NORTH YORK GENERAL
Making a World of Difference

FAMILY MEDICINE CLINIC DAY 2024

Acne & Rosacea update

Dr. Juthika Thakur MD, FRCPC, FAAD

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Agenda

1. Introduction – 2 min
2. Acne Vulgaris Overview and Topical management – 20 min
3. Rosacea Overview and Management – 15 min
4. Brief overview of indications to refer for Psoriasis management and Atopic Dermatitis – 5 minutes
5. Questions & Link to Handout / Slides – 15 min

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Introduction and Disclosures

Relationships with commercial interests:

- **Grants/Research Support**: AIP Labs
- **Speakers Bureau/Honoraria**: Abbvie, Arcutis, Galderma, Bausch, LEO, Sanofi, Galderma, L'Oreal, Pfizer, Sun Pharma

SKINOPATHY

CANADIAN DERMATOLOGY & PLASTIC SURGERY CENTRE

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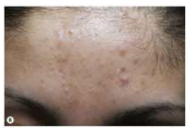
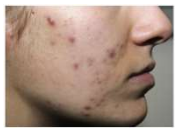
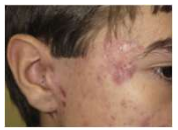
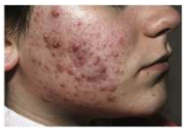
Overview: Severity of Acne


Mild/ Comedonal Acne


Moderate to Severe Acne Vulgaris


Mod to Severe Acne V. with scarring


Severe Acne

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Acne Variants

- Post adolescent acne in women – after age 25
  - Usually only 20% of these patients have irregular menses
  - Most report premenstrual flares ~80%
- Acne Fulminans
  - Rare, usually 13-16 y.o M, +/- systemic symptoms and bony pain
  - Usually associated with new onset isotretinoin
- Solid Facial Edema (Morbihan disease)
  - Complication of acne vulgaris
- Acne Excoriee
  - Optimize topical abx use
  - May need SSRI/SNRI
- Drug induced Acne
  - Steroid topically /oral
  - EGFR inhibitors, MEK inhibitors
  - Lithium, Phenytoin
  - Progestins
  - B6, B12

Acne Fulminans

Solid Facial Edema (Morbihan disease)

1. Geller L, Rosen J, Frankel A, Goldenberg G. Perimenstrual flare of adult acne. J Clin Aesthet Dermatol. 2014;7:30–34.
2. Acne Fulminans Photo: https://dermnetnz.org/topics/acne-fulminans

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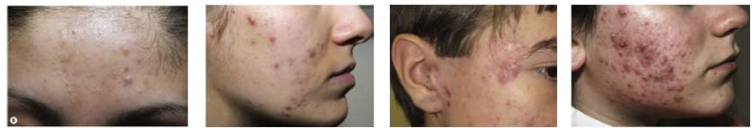

Mild/ Comedonal Acne	Moderate to Severe Acne Vulgaris	Mod to Severe Acne V. with scarring	Severe Acne
1st Line Topical retinoid	1st Line Combination therapy – BPO + retinoid, or clindamycin + retinoid Can consider oral antibiotic	1st Line Combination therapy – BPO + retinoid, or clindamycin + retinoid Can consider oral antibiotic Isotretinoin	1st Line Isotretinoin
2nd Line Salicylic acid 2% (OTC) Azeleic acid 15% (Finacea) Alternative topical retinoid	2nd line Topical dapsone 5%	2nd line Isotretinoin	2nd line Adjunct treatments: oral dapsone Female patients: OCP, spironolactone
Procedural Options: Aviclear	Procedural: Aviclear	Procedural Intralesional steroid	Procedural Intralesional steroid
	Female patients: OCP Topical antiandrogen or oral antiandrogen	Female patients: OCP Topical or oral antiandrogen	Female patients: OCP Oral antiandrogen
Aim for retinoid only	Aim for combination – dual therapy	Aim for triple therapy – BPO + abx + retinoid or isotretinoin	Strongly recommend isotretinoin

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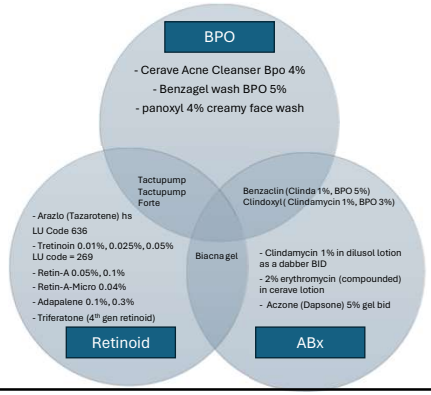
Commonly prescribed topicals in Acne

