



# Periorbital Dermatology

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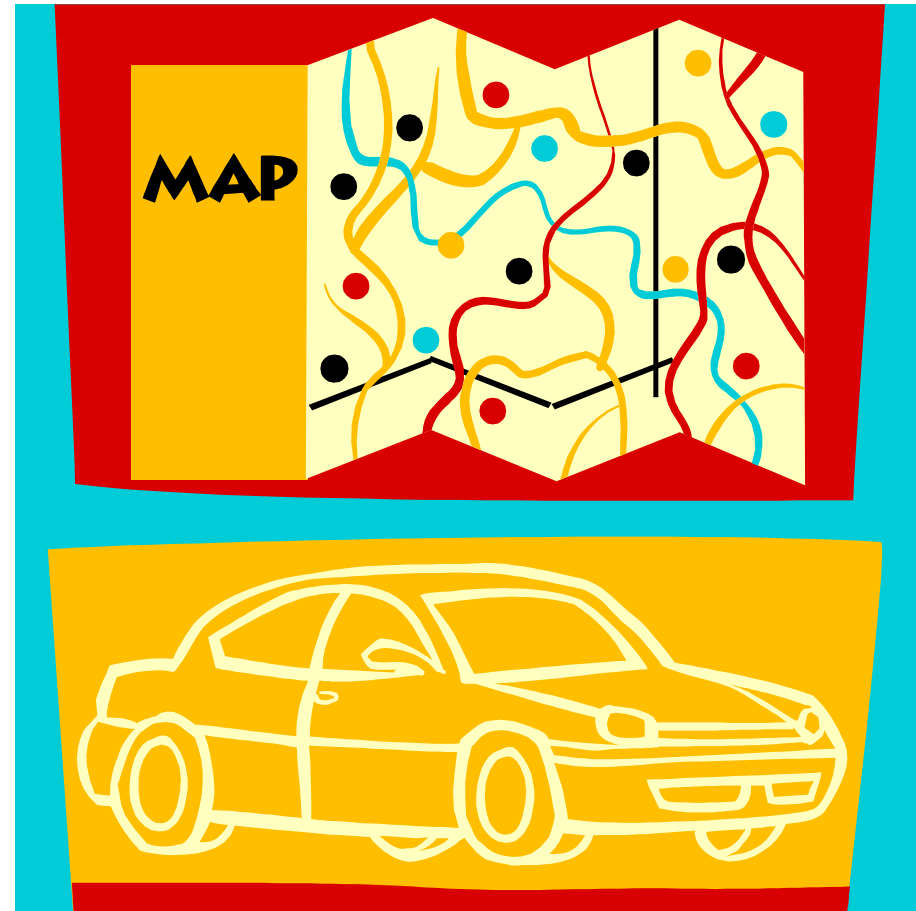
# Periorbital skin

- Characteristics of periorbital skin
  - Delicate and thin
  - More susceptible to irritation and allergy
  - Easily shows changes due to sun, age and irritation



# Roadmap

- Periorcular Dermatitis
- Periorbital Manifestations of Connective Tissue Disease
- Periorbital Manifestations of Systemic Diseases
- Periorbital Infections
- Periorbital rejuvenation



# Periocular Dermatitis

- Periocular contact dermatitis (54% of cases)
  - Direct allergic contact (44%)
  - Airborne allergic contact dermatitis (10%)
- Periocular atopic dermatitis (25%)
- Periocular irritant contact dermatitis (9%)
- Periorificial dermatitis (4.5%)
- Periorbital psoriasis (2%)
- Periorbital allergic conjunctivitis (2%)

# Periorbital Contact Dermatitis



<http://dermis.net>

# Periorbital Contact Dermatitis

- Inflammatory reaction of the eyelid skin
- Scaling, swelling, erythema, itching
- Upper and/or lower eyelids on one or both sides can be affected
- Contact with a trigger substance
- Allergy – allergic contact dermatitis
  - Nickel, fragrance mix, balsam of Peru, preservatives, Nail polish (toluene), hair dye, eye cream, shampoo
  - Patch testing for confirmation



