 m) + doxy 100 mg BID x 3 m, antiseborrheic shampoo q 1-2 wks
- 2. daily topical minoxidil, topical corticosteroids x 3 n/wk, antiseborrheic shampoo q 1-2 wks. prn IL triamcinolone
- Oral: doxycycline, minoxidil, finasteride, hydroxychloroquine, metformin, mycophenolate mofetil
- Platelet-rich plasma
- hair transplantation

Photo Courtesy of V.Lazareth NP

Nail Disease





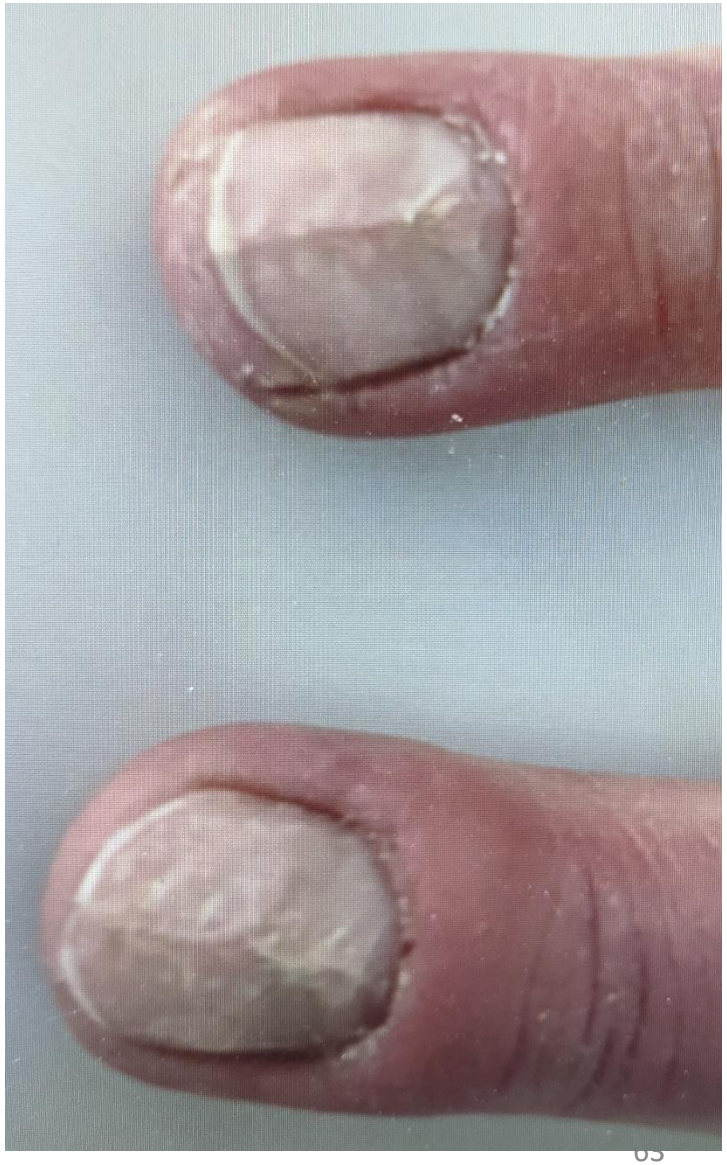


Photo Courtesy of V.Lazareth NP

Onychomycosis: Topical Treatment

- Topical treatments are generally less effective than oral antifungals
- Topical Rx is a reasonable option for patients who have contraindications to oral medications and have 3 or fewer nails affected, with <50% nail plate surface area affected and <2 mm nail thickness
- Efinaconazole 10% solution – daily for 48 weeks for toenails
- Tavaborole 5% solution – daily for 48 weeks for toenails
- Ciclopirox 8% nail lacquer plus debridement –daily for 48 weeks for toenails
- Side effects: uncommon, mild application site erythema and nail discoloration

- adjunctive **c**hemical nail avulsion with topical 40% urea ointment
- Nd:YAG lasers are approved for the temporary cosmetic improvement, not complete cure.

Photo Courtesy of V.Lazareth NP

Onychomycosis: Systemic Treatment

- The most effective therapy for adult onychomycosis is oral terbinafine 250 mg daily for a duration of 12 weeks for toenail infections and 6 weeks for fingernails.
- Taste disturbances with terbinafine are relatively uncommon but more common than liver function abnormalities.
- Itraconazole is fungistatic against dermatophytes, molds, and yeasts. Itraconazole 200 mg by mouth daily for 12 weeks for toenails. Pulse therapy using 200 mg by mouth twice daily for 1 week per month for 3-4 months for fingernails.
- Hepatotoxicity and neutropenia are uncommonly associated with some oral antifungal agents. Perform baseline CBC and liver function tests prior to initiation of therapy with interval lab monitoring >65 yr and per provider discretion
- Itraconazole is contraindicated in pts with heart failure, since it decreases cardiac contractility. There are also many important drug interactions with itraconazole.

