Ocular Rosacea

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Rosacea Subtypes (National Rosacea Society)

- Erythematotelangiectatic
- Papulopustular
- Phymatous
- Ocular
- ROSCO panel recommendations
  - Phenotype based

Global Rosacea Consensus

- Diagnostic phenotypes
  - Fixed centrofacial erythema in a characteristic pattern that may periodically intensify
  - Phymatous changes
    - Patulous follicles
    - Skin thickening or fibrosis
    - Glandular hyperplasia
    - Bulbous appearance of the nose

- Major phenotypes
  - Papules and pustules
  - Flushing
  - Telangiectasia
  - Hard to see in darker skin
  - Ocular manifestations

- Secondary phenotypes
  - Burning and stinging
  - Facial edema
  - Dry facial appearance

Etiology and Pathology of the Disease

- Dermal matrix degeneration
- Ferritin expression
  - Higher in rosacea patients
- Reactive oxygen species
- VEGF overexpression
- Antimicrobial peptides
  - AMPs

The Skin and Dermal Degeneration
Aberrant Innate Immune Response

- Kallikrein 5 (KLK5)
- Cathelicidin
  - Aberrant in rosacea patients
- Toll-like receptor 2 (TLR2) expression

ROS

- Reactive Oxygen Species
  - Released by neutrophils
  - Lead to oxidative tissue damage (inflammation)
    - Deactivate natural defenses via oxidative stress
    - Modify proteins and lipids
    - Production of inflammatory mediators
  - Generated by cathelicidins

Demodex

Ocular Rosacea

- What do we mean when we say Ocular Rosacea?
- Clinical signs
  - Lid margin telangiectasia
  - Conjunctival injection
  - Marginal keratitis
  - Scleritis and sclerokeratitis
  - “Honey crust” and collarette accumulation at lash base
  - Lid margin irregularity
  - Ocular surface disease

Marginal Keratitis

Patient Symptoms

- May be intermittent
- Usually chronic
- Associated with triggers
- Presenting symptoms
  - Flushing
    - Irritation
    - Conjunctiva
    - Lids
    - Aesthetics
  - Telangiectasia
  - Periorbital/rimpheyema
  - Gritty feeling/FB sensation
  - Lid edema
  - Burning/stinging
  - Raw feeling
Diagnosing Ocular Rosacea

- May precede other cutaneous signs by years
- Difficult with darker skin
- Must exclude other diseases

Rosacea Triggers

- Temperature
- Wind
- Caffeine
- Exercise
- Spicy food
- Alcohol
- Skin products
- Stress
- Any vasodilators
  - Hot drinks

Management of Rosacea

- Medications
  - Metronidazole
  - Retinoids
  - Tretinoin
  - Isotretinoin
  - Alpha-2 agonists
  - Brimonidine
  - Oxymetazoline
  - Topical ivermectin
  - Beta blockers
  - Fusidic acid
  - Azelaic acid

- Medications (cont)
  - Tacrolimus
  - Doxycycline/minocycline
  - Erythromycin
  - Topical clindamycin
  - Oral steroids
  - Topical sulfur
Management of Ocular Rosacea

- **Topical**
  - Alpha adrenergic
  - Brimonidine
  - Steroid/antibiotic
  - Artificial tears
  - Lid hygiene
    - Avoid astringents, menthol
    - ? Ciclosporin

- **Oral**
  - Beta blockers
    - Carvedilol
  - Doxycycline
Rosacea Management

Famous Faces

The Only Faces of Rosacea?
Not so fast.....

Rosacea in Skin of Color!

Underestimated. Under-diagnosed.

Sunscreen?