Redness and Rosacea

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F125: Redness and Rosacea

DISCLOSURES

I have been an institutional primary investigator for research studies sponsored by Abbvie, Amgen, Novartis, Eli Lilly, Boehringer Ingelheim, Anacor, and Otsuka. I have received no personal payment in exchange for my services. Several years ago, I received honoraria from Galderma.
Learning objectives

Following this session, the attendee should be able to:

1. Describe clinical features and pathophysiology of rosacea
2. Recognize skin diseases that can produce facial redness
3. Develop an appropriate plan to manage facial redness
Initial evaluation

- Determine rosacea subtype
- Skin sensitivity?
  - Tolerability of moisturizers & other topical medications?
- Impact on patient?
- Educate about course of disease
4 Rosacea subtypes

• Papulopustular
• Erythematotelangiectatic
• Phymatous
• Ocular
• One variant: Granulomatous
Papulopustular rosacea: treatment

• **Topical:**
  - metronidazole (0.75%, 1%)
  - sodium sulfacetamide/sulfur
  - azelaic acid (15% gel)
  - ivermectin (1% cream)

• **Oral:**
  - doxycycline 40 mg (Oracea)

• **Multiple off-label therapies**
Topical therapy for PPR: guidelines

• At least 6-8 weeks before assessing efficacy
• Include a gentle skin care regimen
  • Repair skin barrier
**Metronidazole**

- **Metronidazole 0.75% gel, cream, and lotion twice daily** (best price GoodRx $70 for 45 gm gel)
- **Metronidazole 1% gel and cream once daily**
  (best price GoodRx $270 for 60 gm gel [$98 with coupon])
- Pregnancy Category B

Retrieved February 14, 2017, for zipcode 48105 from http://www.goodrx.com/
Azelaic acid

• 15% gel twice daily (best price GoodRx $306 for 50 gm)
• Similar efficacy as compared to metronidazole
• Tolerability: early burning, stinging, irritation
• Pregnancy Category B

Retrieved February 14, 2017, for zipcode 48105 from http://www.goodrx.com/
Practical use

• Combined with oral agents
  • Tetracyclines, especially doxycycline
  • Faster results, better improvement
• Maintain remission/prevent flares
Sodium sulacetamide 10%/sulfur 5% (SS) preparations

• Leave on formulations--cream, gel, foam, lotion
  (Best price GoodRx $130 for 118 mL sulacetamide lotion [with coupon $60])

• Cleansers  (Best price GoodRx $409 for 8 oz [with coupon $47])

• Limited data

• Can combine with oral agent

• Some malodor

Retrieved February 14, 2017, for zipcode 48105 from http://www.goodrx.com/
Topical ivermectin (1% cream)
(Price $309 for 30 gm on GoodRx)

• Once daily
• Indication: inflammatory lesions
• *Demodex folliculorum*?
• Mechanism of action:
  • Activation of immunity?
  • Anti-inflammatory
  • Antiparasitic

Retrieved February 14, 2017, for zipcode 48105 from http://www.goodrx.com/
Oral therapies for PPR

• Doxycycline 40 mg (30/10 extended release)
  • lowest price $588 [$484 with coupon] on GoodRx

• Twice daily doxycycline hyclate 20 mg (off label)
  • lowest price $62 [$23 with coupon] on GoodRx

• Off-label tetracyclines at antimicrobial doses
  • Avoid prolonged duration

• In practical use, often combined with topicals

• Isotretinoin—more recalcitrant disease

Drug price info retrieved February 14, 2017, for zipcode 48105 from http://www.goodrx.com/
Identifying ETR

- Centrofacial
- Flushing
- ±Telangiectasia
Lesional vs background erythema

KEY POINT: disappears when papules have been absent for some time

May see telangiectasia, either with naked eye or using dermoscopy
ETR treatment: Laser and light therapies

• Pulsed-dye laser (purpuragenic settings)
  • Improvement in erythema, telangiectasia

