Acne, rosacea, perioral dermatitis, and other acneiform conditions.

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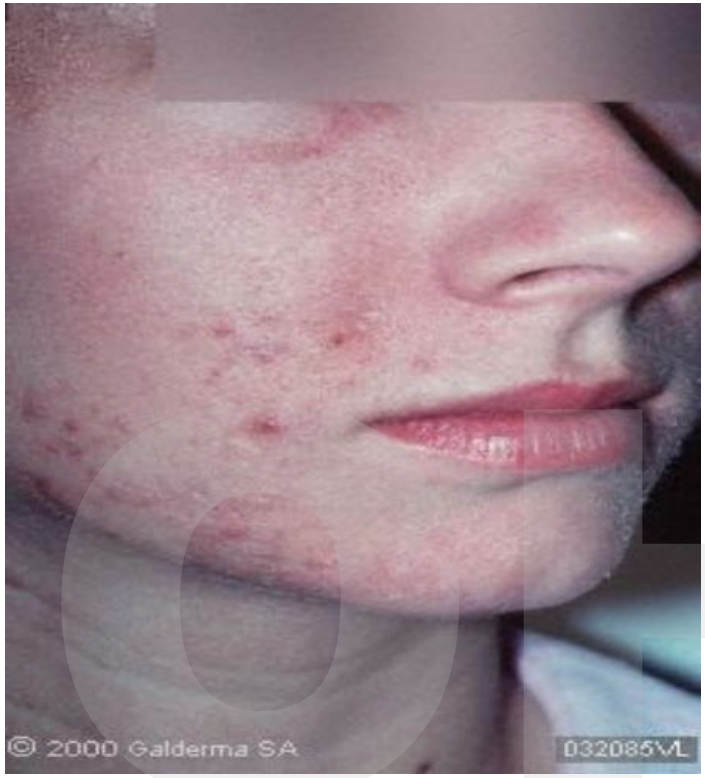
Pre-Test

- Question #1: True or False
  - Acne medications are generally effective within 4-6 weeks of starting
- Question #2: True or False
  - Rosacea and acne can be differentiated by the presence or absence of comedones
- Question #3: True or False
  - Over the counter topical hydrocortisone is the recommended treatment for perioral dermatitis
- Question #4: True or False
  - Smoking cessation is a very important recommendation for patients with hidradenitis supperativa.
- Question #5: True or False
  - Drug induced acne is unresponsive to conventional acne therapy.

Case #1

- 36 year old female who is healthy. Presents for new onset acne.
  - Had mild acne as a teenager, better in her 20's
  - Using over the counter acne products without improvement
  - Recently had a mirena IUD placed for contraception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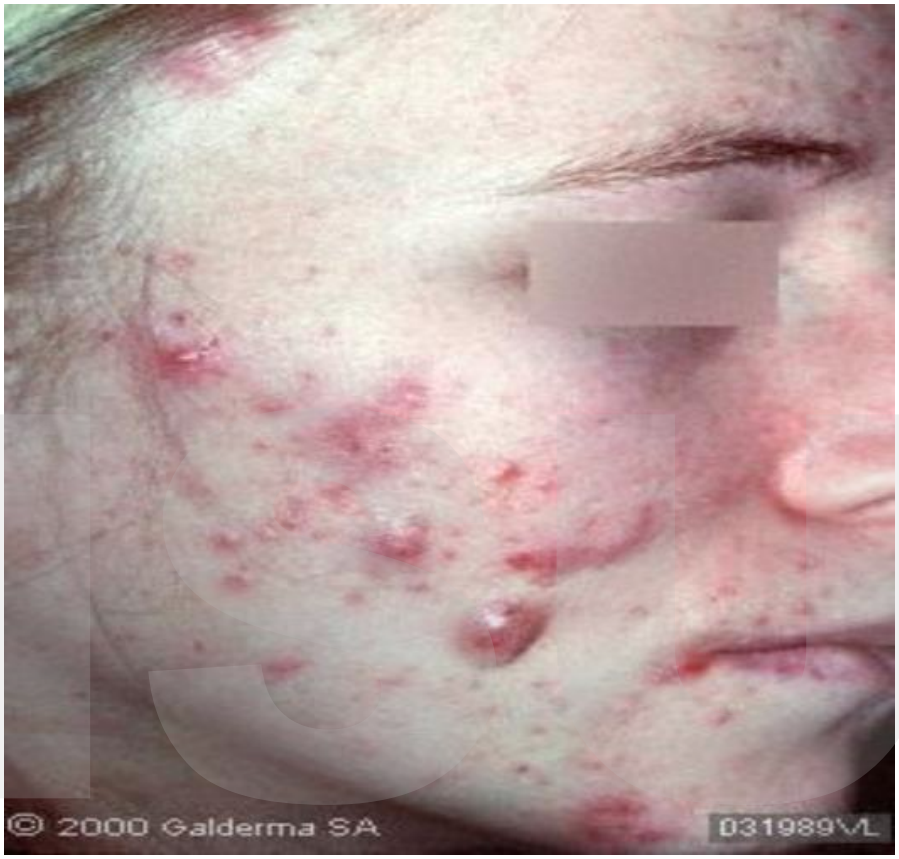
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Diagnosis?

- Rosacea
- Acne
- Perioral dermatitis
- Hidradenitis supperativa

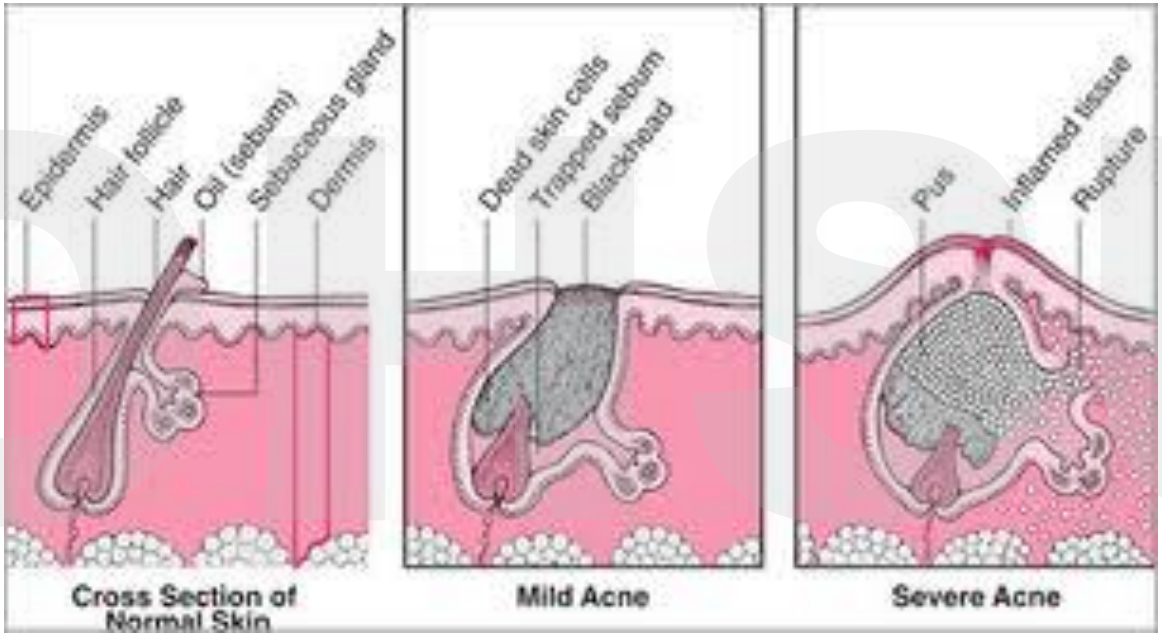
Acne! Adult female/hormonal type

- Treatment recommendations discussed a little later

Acne

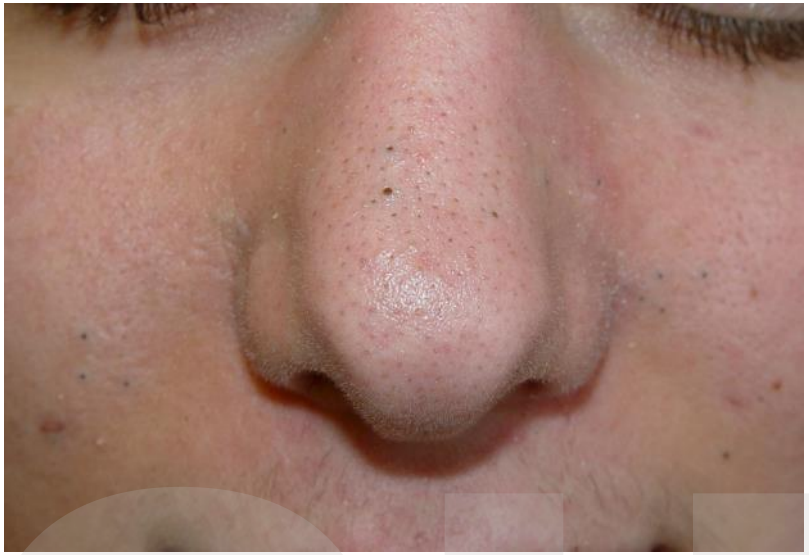
- Pathogenesis:
  - Microcomedones
  - Comedones (open and closed)
  - Superficial inflammatory lesions (papules and pustules)
  - Deep inflammatory lesions (cysts/nodules)
- Etiology:
  - Abnormal keratinization of pore, androgen sensitivity, increased sebum/free fatty acids, p. acnes proliferation, and cell-mediated inflammatory response to p. acnes

