What’s New in Oculoplastics?

Blepharitis and Related Disorders

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Outline

- Eyelid anatomy
- Signs and symptoms
- Aetiology
- Treatments
  - Hot compresses
    - Warm/moist towel, blow mist, mask etc.
  - Lid wipes
    - Baby Shampoo, Lid Wipes, Cliradex
  - Fancy devices
    - Lipiflow, Intense pulse light, Bleaphasteam, MG expression, Probing
  - Drugs
    - Tetracyclines, aziyromycin, clarithromycin
Introduction – Eyelid Anatomy

Skin
Orbicularis oculi muscle
Hair follicle
Perifollicular glands
Eyelash

UPPER EYELID.

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Blepharitis

- Idiopathic chronic inflammatory disorder of eyelids
- Usually isolated near base of eyelashes around eyelashes
- Causes, itching, burning, eye main, FB sensation, crusting around eyes
- Symptoms usually worse in am (as opposed to dry eyes in pm)
Blepharitis- Signs

- Anterior
  - Crusting, redness, thickened eyelid margins

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Blepharitis - Signs

- Posterior
  - Inspissated oil glands (meibomian gland dysfunction)
Blepharitis - Epidemiology

• Few studies available
• Spanish cross-sectional study reported asymptomatic and symptomatic meibomian gland dysfunction of 21.9% and 8.6% of individuals, respectively.
• US survey = 37-47% of patient with signs of blepharitis
• Average age is 50, younger and more females with streptococcal disease (mean 42)].[9][10]
Blepharitis- Aetiologies

- Idiopathic
- Ocular Rosacea
- Staphylococcal Infection
- Demodex
- Contact lens wear?
- Glaucoma Meds?
Staphylococcal Infection

- Hordeolum: Acute infection involving sebaceous glands
  - Glands of Zeiss (external hordeolum, aka styel)
  - Meibomian glands (internal hordeolum)
Demodex

- Most common ectoparasites in Humans
- Folliculorum – Hair follicles
- Brevis – Sebaceous glands
- Prevalence around 50% by 20 y/o, almost all elderly males
- Older Age, oily skin, and facial acne increased prevalence

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Head with four pairs of bud-type legs

Body and tail

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Demodex

- Debris and waste → cylindrical dandruff, (pathognomonic for mites infestation)
- Block the sebaceous ducts, irritate the eyelid margin, and induce epithelial hyperplasia and hyperkeratinization
- The cytoskeleton → foreign body
  - granulomatous reaction → chalazia
  - Elicit an inflammatory/immune response
Blepharitis Treatment

- Lid wipes
  - Baby Shampoo
  - Lid Wipes ®
  - Cliradex ® (Terpinen- 4-ol (T4O))
    - BID for at least 6 weeks to cover two 2 life cycles.
Blepharitis Treatment

- Hot compresses – Are all compresses the same?
  - Hot face cloth towel (dry vs wet)
  - EyeGiene®
  - MGDRx EyeBag®
MGD - Treatment

- **Blephasteam ®**
  - Wet chamber warming goggles
  - 10 min three times daily
    - Showed improvement in TBUT and OSDI in patients that did not respond to warm compresses
MGD - Treatment

- Lipiflow

Cross Section of LipiFlow® Activator

- **Lid Warmer**: Applies directional heat to inner eyelid
- **Eye Cup**: Applies intermittent pressure to the outer eyelid
- **Heat**: Facilitates release of secretion from obstructed Meibomian glands
- **Inflatable air bladder**
MGD - Treatment

• Intense pulse light
  ◦ light therapy over a broad range of wavelengths.
  ◦ Warms MG and constriction of blood vessels
  ◦ Usually monthly doses x 3-5 months then every 6 months
MGD - Treatment

• MG probing
  ◦ Pioneered by Steven Maskin, MD
  ◦ Direct probing of individual meibomian glands with probe to physically opening up the occlusion caused by MGD
  ◦ Requires local aesthetic
  ◦ Maskin probe
What modality is best?

- All products are supported by case series showing improved patient symptoms, TBUT and ASDI scores.
- Few Head to head comparisons with conflicting results
MGD – Treatment - Drugs

- **Topical**
  - Erythromycin
  - Tobradex

- **Oral**
  - Tetracyclines
  - Azithromycin/ Clarithromycin
  - Omega 3 supplementation

- **Injections**
  - Steroids
References


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