• Longer-pulse-duration PDL: nonpurpuragenic
  • facial erythema, can stack PDL pulses for telangiectasia

• 532-nm KTP: most effective for telangiectasia, can treat erythema

• Intense pulsed light: similar efficacy for erythema and telangiectasia as PDL in comparison studies
Topical brimonidine--rebound

Optimizing the Use of Topical Brimonididine in Rosacea Management: Panel Recommendations

Emil A. Tanghetti MD,1 J. Mark Jackson MD,2 Kevin Tate Belasco DO MS,3 Amanda Friedrichs MD,4 Firas Hougier MD,5 Sandra Marchese Johnson MD,6 Francisco A. Kerdel MD,7 Dimitry Palceski DO FAOCD,8 H. Chih-ho Hong MD FR.CPC,9 Anna Hinek MD MSc FR.CPC,10 Maria Jose Rueda Cadena MD11

Potential increases in erythema associated with topical brimonidine

- Paradoxical erythema
- Return to baseline erythema (expected)
- Exaggerated recurrence of erythema
- Allergic contact dermatitis
Coming soon: Topical Oxymetazolene

- FDA approved January 19, 2017
- Treatment of persistent facial erythema of rosacea
- Study design very similar to that required for approval of topical brimonidine
  - Two clinical trials, 885 patients
  - Success 2-grades of improvement on both clinician’s CEA and patient self

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Topical oxymetazoline: adverse reactions

In an open-label extension study, over one year, adverse reactions included:

- worsening inflammatory lesions of rosacea (3%)
- application site dermatitis (3%)
- application site pruritus (2%)
- application site pain (2%)
- application site erythema (2%).

Source: RHOFADE Prescribing Information
Flushed

Wet or dry flush?
Wet=autonomic neural-mediated (+eccrine sweating)
Dry=agents act directly on vascular smooth muscle

- What type of dry flush?
- Any pain/burning?
  - Yes—sensorineural flushing
  - No—endogenous or exogenous?
    - Ask about food, drugs, tests, etc
Treatment of flushing:

- **Wet flushing:**
  - Cooling (ice chips in mouth)
  - Clonidine (0.05 mg twice daily)
  - Beta-blocker—nadolol (40 mg) or propranolol

- **Dry flushing:**
  - With dysesthesia—low-dose clonidine or nadolol; Second-line amitryptiline 10 mg daily
  - No dysesthesia—avoid exogenous vasodilators
  - Aspirin pretreatment for nicotinic acid
  - Antihistamine
Phymatous rosacea

• Primarily adult male patients
• Prominent sebaceous hyperplasia & oily skin

• Treatment:
  • Isotretinoin (0.3-1 mg/kg) reported beneficial. Duration of benefit uncertain
  • Laser ablation and surgical debulking to recontour hypertrophy
Ocular rosacea

• 50-72% of rosacea patients
  • potential sight-threatening corneal damage

• Clinical diagnosis
  • Severity doesn’t correlate with skin severity

• Symptoms—tearing, redness, foreign body sensation, burning, itching, photophobia, blurring
Ocular rosacea management

- Mild disease
  - Lid hygiene
  - Metronidazole gel

- Moderate to severe
  - Topical corticosteroids or cyclosporine
  - Oral tetracyclines, azithromycin second-line
Granulomatous rosacea

- Variant, not a subtype
- Red-brown papules
- Surrounding erythema not a marked feature but may be present
- Often symmetric, but not necessarily
- Convexities of face, periocular/periorificial
- Histology: granulomas
Granulomatous rosacea: treatment

• No large-scale studies
• Standard rosacea therapies
  • Systemic tetracyclines
  • Consider topicals (less effective)
• Isotretinoin
Rosacea pathogenesis

- Innate immunity
  - ↑ cathelicidin and kallikrein 5 (SCTE)

- Microorganisms
  - *Demodex*, *Bacillus oleronium*, *H. pylori*

- UV irradiation

- Vascular hyperreactivity

- Genetics
Remainder of talk devoted to case presentations and discussion of other causes of facial erythema