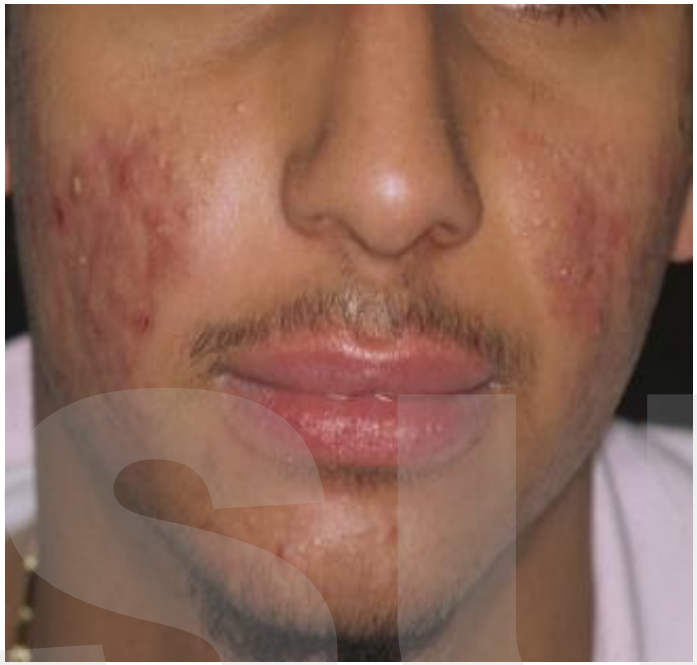
Acne Diagram

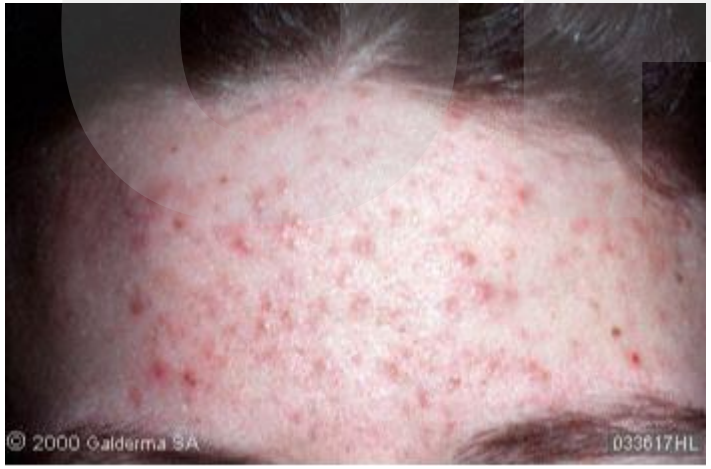


Acne

- Comedone is primary lesion of acne
  - May be open or closed
- Papules, pustules, nodules & cysts may also occur
- Acne vulgaris is common acne, more severe forms include cystic acne & acne conglobata
- Early treatment will minimize scarring:
  - **topical retinoids**, topical and po abx*, Isotretinoin, photodynamic therapy, peels & OCPs/spironolactone



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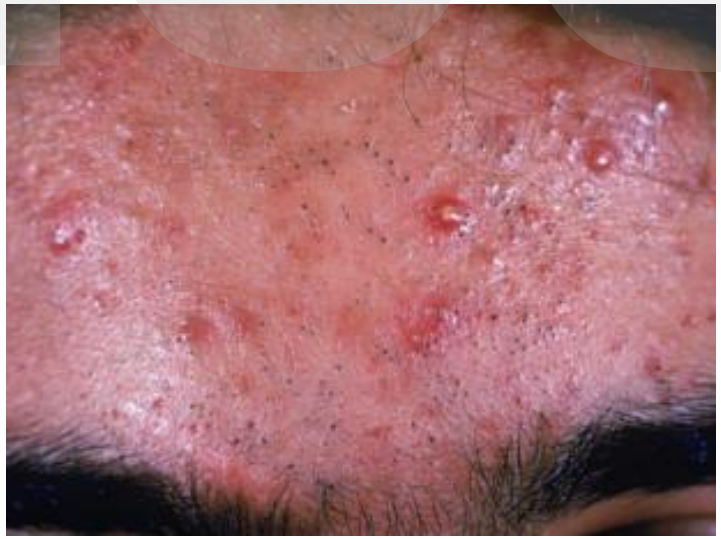

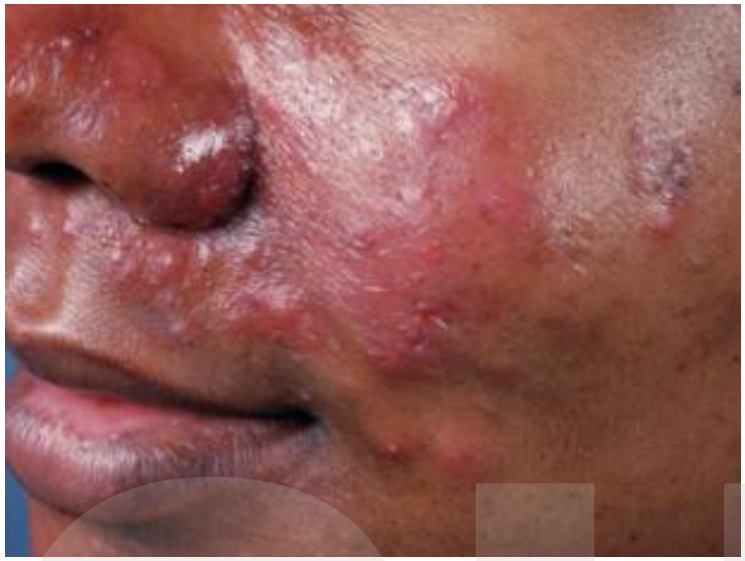

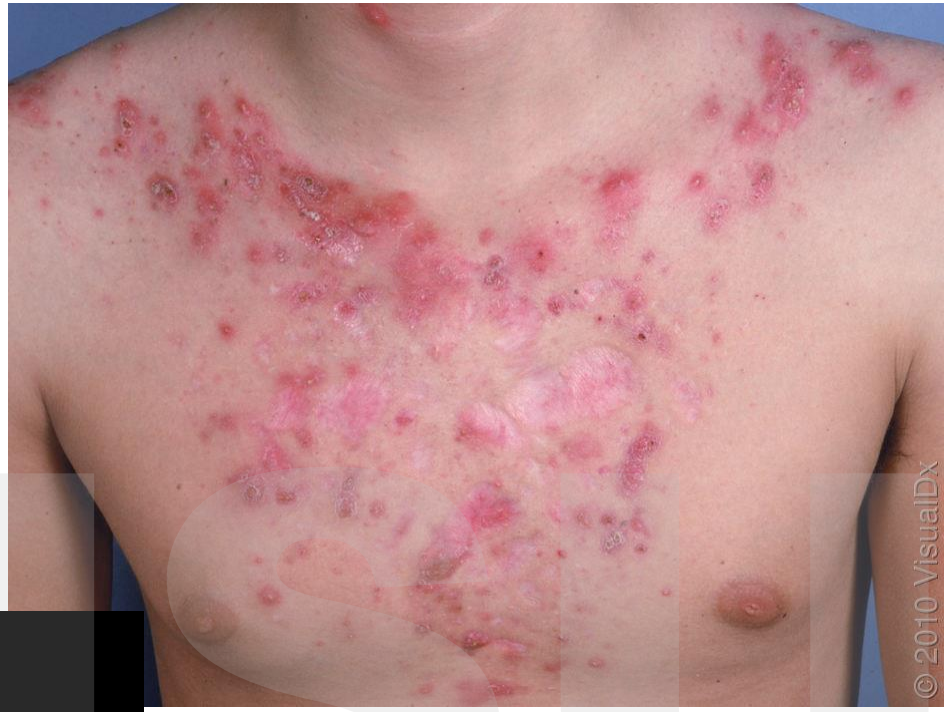
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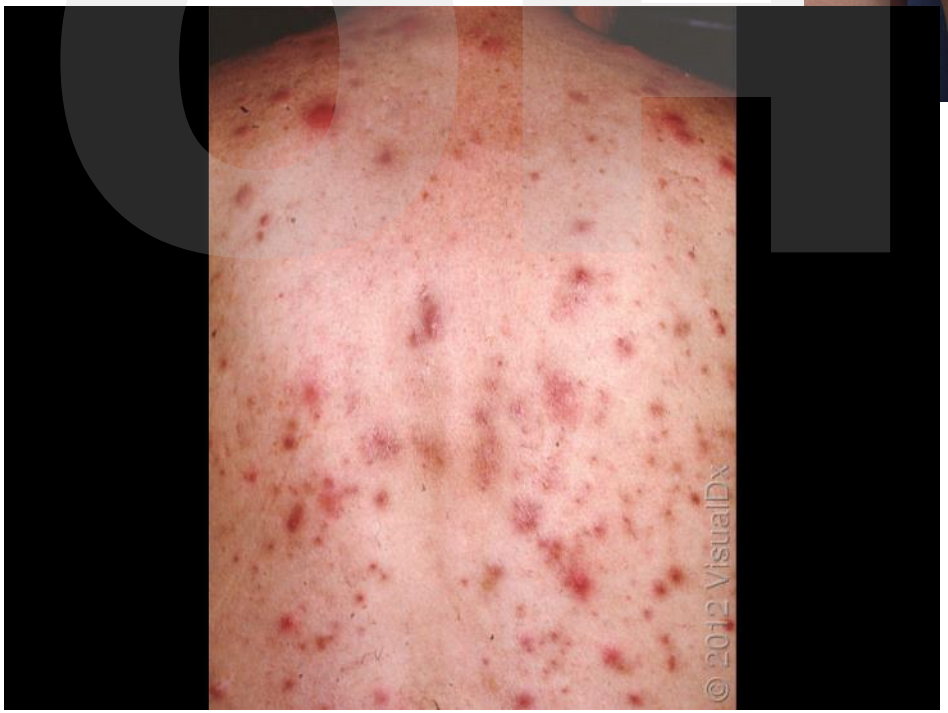
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Acne Treatment