Photo Courtesy of V.Lazareth NP

Genital Diseases

Photo Courtesy of V.Lazareth NP

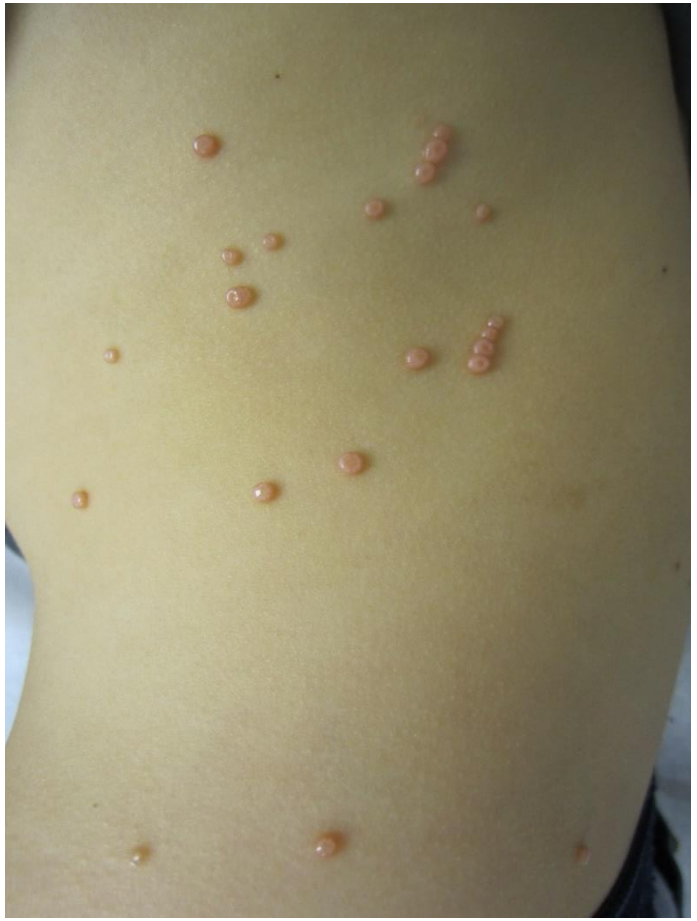
Vulvar Disorders

Vulvar Lichen Sclerosis

- chronic dermatosis, initial short inflammatory phase followed by chronic scarring and skin atrophy affecting primarily anogenital skin. peaks in prepubertal and postmenopausal females. increasingly recognized in boys and adolescent males
- dry, tender, severely pruritic atrophic white plaques. can progress to cause fusion of labia minora to adjacent mucosa, fusion involving clitoral hood and clitoris, sclerosis of the vaginal introitus, erosion or ulceration resulting in dyspareunia
- majority of male genital LS occur in uncircumcised men. Scarring complications include urinary obstruction, ulceration, painful erection, phimosis and sexual dysfunction. Circumcision can be curative.
- Squamous cell carcinoma can arise in untreated genital lesions.
- Rx: clobetasol propionate 0.05% ointment BID for 3 months, or until skin texture and color resolves, then as maintenance therapy 2 or 3 times per week. UVA-1 treatment.

Photo Courtesy of V.Lazareth NP

Molluscum contagiosum



Topical Rx

- cantharidin
- podophyllotoxin
- imiquimod
- cidofovir (immunosuppressed)