## Periorbital dermatitis: Causes, differential diagnoses and therapy

Alexandra Feser, Vera Mahler

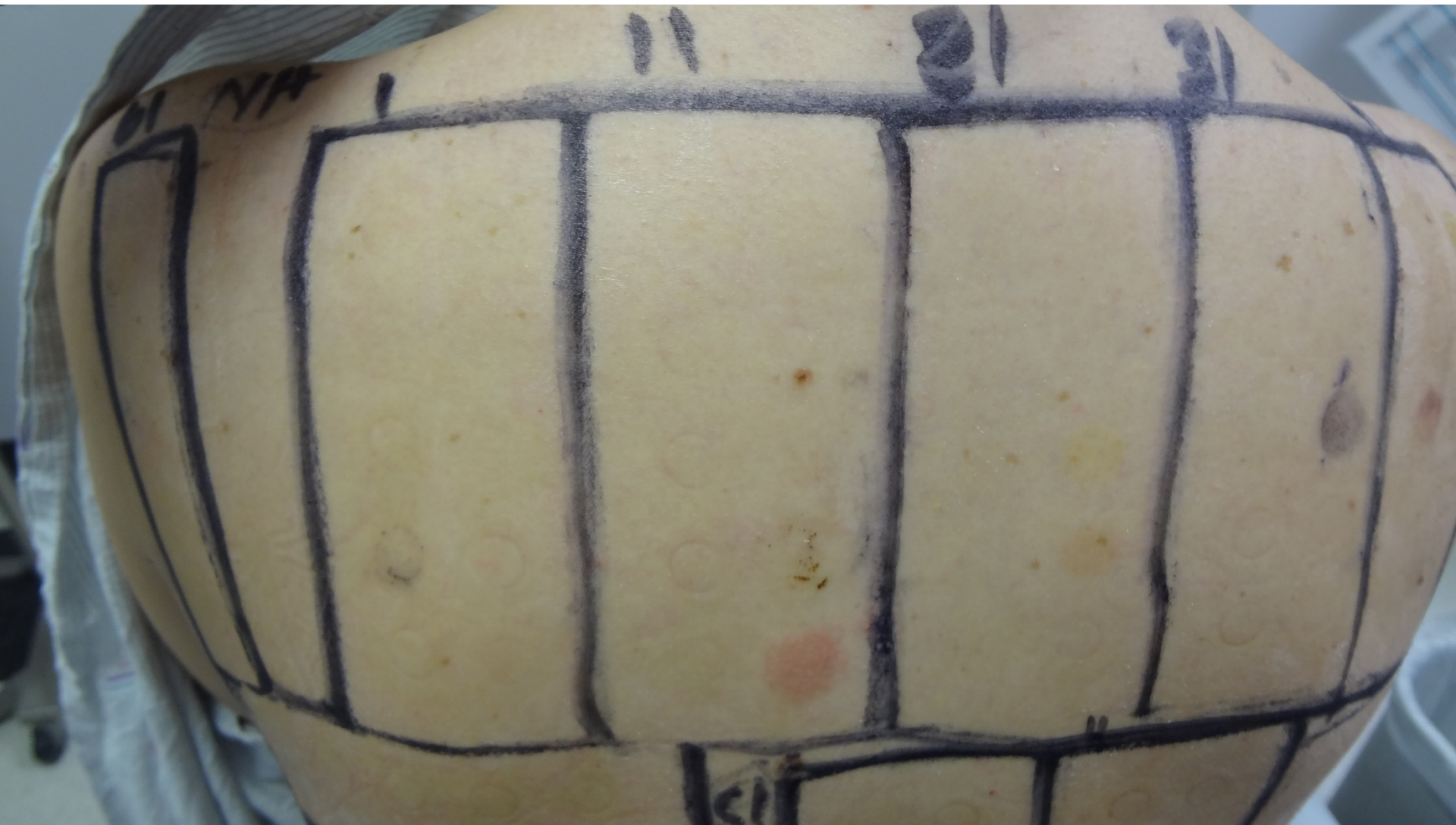
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# Periorbital Contact Dermatitis

- Evaluation
  - Patch testing
  - Elimination challenge – very simple skincare regimen for at least a month
- Therapy
  - Topical corticosteroids
    - Caution near eye to avoid development of cataracts and thinning of sin
  - Topical calcineurin inhibitors
  - Topical tacrolimus 0.1% ointment (Protopic)
    - Can burn initially
  - Topical pimecrolimus 1% cream (Elidel)
    - Cream, can wick into eyes





# Airborne Allergic Contact Dermatitis





# Airborne Allergic Contact Dermatitis

- Often related to Compositae family
- Involves exposed areas of face
- “Wilkinson's triangle,”
  - Both eyelids, nasolabial folds, and under the chin
- Can also involve “V” of neck, hands and forearms
- Worse with outdoor exposure and windy days
- Evaluate with patch testing





# Airborne Allergic Contact Dermatitis

- Treatment

- Use of barrier cream on the exposed areas after every wash

- Slows down penetration of antigen into skin

- Topical corticosteroids

- Caution with long term use, can increase risk of cataracts
- Can thin skin

- Topical calcineurin inhibitors

- Tacrolimus or Pimecrolimus

# Periorbital Atopic Dermatitis





# Periorbital Atopic Dermatitis

- Erythema, scaling, and edema of upper and lower eyelids
- Hyper-linearity of lower eyelid
  - Dennie Morgan lines (fold)- crease-like wrinkles that form under the lower eyelid folds (double skin folds)
- Dark circles under the eyes are due to swelling and discoloration from congestion of small blood vessels beneath the skin in this area