- Mild, non-inflammatory: topical retinoids, salicyclic acid, azeleic acid
  - Adapalene, tretinoin, tazarotene
- Mild mixed (inflammatory and comedones)
  - Benzoyl peroxide
  - Topical antibiotics (combo with BPO)
  - Topical retinoids

Topical Retinoids for Acne

- Tretinoin (Retin-A)
- Approved for treatment of acne and as an adjunctive agent for photoaging
  - Reduces hyperkeratinization that leads to comedone formation
  - Causes vasodilation, angiogenesis and increased dermal collagen synthesis resulting in improvement of fine lines / wrinkles, hyperpigmentation and roughness

Retinoids

- Natural compounds and synthetic derivatives of retinol that have Vitamin A like activity
  - Affects regulation of cell proliferation and normal epithelial differentiation
- Used in the treatment of inflammatory skin diseases, skin malignancies, hyperproliferative disorders and photoaging

Acne Treatment

- Deep inflammatory, moderate, +/- scarring
  - Above topicals with oral antibiotics
    - Doxycycline, Minocycline, Erythromycin
- Deep, severe, scarring
  - Isotretinoin 0.5 – 1mg/kg for 5-6 months
    - Goal dose 150 – 220mg/kg over duration of treatment
    - Labs, baseline and s/p 1 and 3 months*

Oral Antibiotics for Acne

- **Tetracyclines:**
  - MOA: Antimicrobial, ***anti-inflammatory properties,*** inhibit chemotaxis and phagocytosis
  - Contraindicated: Pregnancy and children less than 10y/o (tooth discoloration) – all tetracyclines cross the placental barrier and are excreted in breast milk - concentrate in fetal bones and dentition

Oral antibiotics for acne

- **Minocycline**
  - Usual dose: usually 100mg BID, can use 50mg BID in small patients
  - More effective than tetracycline secondary to lipid solubility and enhance penetration into tissues
  - Adverse Effects: Resistant bacteria?, candidiasis, gastrointestinal upset, headaches and dizziness
- **Doxycycline**
  - Adverse Effects: same as MCN (less headaches and dizziness), much more photosensitizing!! And more GI upset.
  - More effective and less resistance than tetracycline
- **Tetracycline**
- **Sarecyclin***

Oral Antibiotics for Acne

Macrolides

- Erythromycin 500mg BID with food.
- Use if cannot tolerate or resistant to tetracycline
- Similar efficacy as tetracycline, but higher inducer of resistance
- AE include GI distress – hepatoxocity may occur

Acne – Hormonal Therapy

- Use early in females with androgen excess
- Consider in females with normal serum androgens
  - Acne flares with menses
  - Persistent inflammatory papules or nodules chin, jaw line, upper neck, +/- upper back (at times only upper back)
- Treatment:
  - Spironolactone – androgen receptor blocker
    - 50-100mg daily
    - Take with food
  - Oral contraceptives – ovarian suppression of androgen production
    - Can use with spironolactone if needed

Retinoids for Acne

- Isotretinoin
  - Approved for treatment of severe nodulocystic acne vulgaris (also used when pt's resistant to conservative treatment)
  - Decreases sebum production but MOA not clearly understood
  - Excellent efficacy and may induce prolonged remissions after a single course of therapy – 70% response rate (about 10-20% need additional topical or hormonal therapy, 10% require 2nd course)

Retinoids for Acne

- Isotretinoin
  - Adverse effects include mucus membrane dryness, cheilitis, dry eyes, blepharoconjunctivitis, epistaxis, xerosis, paronychia
  - Systemic adverse effects include elevated liver transaminases, dyslipidemias (25% develop triglyceride elevations), myalgias, arthralgias and skeletal hyperosteoses and extraskeletal ossification
  - Concern for depression and suicidal ideation
  - Risk for inflammatory bowel disease?

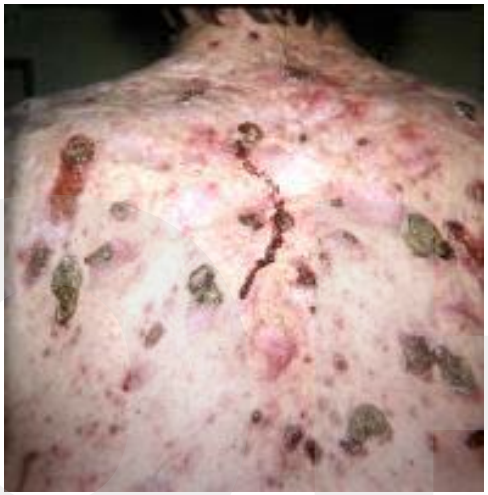
Retinoids for Acne

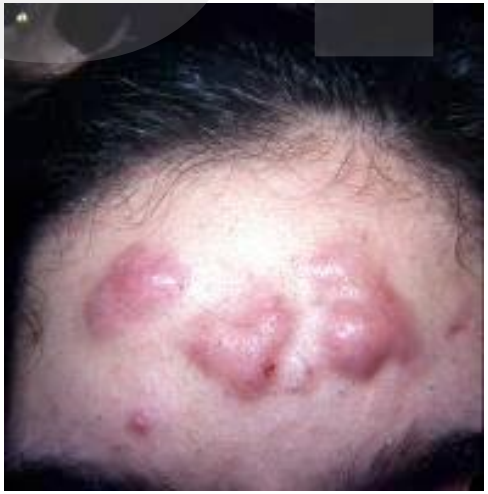
- iPLEDGE
  - **Pregnancy Category X**
  - Obtain iPLEDGE information at www.ipledgeprogram.com or 1-800-495-0654
  - Sign and return completed registration form
  - Activate registration via the internet or phone
- LFT's and triglycerides baseline, then s/p 1 and 3 months
- Monthly pregnancy tests – women must verify use of two different types of contraceptives

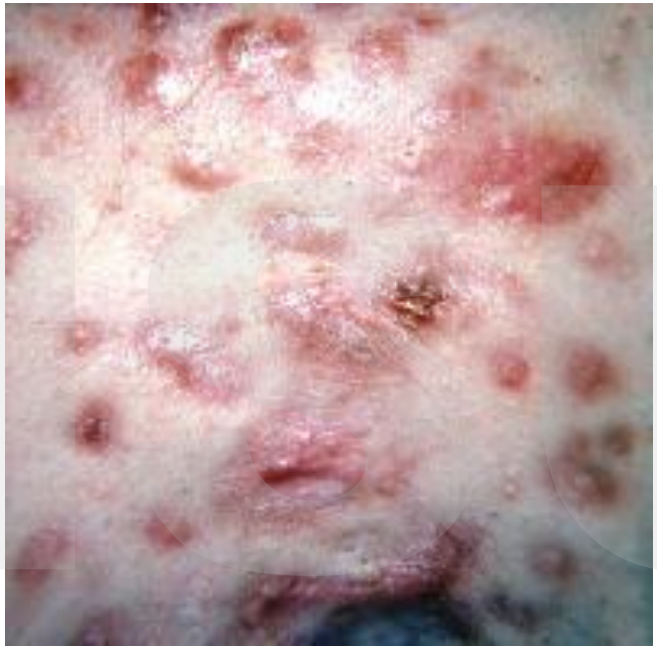
Acne Conglobata

- Severe, eruptive nature
- Part of follicular occlusion tetrad
  - Dissecting cellulitis of the scalp
  - Hidradenitis supperativa
  - Pilonidal cysts
- Treat with Isotretinoin, usually with prednisone