Destructive Rx

- Curettage
- Cryotherapy
- Pulse dye laser

cantharidin 0.7% soln

Indication: 2+ years

CI: none

AEs: vesiculation, pain, itch, erythema

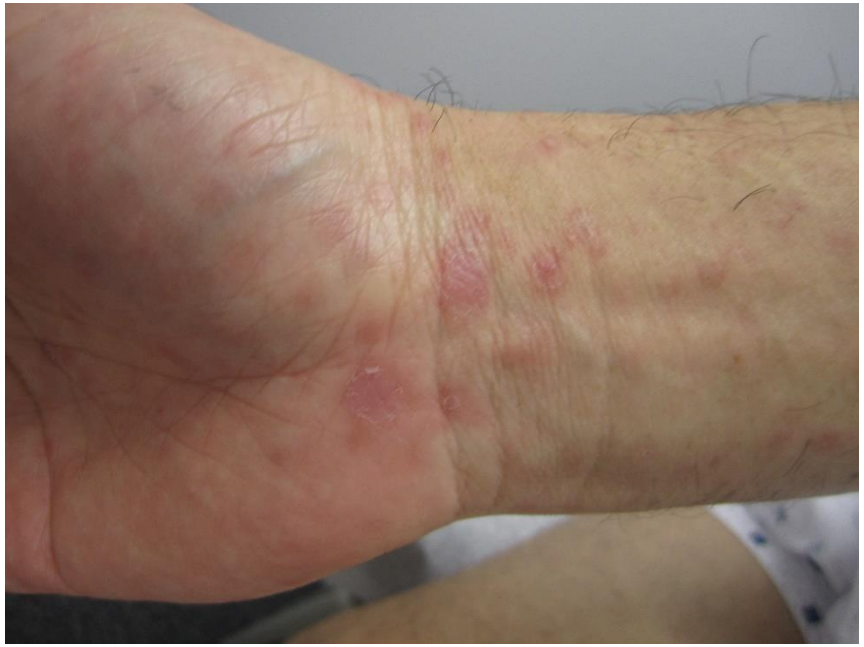
Low incidence of scarring

Efficacy: 12 wk complete clearance

Photo Courtesy of V.Lazareth NP

Syphilis

- CDC reportable STD; spirochete *Treponema pallidum*
- I (3-90 days): painless ulcer *Chancre* (round, pink, raised border), resolves spontaneously
- II (3-12 weeks) localized or diffuse mucocutaneous lesions; asymptomatic or pruritic diffuse red-brown scaly palmar/plantar macules or papules. LAD, malaise, myalgias, sore throat, low grade temp
- Rx: Benzathine PCN G 2.4 million units IM x1



- III (chronic) systemic disease; CNS, heart, bone, skin. Screening Tests: RPR, VDRL, HIV, STDs
- if positive: TPPA, EIA, CLIA.

Photo Courtesy of V.Lazareth NP

Human Papillomavirus

- >90% of anal cancers are caused by HPV infection
- annual screening with anal cytology, high-resolution anoscopy, digital anorectal exam for pts >35 who are symptomatic (anorectal bleeding or pain) or living with HIV
- vaccination is key to reducing the incidence of anal and cervical cancers
- vaccine should be offered to pts at higher risk to 45 yrs
- LGBTQIA2+ pts are at higher risk of human papillomavirus (HPV) infection

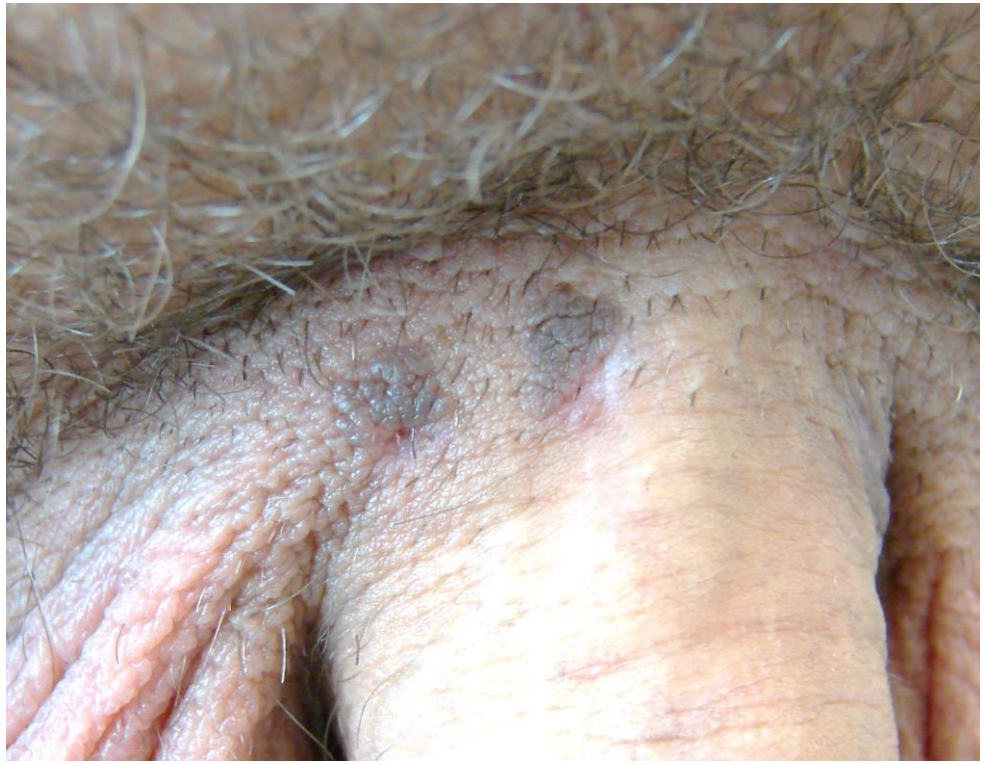


Photo Courtesy T.Rosen MD

Harnessing Doxycycline for STI Prevention: A Vital Role for Primary Care Physicians