Other options:
Clascaterone 1% (Winlevi)
Azeleic acid 15% (Finacea)



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New Developments in 2023-2024

- New acne topical: clascoterone 1%
  - Topical androgen inhibitor
  - Noted to decrease sebum on the skin, and the local effects of androgen
  - Limited systemic absorption
  - Tolerability – Off label pearl: great in combination with a topical retinoid due to vehicle
  - Product monograph recommends BID application (1g daily)
  - Side effects: burning, irritation in 5-7%

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New Developments

- Discontinuation:
  - Stieva-A (tretinoin cream) is being discontinued
- Newer brands: Vitamin A Acid
  - Gel only formulation: Tretinoin 0.01% gel and Tretinoin 0.05% gel (LU code 269 applies)
- Existing tretinoin brands include
  - Gel or cream formulation: Retin-A 0.01%, 0.025% (No LU Code)
  - Cream only formulation: Retin-A 0.05% cream, 0.1% cream. (No LU Code)

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New developments

- Tazorac discontinued
- Arazlo – topical tazarotene lotion 0.045%
- LU code = 636
- Off label use: post inflammatory hyperpigmentation, photoaging, KP
- My tip: Titrate slower than other retinoids or initiate as short contact daily

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Tips for improving tolerability

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Tips for improving tolerability

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Tips for Successful Topical Treatment

- ★ Start every other night pea sized amount to all acne prone areas x 1 month then titrate up as tolerated (not spot treatment)
- ★ Offer Benzaclin or Aczone gel for spot treatment
- Wash face first, let it dry
- Apply moisturizer, apply medication, and then moisturize again – no need to wait until moisturizer is fully absorbed
- Dial back frequency to 2x/week as soon as they notice any "burning/stinging" and work up from there
- Remove other AHAs, BHAs from skincare routine
- ★ Set Expectations: takes 6-8 weeks to see any result, and 12 weeks for good results.

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Post adolescent acne in women

- Often do not have PCOS, or other signs of hyperandrogenemia
- Will often report perimenstrual flares
- Usually age >25
- Treatment options:
  - OCP: similar effectiveness to oral antibiotics at 6 months.
    - 3rd generation progestins less likely to contribute to acne
    - drospirenone, cyproterone acetate, dienogest have antiandrogenic properties
  - Spironolactone 50-100mg for acne, for hirsutism + acne – consider 150mg-200mg daily.
  - Can consider low dose isotretinoin + spironolactone to start

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Pregnancy Considerations

- Contraindicated: Use of tetracyclines, isotretinoin, topical retinoids
- Good data to support use of topicals:
  - Clindamycin 1% daily to bid
  - BPO 3-10% daily to bid
  - Erythromycin 2% bid
  - Azelaic acid 15% bid
- Oral options:
  - Consider referral to dermatology
  - Azithromycin 3x/week dosing can be considered in severe cases

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Controversy: Diet and Acne

- observational studies in different ethnic groups have found that intake of milk, especially skim milk, is positively associated with acne prevalence and severity
- Whey protein for body building has also been implicated
- B12 excess can also contribute by disrupting microbiota and producing more proinflammatory cytokines at the skin surface
- Foods with high glycemic index can contribute to acne

More information can be found at https://www.aad.org/public/diseases/acne/causes/diet

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Controversy: IBD and Isotretinoin

- global population-based retrospective cohort study assigned 2 groups of patients with acne initiating isotretinoin (*n* = 77,005) and oral antibiotics (*n* = 77,005)
- Results:
  - lifetime risk of Crohn's disease - hazard ratio [HR], 1.05;
  - lifetime risk of UC hazard ratio -1.13
  - Risk of IBD was comparable between study groups (oral abx vs isotretinoin)
  - In time-stratified analysis:
    - isotretinoin-related risk of UC was significantly increased during the first 6 months following drug initiation – hazard ratio 1.93
    - HR decreased afterward to level the risk of the comparator group.

Kridin K, Ludwig RJ. Isotretinoin and the risk of inflammatory bowel disease and irritable bowel syndrome: A large-scale global study. J Am Acad Dermatol. 2023 Apr;88(4):824-830. doi: 10.1016/j.jaad.2022.12.015. Epub 2022 Dec 15. PMID: 36529376.