Acne Conglobata

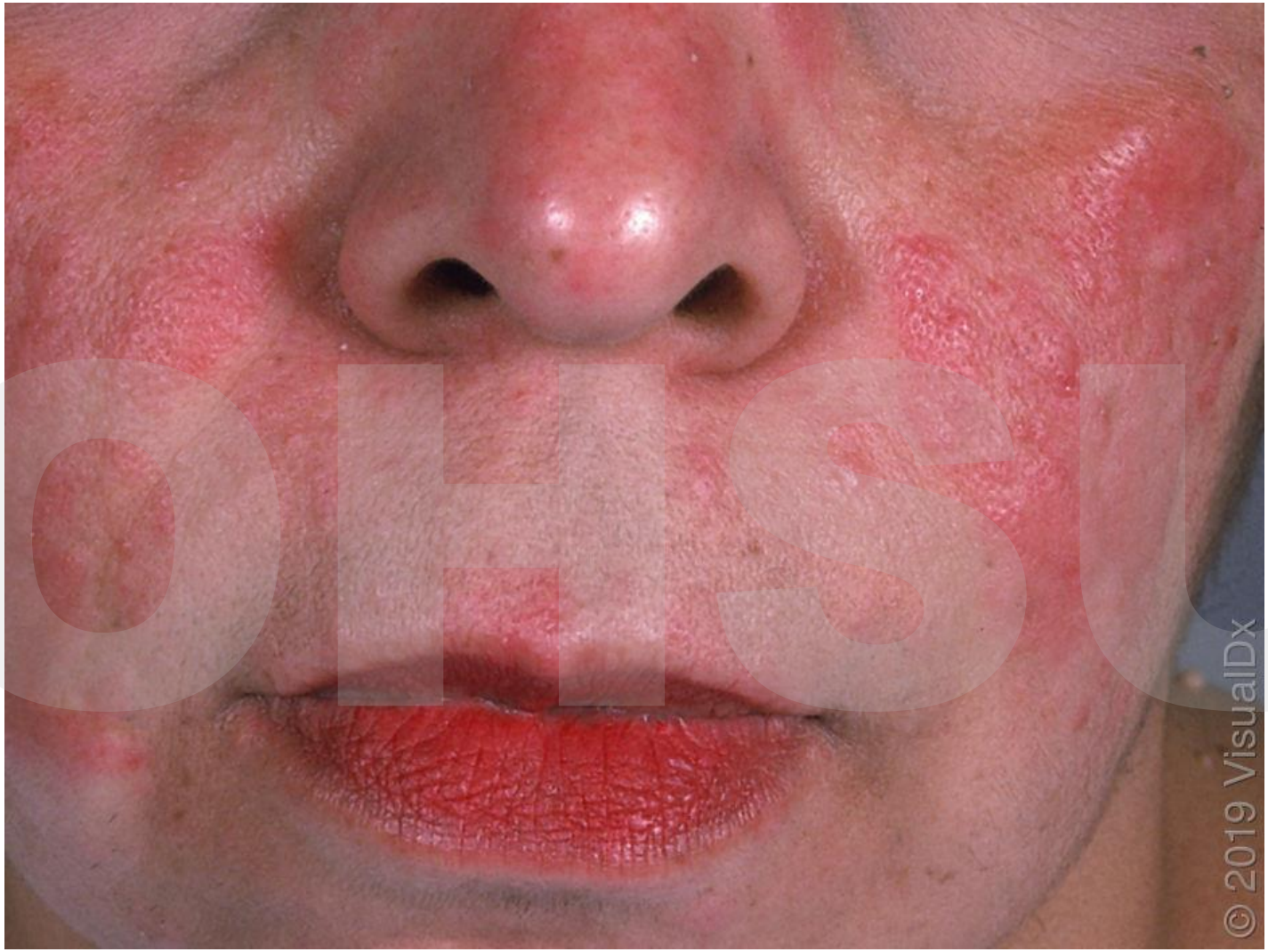






Case #2

- 36 year old female with new onset redness and pimples on her face. Has been using over the counter acne preparations and feels she is getting worse.
  - Complains of dryness, mostly on her cheeks
  - Complains her skin feels irritated
  - Feels her face get warm with red wine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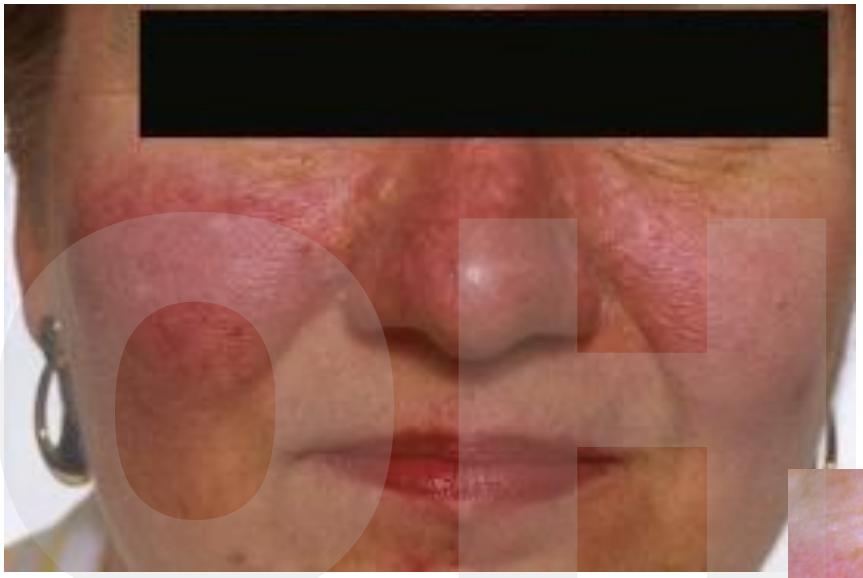
Rosacea

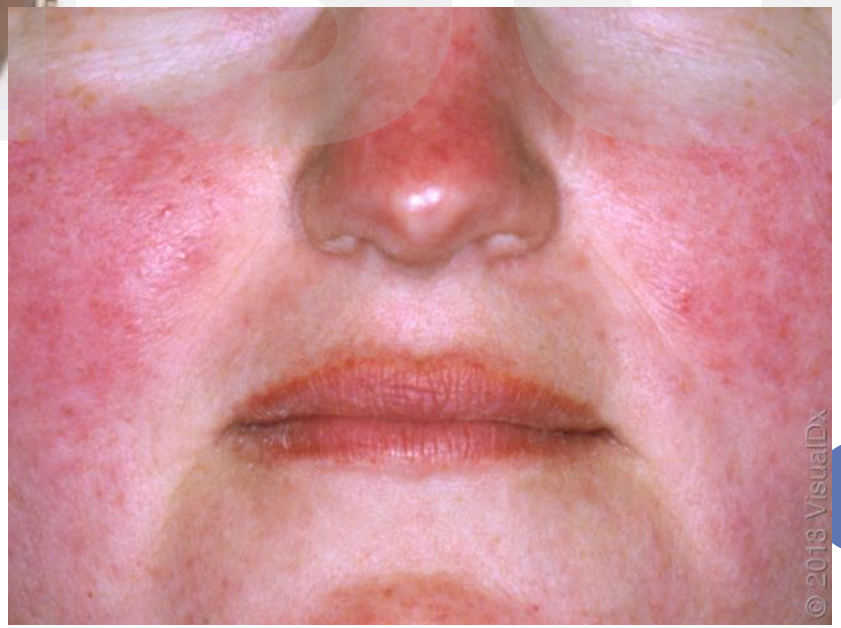
- Chronic acneiform condition of facial pilosebaceous units with increased reactivity of capillaries to heat.
- Often, long history of easy flushing
- Usually develops after age 30
- Can be very sensitive and dry
- Absence of comedones
- *Triggers*: wind/sun, spicy food, hot beverages, alcohol, exercise, stress, vasoactive drugs
- Treatment
  - Avoid triggers
  - If papules or ocular involvement – oral antibiotics
  - Rhinophyma requires plastic surgery, fraxel laser, loop cautery