September 19, 2024|Family Medicine

By**Santina J.G. Wheat, MD, MPH**

Primary care physicians frequently offer postexposure prophylaxis for various infections, including influenza, pertussis, tetanus, hepatitis, and Lyme disease, among others. However, the scope of postexposure prophylaxis in primary care is expanding, presenting an opportunity to further integrate it into patient care. As primary care providers, we have the unique advantage of being involved in both preventive care and immediate response, particularly in urgent care or triage scenarios. This dual role is crucial, as timely administration of postexposure prophylaxis can prevent infections from taking hold, especially following high-risk exposures.

Recently, the use of doxycycline as a form of postexposure prophylaxis for sexually transmitted infections (STIs) has gained attention. Traditionally, doxycycline has been used as preexposure or postexposure prophylaxis for conditions like malaria and Lyme disease but has not been widely employed for STI prevention until now. Doxycycline is a relatively common medication, generally safe with side effects that typically resolve upon discontinuation. Several open-label studies have shown that taking 200 mg of doxycycline within 72 hours of condomless sex significantly reduces the incidence of chlamydia, gonorrhea, and syphilis among gay, bisexual, and other men who have sex with men, as well as transgender women who have previously had a bacterial STI. However, these benefits have not been consistently observed among cisgender women and heterosexual men.

Dermatoses of Pregnancy

Photo Courtesy of V.Lazareth NP

Polymorphic eruption of pregnancy

- PEP, also known as PUPPP, is the most common specific eruption of pregnancy.
- 3rd trimester of a first pregnancy or in the immediate postpartum period
- 0.5% of pregnancies. higher frequency: multiple gestation, significant intrapartum weight gain, primiparity, N European descent
- pruritis develops in and around the abdominal striae, may spread to the extremities, chest, back
- benign, self-limiting, no association with adverse fetal or maternal outcomes
- typically resolves within 4 weeks of rash onset, recurrence with subsequent pregnancies is uncommon