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Controversy: Isotretinoin and Depression

- Causal link reported between isotretinoin and depression
- 1st Study:
  - 8,000 patients age 18-65 who were diagnosed with acne between January 2001 and December 2017
  - Forty-one of the 1,087 patients exposed to isotretinoin (3.77 percent) developed depression, compared to 1,775 of the 36,929 who were not exposed to isotretinoin (4.81 percent)
- 2nd study:
  - Meta-analysis of 25 studies, 1.6 million patients
    - Depression endorsed 3.8%
    - SI / attempt / completed suicide 0.5%
  - No epidemiological evidence to support relative increase in risk of depression with isotretinoin
- Isotretinoin is not independent risk factor for depression
- Often patients with acne suffer from depression, and rate of depression is higher among adolescents in general

Tan NKW, Tang A, MacAlevey NCYL, Tan BKJ, Oon HH. Risk of Suicide and Psychiatric Disorders Among Isotretinoin Users: A Meta-Analysis. *JAMA Dermatol.* 2024;160(1):54–62. doi:10.1001/jamadermatol.2023.4579

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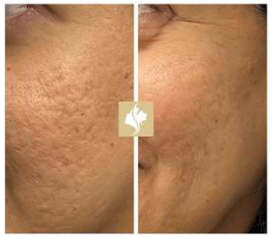
Treatment of Scars

- Topicals rarely help with this
  - Some case reports small studies support evidence for topical tazarotene
- Consider cosmetic modalities
  - RF microneedling
  - Microneedling
  - Pulse Dye Laser for post inflammatory erythema
  - Laser resurfacing in certain skin types (CO_2, fractionated)
  - TCA peels – localized to pitted scars
  - Medium depth chemical peels



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Rosacea Management

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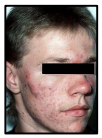
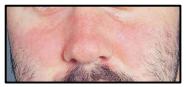
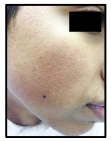
Rosacea ddx includes:



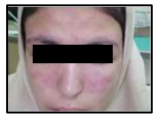
Acne vulgaris



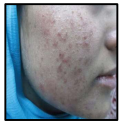
Seborrheic dermatitis



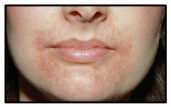
Erythromelanosis faciei and keratosis pilaris rubra



Lupus erythematosus



Demodex folliculitis



Perioral dermatitis

Zouboulis CC, et al. *Pathogenesis and treatment of acne and rosacea*. Berlin: Springer; 2014.

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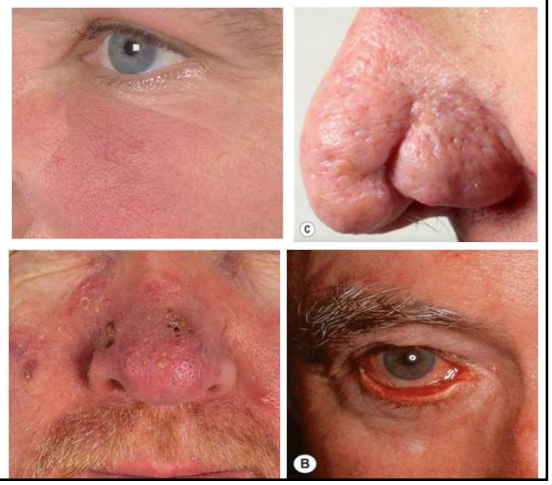
Rosacea

- Vascular changes – redness and flushing
- Epidermal barrier dysfunction (dry skin, burning, stinging)
- Absent comedones
- Thought to be related to demodex mites
- Four types:
  - *Erythematotelangiectatic rosacea*
  - *Papulopustular*
  - *Rhinophyma*
  - *Ocular Rosacea*



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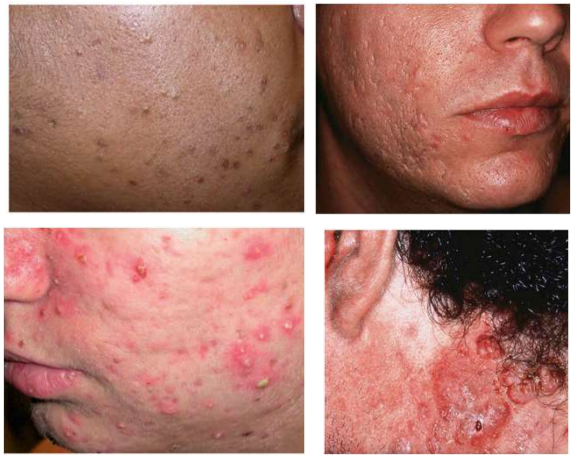
Acne