Topical Treatments for Rosacea

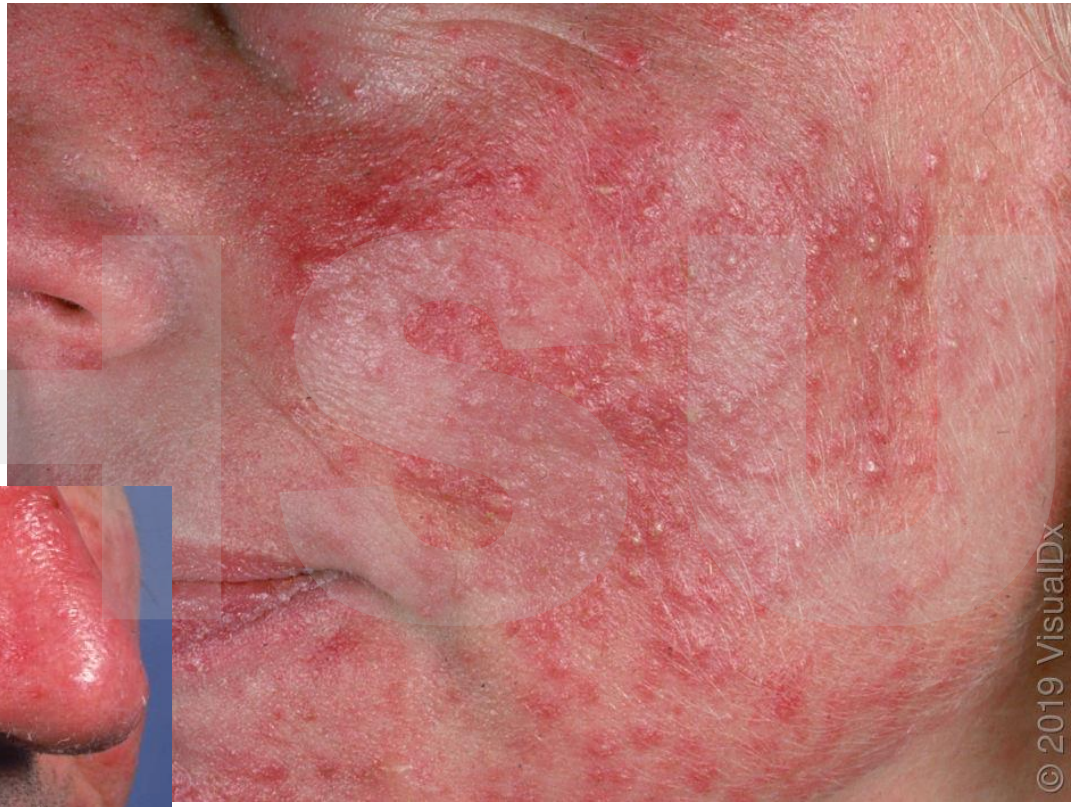
- Azeleic acid: good for redness, pigmentation, pore size. Also good for mild acne and seborrheic dermatitis
- Metrocream or gel: helps with inflammatory papules and pustules. Also for perioral dermatitis.
- Sodium sulfacemtamide: comes as a wash or topical solution. Good for redness and those with sensitive skin. Also used in mild acne and seborrheic dermatitis.
- Topical ivermectin: helps with inflammatory papules and pustules – consider demodex with explosive flares.