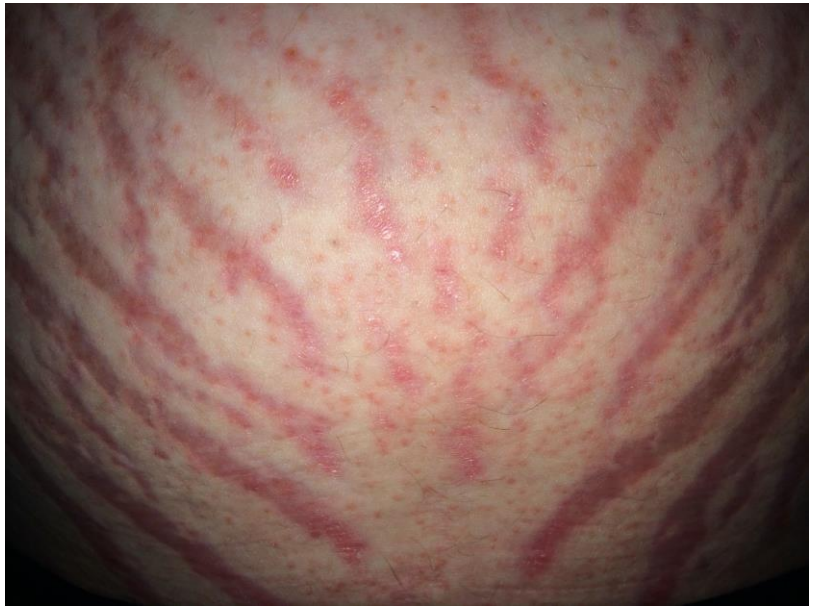


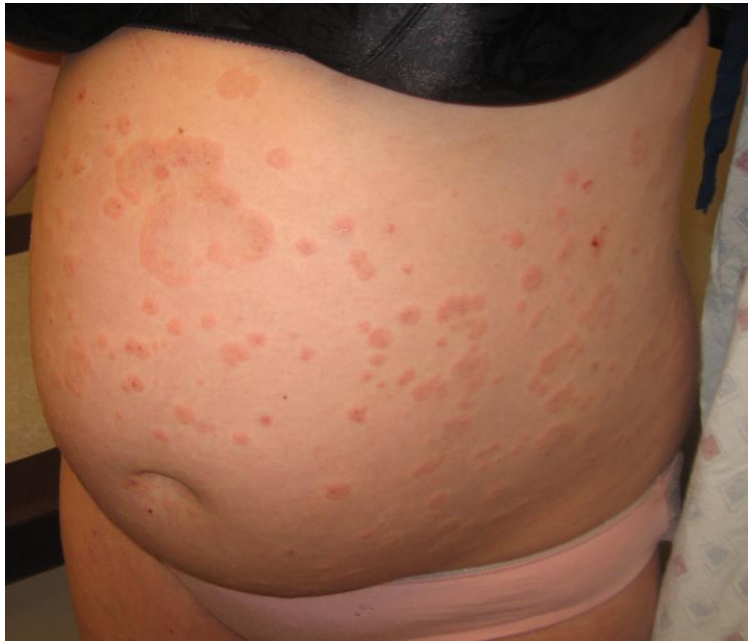
Photo Courtesy of V.Lazareth NP

Cholestasis of pregnancy

- Intrahepatic cholestasis of pregnancy (ICP) is a disease where patients develop pruritus and elevated liver function values.
- risk factors include FMH, multifetal pregnancy, PMH of the disease, pts receiving assistive reproductive treatments, advanced maternal age. 1:1000 US pregnancies; usually in the 3rd trimester
- new-onset overall itching (especially palms and soles); usually there will be no rash. RUQ pain, fatigue, a change in the color of bowel movements, or jaundice.
- symptoms resolve rapidly following delivery; high risk of recurrence
- Bile acids cross the placenta and can build up in the fetus risking fetal demise in utero (FDIU), meconium-stained amniotic fluid, preterm delivery, respiratory distress
- fetal surveillance must be undertaken though monitoring may not prevent fetal death, as build-up of bile acids in the fetus is thought to cause a sudden catastrophic event. Early delivery is often indicated to help prevent FDIU (37 weeks' gestation)
- Rx: 1st line ursodeoxycholic acid. 2nd line cholestyramine

Pemphigoid Gestationis

- rare, abrupt onset of extremely pruritic vesiculobullous eruption in 3rd trimester/ postpartum
- ***Involves*** umbilicus; sparing the face, palms, soles, and mucous membranes
- association: Graves, thyroid
- Recurrence with menstruation, oral contraceptives, future pregnancies is common, and disease may be more severe with each pregnancy
- 75% of patients worsen dramatically at the time of delivery, and 25% present with de novo blisters in the postpartum period
- onset in the first or second trimester and presence of blisters may lead to adverse pregnancy outcomes, including decreased gestational age at delivery and low-birth-weight children.



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Safe Prescribing in Pregnancy

Avoid Risks with Preconception Patient Counseling

- one-half of all pregnancies are unplanned, and fewer than half of women know they're pregnant before the 4th week of gestation.
- the fetus could be unintentionally exposed to medication during the 1st trimester
- "Are you thinking about becoming pregnant in the next year?"

Adjust Medications During Pregnancy and Lactation

- Individuals may need evaluation and treatment adjustments during and after pregnancy
- inflammatory diseases may progress however skin conditions like psoriasis, acne, and dermatitis can improve

Consider Patient Preference

- Some patients want to get their skin condition under control with effective treatment, while others really want to limit their exposure to medications during pregnancy.
- There is no one right answer that fits for everyone

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Safe Prescribing in Pregnancy

- Acne: safe treatments include topical benzoyl peroxide, topical salicylic acid, glycolic acid, antibiotics
- Nevi: monitor new nevi during each trimester and biopsy suspicious lesions.
- Psoriasis: safe treatments include narrow-band UVB (with supplemental folate), topical steroids, tumor necrosis factor (TNF) inhibitors, and possibly cyclosporine.
- Infections: most topical antifungals, and antibiotics (both oral and topical), are safe during pregnancy and lactation. systemic antifungals are not recommended. Herpes should be treated to prevent the virus from crossing the placenta
- Atopic dermatitis: tends to flare up during pregnancy. Flares can be safely treated with topical and short-term systemic corticosteroids, topical calcineurin inhibitors, narrow-band UVB
- Avoid:
- retinoids (including isotretinoin),
- methotrexate, spironolactone
- certain systemic antifungals
- JAK inhibitors

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