- Acne Vulgaris
  - A multifactorial disorder of the pilosebaceous unit
  - Clinically characterized by comedones, papules, pustules, cysts and scarring
  - Look for comedones to differentiate from rosacea



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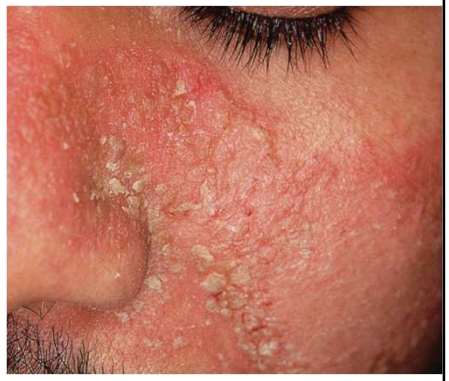
Seborrheic Dermatitis

- Caused by malasezzia furfur complex
- Can mimic ocular rosacea as one of the complaints is often blepharitis
- Look for greasy scale along the brows, lash line, and nasolabial folds to distinguish from rosacea



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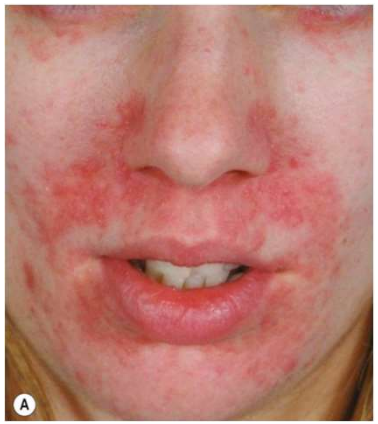
Perioral Dermatitis

- Lower mid line face distribution
- Absence of comedones
- Burning, stinging, papules, and pustules are common complaints
- Due to steroid use or occlusive cosmeceuticals / cosmetics



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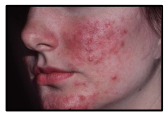
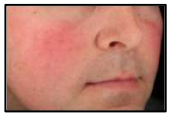
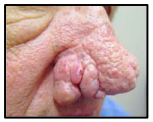
Historical approach: The 4 subtypes of rosacea



Papulopustular Rosacea (PPR)



Erythematotelangiectatic Rosacea (ETR)



Phymatous Rosacea

Ocular Rosacea

There has been a **modification** in the diagnosis and classification of rosacea to **increase accuracy and to focus on the presenting features** of an individual—the **phenotype-based approach**

Asai Y, et al. *J Cutan Med Surg*. 2016;20(5):432-445.

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Guideline recommendations: Papulopustular rosacea (PPR)

	Assess severity of papules/pustules			
	MILD *(Characterized by a few papules/pustules)*	**MODERATE TO SEVERE*** *(Characterized by several to numerous/extensive papules/pustules, with or without plaques)*		
FIRST-LINE APPROACH	**Topical treatment:** Ivermectin ***OR*** Metronidazole ***OR*** Azelaic Acid	**Topical treatment:** Ivermectin ***OR*** Metronidazole ***OR*** Azelaic Acid	***AND***	**Oral treatment:** Doxycycline ***OR*** Doxycycline MR ***OR*** Tetracycline
SECOND-LINE APPROACH *(If response is inadequate after 8–12 weeks of treatment)*		**Alternative combination** of first-line treatment options ***OR*** Low-dose **isotretinoin**†		
MAINTENANCE *(Consider once rosacea symptoms have improved)*	Topical ivermectin ***OR*** Metronidazole ***OR*** Azelaic Acid			

* Adapted from the Canadian Clinical Practice Guidelines for Rosacea (2016). Please see guidelines for complete information.
MR, modified release.
Asai Y, et al. *J Cutan Med Surg*. 2016;20(5):432-445.