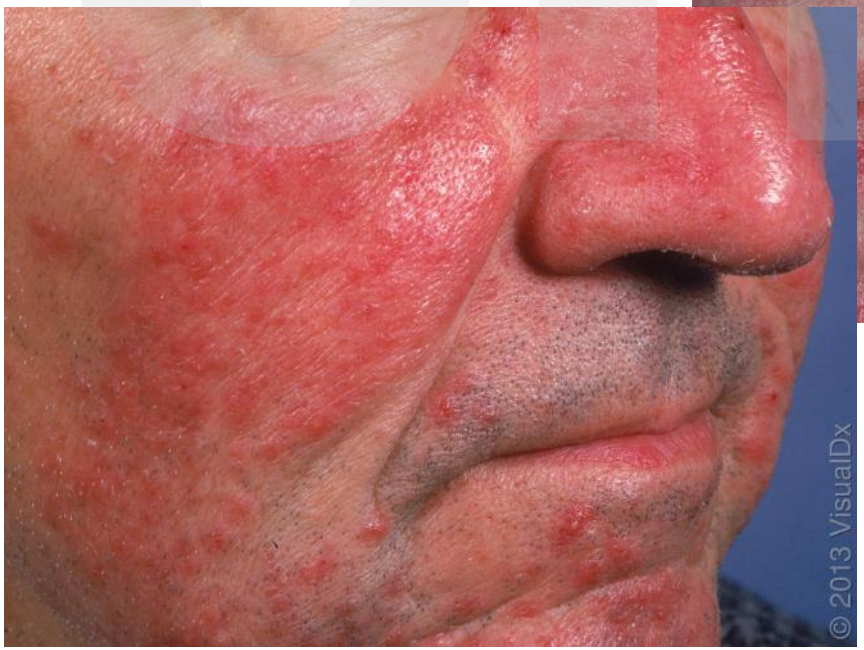
Rosacea, erythematotelangiectatic type



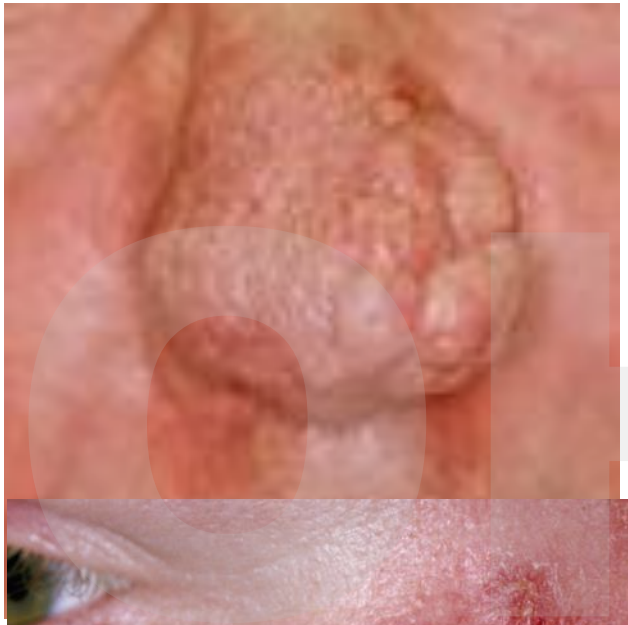


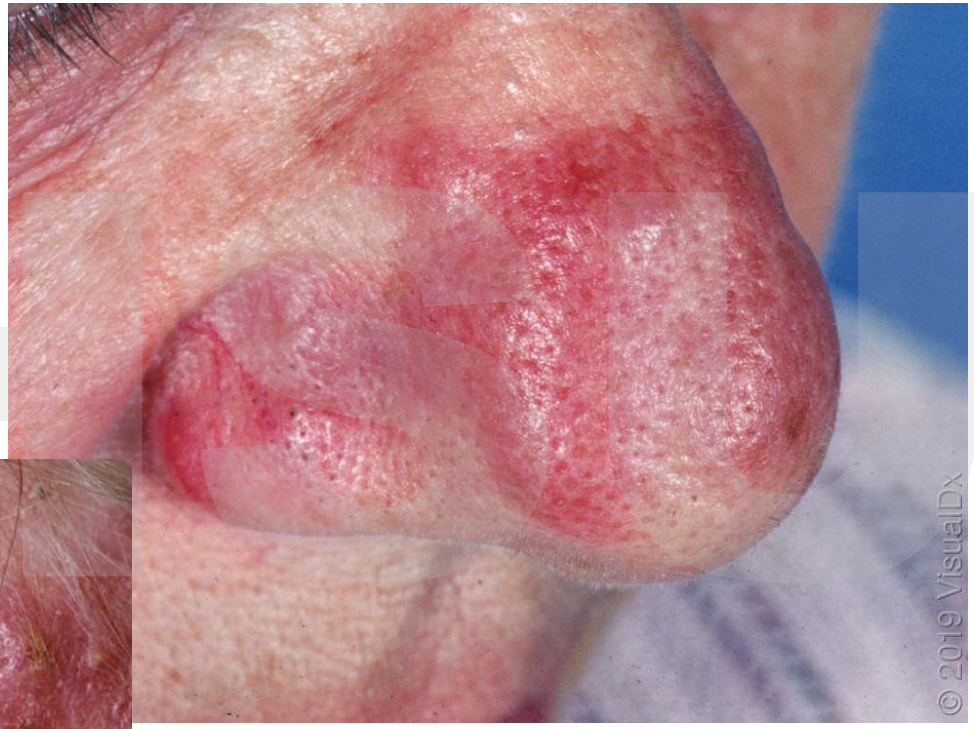
Rosacea, papulopustuler

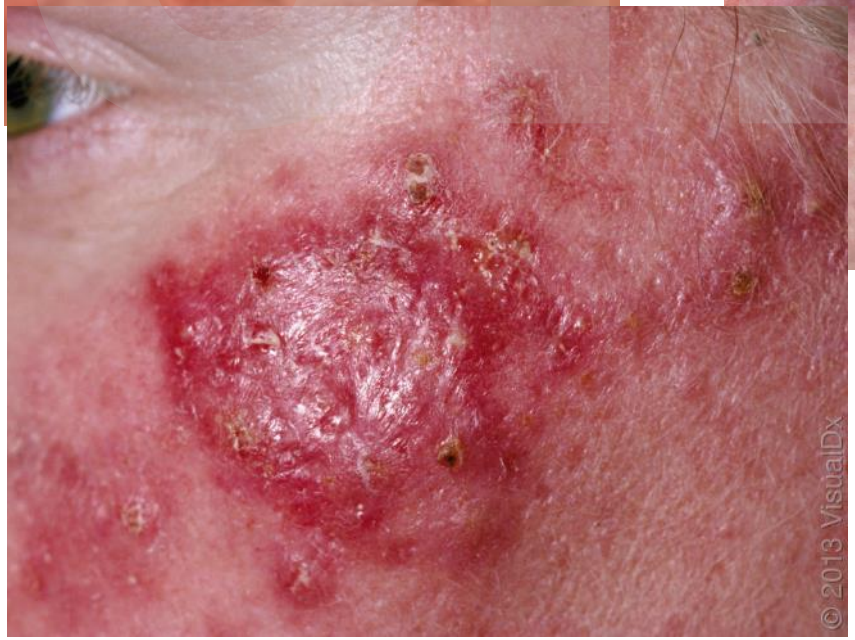




Rosacea, cystic and rhynophyma

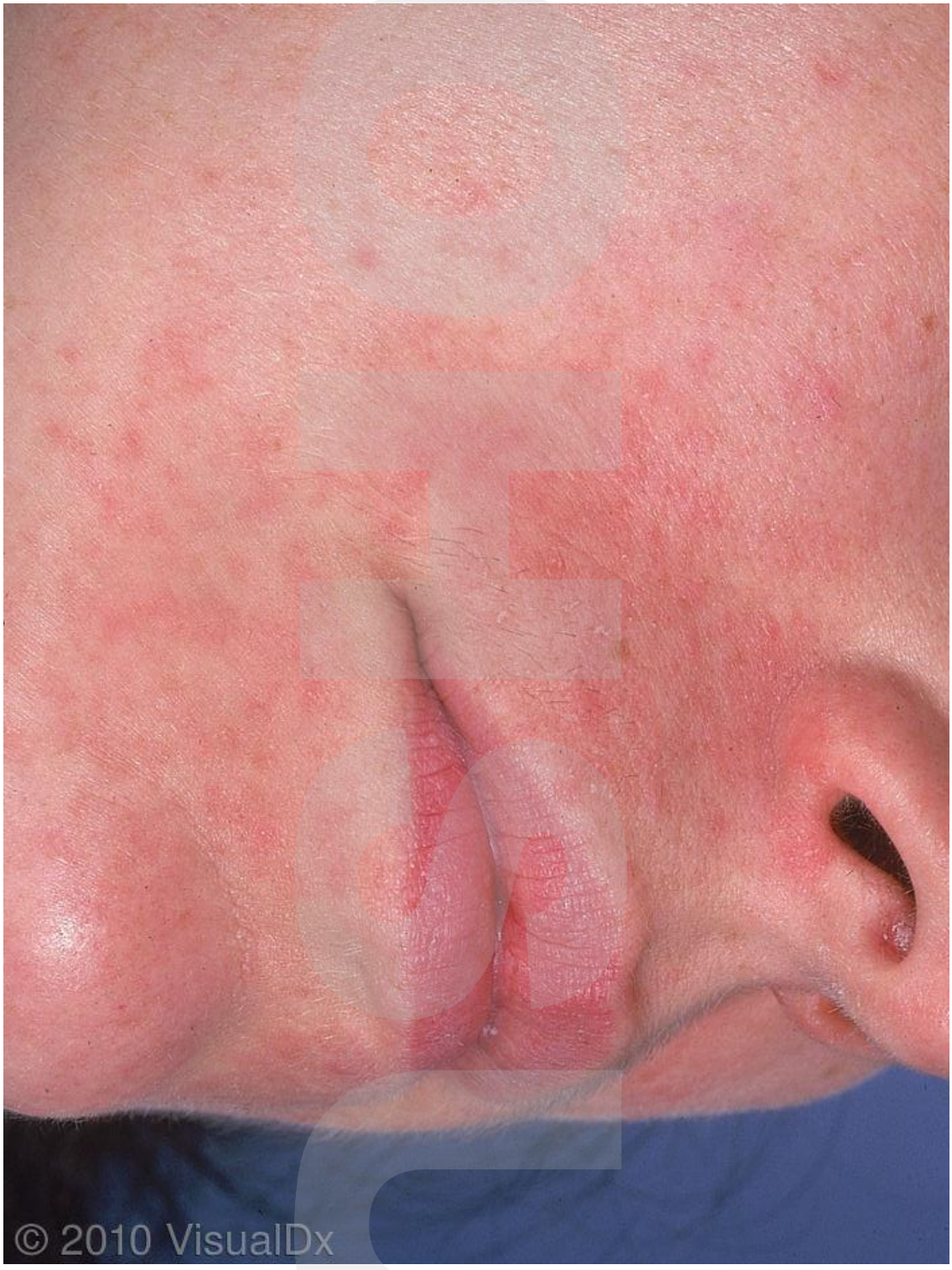






Case #3

- 36 year old female with acne on her chin and around her nose. Notes it feels different than acne she has had in the past. "Feels more like a rash".
  - No improvement with over the counter acne products
  - Hydrocortisone makes it go away, but it flares when she stops using it
  - She started OCP's about 3 months ago as she had the implant, but it needed to be replaced and she is considering a pregnancy in the near future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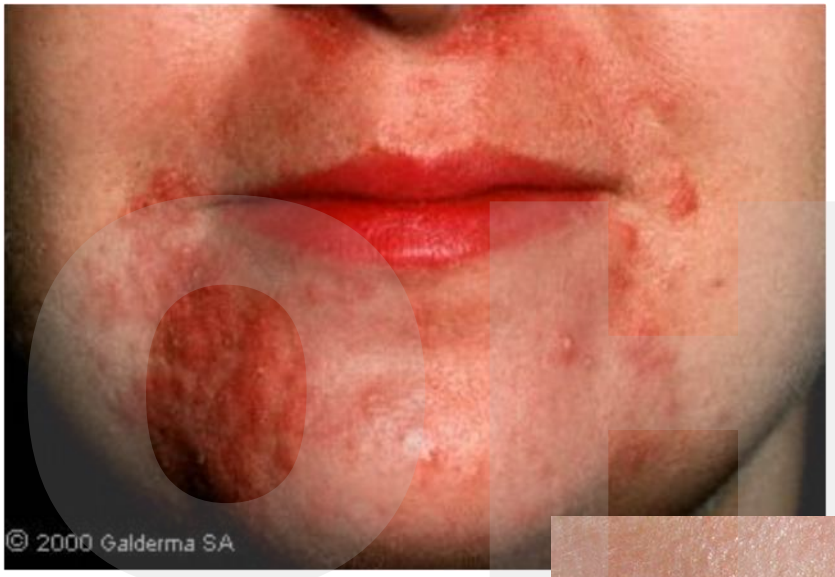
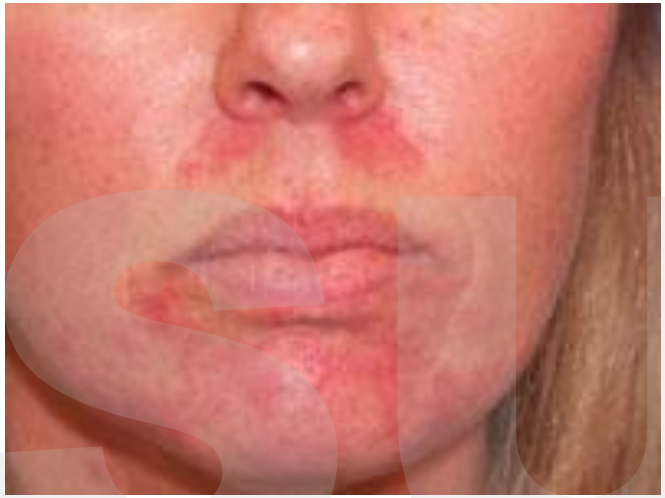
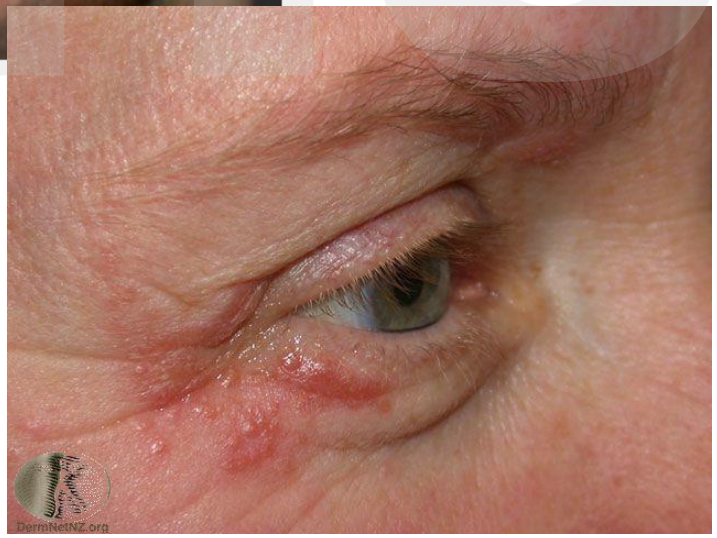
Perioral Dermatitis