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Guideline recommendations: Erythematotelangiectatic rosacea (ETR)

	Asses severity of background erythema* and for presence of telangiectasia†			
	MILD		**MODERATE TO SEVERE** *(Consider referral to a dermatologist)*	
FIRST-LINE APPROACH	**Topical treatment:** Brimonidine ***OR*** Metronidazole ***OR*** Azelaic Acid			
SECOND-LINE APPROACH *(If response is inadequate after 8–12 weeks of treatment)*	**Alternative** first-line treatment option ***OR*** **Combination** of first-line treatment options ***OR*** Intense pulsed light or vascular laser for erythema resistant to therapy			
THIRD-LINE APPROACH *(If patient declines above)*			**Oral treatment:** Doxycycline ***OR*** Doxycycline MR	
MAINTENANCE *(Consider once rosacea symptoms have improved)*	**Topical treatment:** Brimonidine ***OR*** Metronidazole	***AND/OR***	Laser/Intense pulsed light	

* Adapted from the Canadian Clinical Practice Guidelines for Rosacea (2016). Please see guidelines for complete information.
MR, modified release.
Asai Y, et al. *J Cutan Med Surg*. 2016;20(5):432-445.

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Guideline recommendations: Phymatous rosacea

	Asses severity of phyma (Consider referral to a dermatologist)			
	MILD TO MODERATE			SEVERE
FIRST-LINE APPROACH	**Topical treatment:** Topical retinoid	***OR***	**Oral treatment:** Doxycycline ***OR*** Doxycycline MR ***OR*** Tetracycline	Surgical/electrosurgical/laser ablation
SECOND-LINE APPROACH *(If response is inadequate after 8–12 weeks of treatment)*	**Topical treatment:** Topical retinoid	***AND***	**Oral treatment:** Doxycycline ***OR*** Doxycycline MR ***OR*** Tetracycline	*If patient declines above:* Isotretinoin
THIRD-LINE APPROACH *(If patient declines above)*	Isotretinoin			*If patient declines above, consider options from mild/moderate, and consider first-line approach again if previously declined*
MAINTENANCE *Consider once rosacea symptoms have improved)*	**Topical treatment:** Topical retinoid	***OR***	**Oral treatment:** Doxycycline ***OR*** Doxycycline MR ***OR*** Tetracycline	

- Adapted from the Canadian Clinical Practice Guidelines for Rosacea (2016). Please see guidelines for complete information.

MR, modified release.
Asai Y, et al. *J Cutan Med Surg*. 2016;20(5):432-445.

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Guideline recommendations: Ocular rosacea

	Asses severity of ocular symptoms *(Refer to ophthalmologist if diagnostic uncertainty)*					
	MILD			MODERATE TO SEVERE *(Consider referral to a dermatologist)*		
FIRST-LINE APPROACH	Lid care ***AND*** Artificial tears			**Refer to ocular specialist* *AND* Consider initiating treatment with:** Lid care/artificial tears	***AND***	**Oral treatment:** Doxycycline ***OR*** Doxycycline MR ***OR*** Tetracycline
SECOND-LINE APPROACH *(If response is inadequate after 8–12 weeks of treatment)*	Lid care/artificial tears	***AND***	**Oral treatment:** Doxycycline ***OR*** Doxycycline MR ***OR*** Tetracycline	Isotretinoin		
THIRD-LINE APPROACH *(If patient declines above)*	Consider referral to ocular specialist and/or cyclosporine drops					
MAINTENANCE *(Consider once rosacea symptoms have improved)*	Lid care/artificial tears	***AND***	**Oral treatment:** Doxycycline ***OR*** Doxycycline MR ***OR*** Tetracycline			

- Adapted from the Canadian Clinical Practice Guidelines for Rosacea (2016). Please see guidelines for complete information.

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Asai Y, et al. *J Cutan Med Surg*. 2016;20(5):432-445.

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Phenotypic approach: Available treatment options

	Centrofacial erythema	Phymatous changes	Papules/pustules	Telangiectasia	Ocular manifestation
Topical					
• Ivermectin (ROSIVER® Cream)	✓		✓		
• Metronidazole (MetroCream®; Noritate®)	✓		✓	✓	
• Azelaic acid (FINACEA®)	✓		✓	✓	
• Brimonidine (Onreltea®)	✓				
• Retinoid		✓		✓	
Oral					
• Doxycycline/Doxycycline 40 mg modified-release (APPRILON®)	✓	✓	✓		✓
• Tetracycline	✓	✓	✓		✓
• Low-dose isotretinoin (Accutane®; Clarus®; Epuris®)		✓	✓		✓
Other					
• Intense pulsed light	✓			✓	
• Vascular laser	✓	✓		✓	
• Lid care/artificial tears					✓
• Cyclosporine drops (Restasis®)					✓

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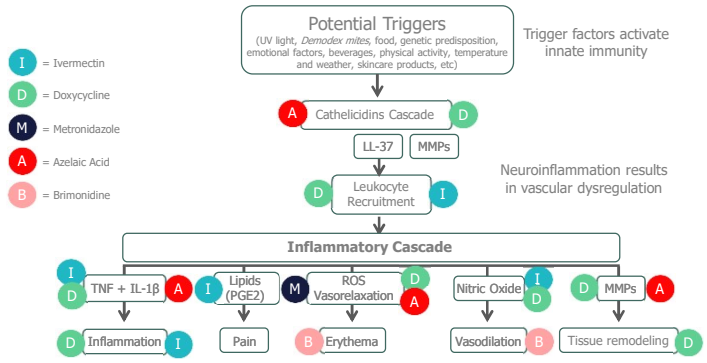
Tackle multiple pathophysiologic pathways via different therapeutic approaches



Asai Y, et al. *J Cutan Med Surg*. 2016;20(5):432-445.

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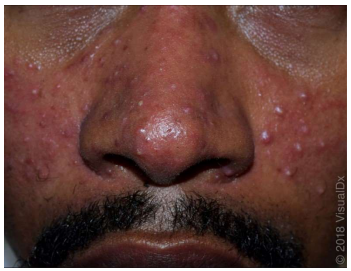
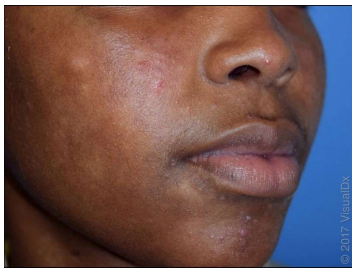
Rosacea in Melanated Skin Types

- Clues:
  - Patient complaints include: burning and stinging diffusely with acneiform eruption
  - Worse with topical retinoid use
  - Swelling or thickening of the skin on the nose, cheeks, and chin
  - Signs and symptoms of ocular rosacea
  - Absence of comedones





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Tips for successful treatment

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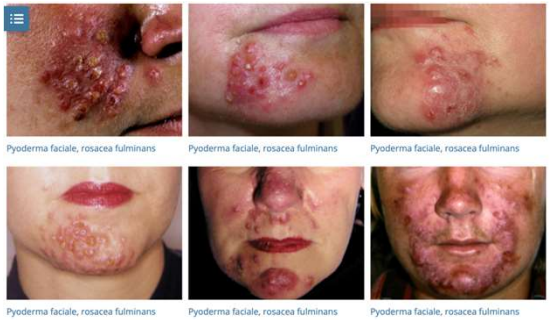
Rosacea Fulminans

- Typically affects females, younger, can be in someone with hx of rosacea, or new diagnosis
- Peripartum flare – usually post partum
- Tx: oral erythromycin post partum, isotretinoin
- Rarely require oral/systemic steroids



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Tips for co-managing Psoriasis and AD patients

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Co-managing patients on biologics/cDMARDs

1. Lab work up: Usually includes all Hep B serology (sAg, sAb, core), and Hep C, HIV as indicated by risk factors, TB skin test or quantiferon gold and chest x-ray
2. Any patient on a JAK inhibitor needs Shingrix vaccine ideally before starting – even 18 year olds
3. Please ensure all relevant vaccines are up to date ideally before starting
4. No live vaccines on systemic agents unless there pause /interruption in therapy that is adequate to allow for the vaccine. Liaise with dermatology if required

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Tips: Referrals for Psoriasis

1. Joint symptoms: Look for joint symptoms – refer to rheumatology and dermatology at the same time
2. BSA >10%: If patient has body surface area >10%, take pictures, manage with topicals and refer to derm. Indicate severity on the referral
3. Special sites: face, genitals, folds, hands, feet – can warrant use of systemic agents
4. Difficult to manage with chronic ultrapotent topical steroids and/or phototherapy.

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Tips: Referral for Atopic Dermatitis

1. History of recurrent infections (HSV, Impetigo)
2. BSA is greater than 10%
3. Special Site involvement: face, hands, feet
4. Affecting quality of life (itch burden)
5. Difficult to manage with topical steroids – patient or physician driven difficulty
6. Suspected allergic contact dermatitis – eyelids, lips, hands
7. Occupation associated flares
8. Associated comorbidities – e.g. asthma that can benefit from systemic therapy (e.g. dupilumab)

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