- Often occurs in patients with rosacea
- Can also occur around the eyes and nose "perioroficial"
- Most common in females, especially around hormonal changes*
- Beware of steroid addition
- Treatment
  - Metrogel
  - Clindamycin
  - Doxycyline
  - Protopic or Elidel

Perioral Dermatitis

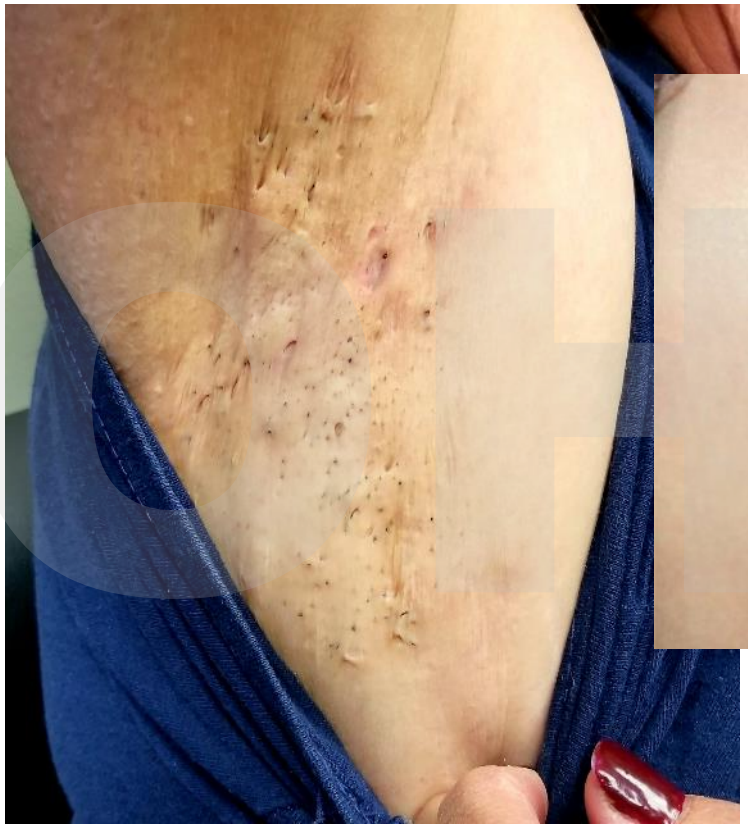


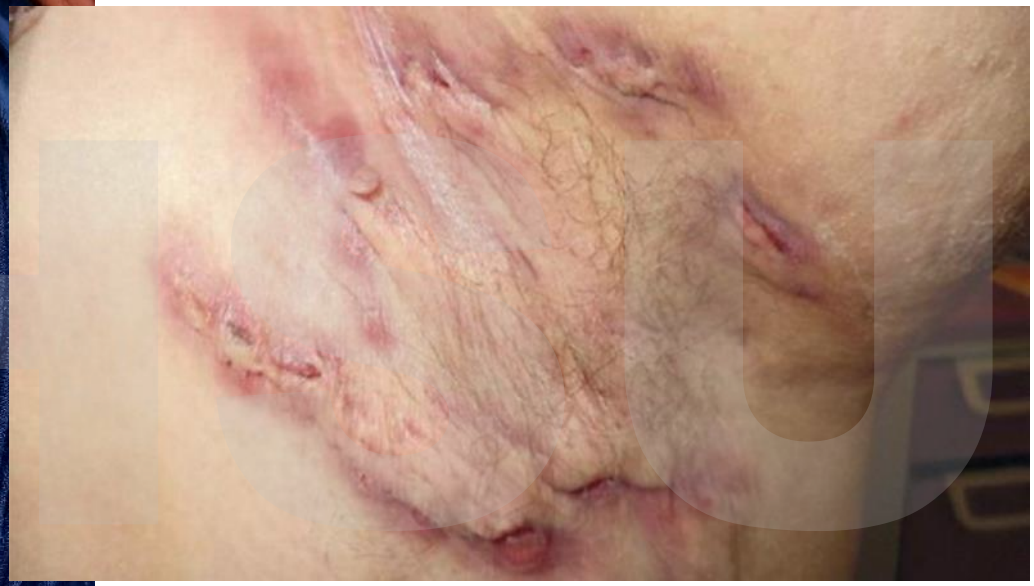




Case #4

- 36 year old obese female with acne in her armpits, under her breasts, and in her groin. Present for several years. Worsening with time although waxes and wanes.
  - Current daily smoker
  - Otherwise healthy on no prescription medications, IUD for contraception
  - Family history of severe acne and diabetes



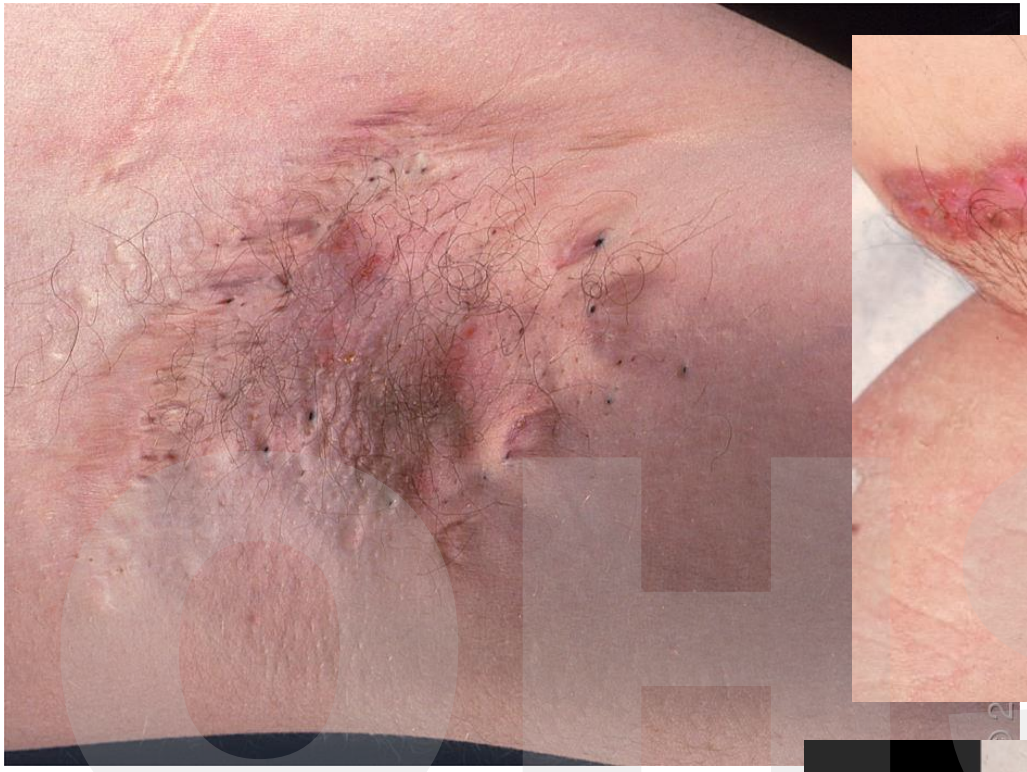


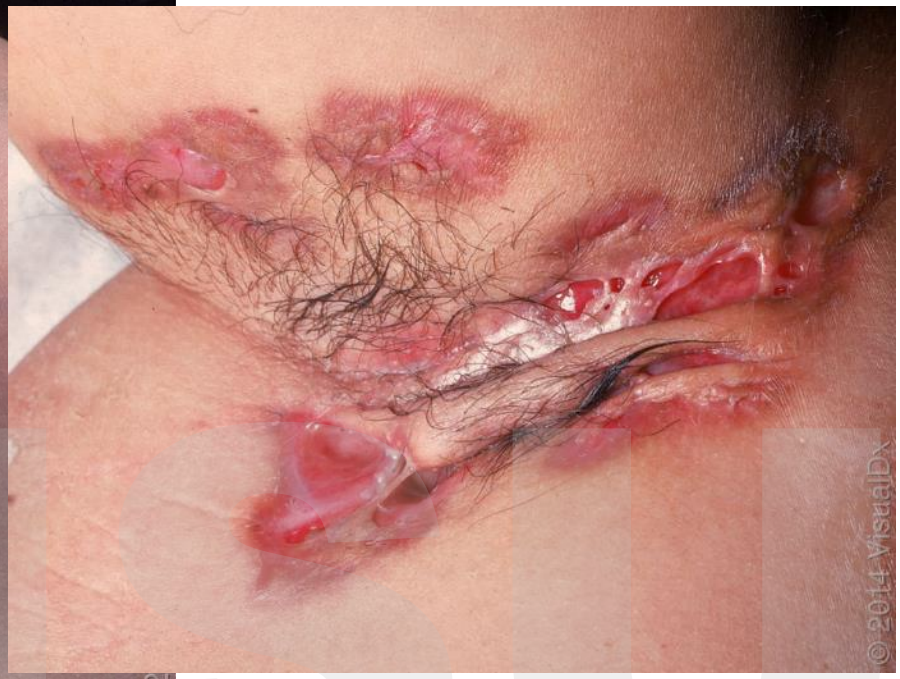
Differential diagnosis

- Acne vulgaris
- Recurrent furunculosis
- Hidradenitis supperativa

Treatment

- Benzoyl peroxide wash
- Topical clindamycin
- Oral antibiotics (doxycycline) for flares
- Intralesional Kenalog injections
- Punch deroof with curettage
- Isotretinoin
- TNF inhibitors
- Surgery
- Stop smoking!!!

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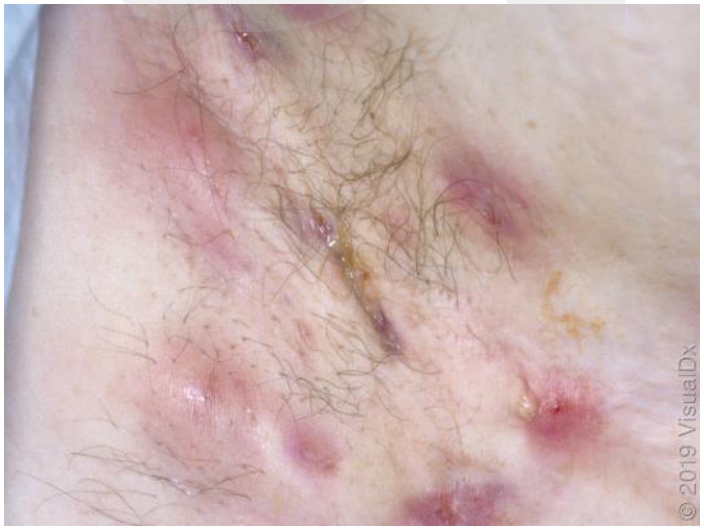
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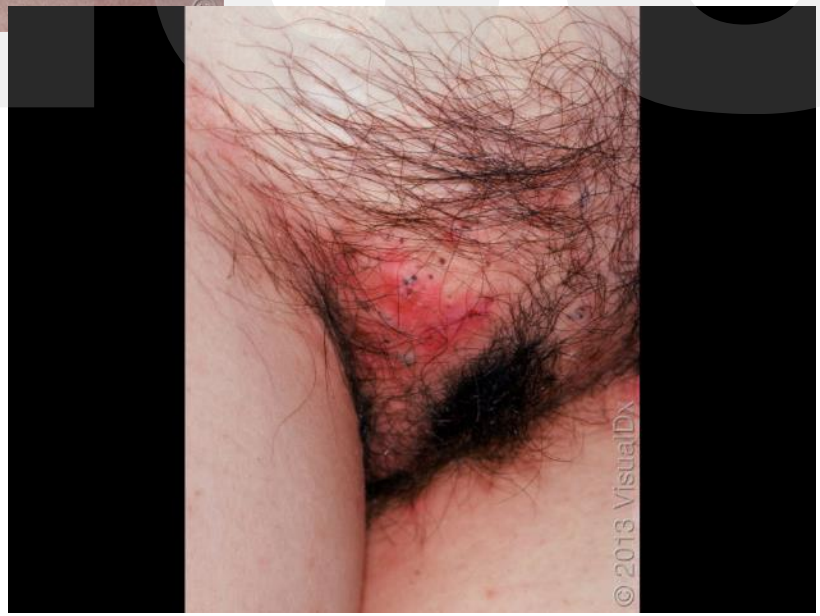
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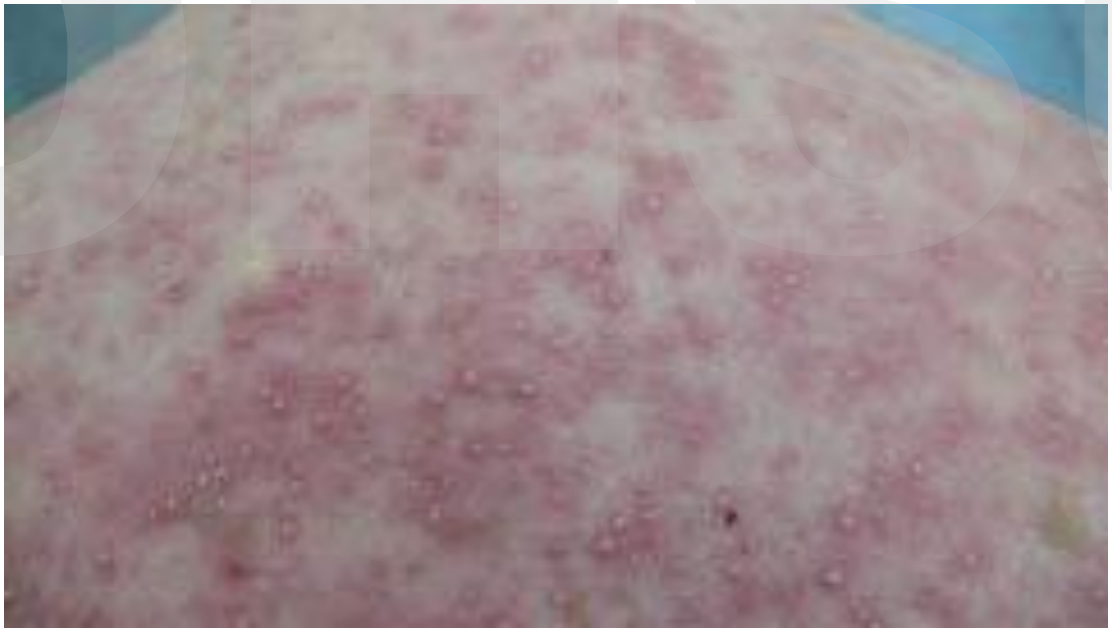
Case #5

- 36 year old female with new onset explosive acne on her face, neck, chest and upper back. She has never had acne before. It itches slightly.



More history:

- Medications: multivitamin, Mirena IUD, levothyroxine 75mcg all x several years
- New Dx breast cancer for which she is being treated with Neratinib.

Common causes of drug induced acne

- Anabolic steroids
- Bromides
- Corticosteroids
- Corticotropin
- EGFR inhibitors
- Iodides
- Isoniazid
- Lithium
- Phenytoin
- Progestin

Less common causes of drug induced acne

- Azathioprine
- Cyclosporine
- Disulfiram
- Phenobarbital
- Propylthiouracil
- Psoralen + UVA
- Vitamins B6 and B12

Treatment

- Stop offending medication if clinically appropriate
- If patient needs to continue the medication, treat the same as acne

Post-test

- Question #1: True or False
  - Acne medication are generally effective within 4-6 weeks of starting
- Question #2: True or False
  - Rosacea and acne can be differentiated by the presence or absence of comedones
- Question #3: True or False
  - Over the counter topical hydrocortisone is the recommended treatment for perioral dermatitis
- Question #4: True or False
  - Smoking cessation is a very important recommendation for patients with hidradenitis supperativa.
- Question #5: True or False
  - Drug induced acne is unresponsive to conventional acne therapy.

Thanks for your attention!

- Questions???