# Atopic Dermatitis - Treatment

- Acute management (<2 weeks)
  - Low potency steroid ointments (creams can wick into eyes)
  - Hydrocortisone 2.5% ointment
  - Desonide 0.05% ointment
  - Mometasone 0.1% ointment
    - (higher potency, reserve for severe cases)
- Chronic management
  - Topical tacrolimus 0.1% ointment (Protopic)
    - Can burn initially
  - Topical pimecrolimus 1% cream (Elidel)
    - Cream, can wick into eyes

# Periocular Irritant Contact Dermatitis





# Periocular Irritant Contact Dermatitis

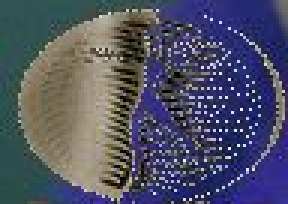
- Causes
  - Soaps, cosmetics, dusts, detergents
  - Fumes, mechanical factors
- Treatment
  - Avoidance of triggering factor
  - Protective eye wear
  - Barrier ointment or cream
  - Sun protection in darker skin types to decrease hyperpigmentation
  - Topical steroids or calcineurin inhibitors

# Periorificial dermatitis



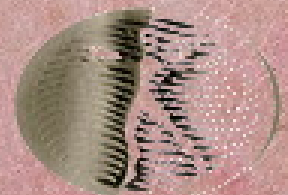
# Periorbital Dermatitis

- Form of periorificial dermatitis – perioral and periorificial skin
  - Discrete erythematous micropapules and micropapulovesicles
  - May become confluent on the perioral and periorbital skin
  - Skin surface often becomes dry and flaky
  - Typically adult women
  - Thought to be a variant of rosacea



# Periorbital Dermatitis

- Causes
  - Neglecting to wash the face
  - Certain cosmetics and creams
    - Isopropyl myristate – preservative
  - High potency halogenated topical steroid creams
  - Nasal steroids and steroid inhalers
  - Fluorinated toothpaste
  - Hormonal changes and/or oral contraceptives





# Periorbital Dermatitis

- Treatment
  - Discontinue exacerbating agents
  - Gentle topical skin care products, ointments may be better than creams due to preservatives
- Topical treatments
  - Topical erythromycin or metronidazole
  - Topical calcineurin inhibitors such as pimecrolimus or tacrolimus
  - Topical Azelaic acid
- Oral treatments
  - Oral tetracycline family antibiotics
  - In severe cases oral isotretinoin may be used

# Periorbital psoriasis



19

**Periorbital psoriasis developing after trauma. Cihangir Aliagaoglu MD<sup>1</sup>, Umran Yıldırım MD<sup>2</sup>, Mustafa Atasoy MD<sup>3</sup>, Önder Sahin MD<sup>2</sup>, Cemal Gündođdu MD<sup>2</sup>  
Dermatology Online Journal 12 (6): 22**

# Periorbital Psoriasis

- Psoriasis of the eyelids is uncommon
  - As are other forms of facial psoriasis except eyebrows and hairline
- Triggers – trauma
  - Abrasions, bites, burns, contusions, excoriations
  - Phototoxic reactions, pressure, tape stripping, and irritant application
- Treatments – topical steroids and calcineurin inhibitors
  - Anti TNF agents, methotrexate, oral retinoids – severe cases

# Periorbital Manifestations of Connective Tissue Disease

- Dermatomyositis
- Scleroderma
- Graves Ophthalmopathy
- Neonatal Lupus Erythematosus

# Dermatomyositis







# Dermatomyositis

- Heliotrope or "lilac" rash
  - Violaceous eruption on the upper eyelids
    - Rare cases on the lower eyelids
  - May be seen in conjunction with “Shawl sign” or Gottron’s papules
- Check for proximal muscle weakness
  - Check creatine kinase, aldolase
  - ANA panel with cascade









# Scleroderma – Periorbital Manifestations



Upper lid telangiectasia



Lower lid telangiectasia

*JAAD* Vol 54, Issue, 2 March–April 2009, Pages 292–304

# Scleroderma – Periorbital Manifestations

- Telangiectasia - 17–21% of patients
  - Can be found on either upper or lower lids
- Lid stiffness is seen in 29–65% of patients
  - Associated with a “woody” texture on palpation and difficulty with lid eversion
- Treatment
  - Management of the underlying disease



# Graves' Ophthalmopathy

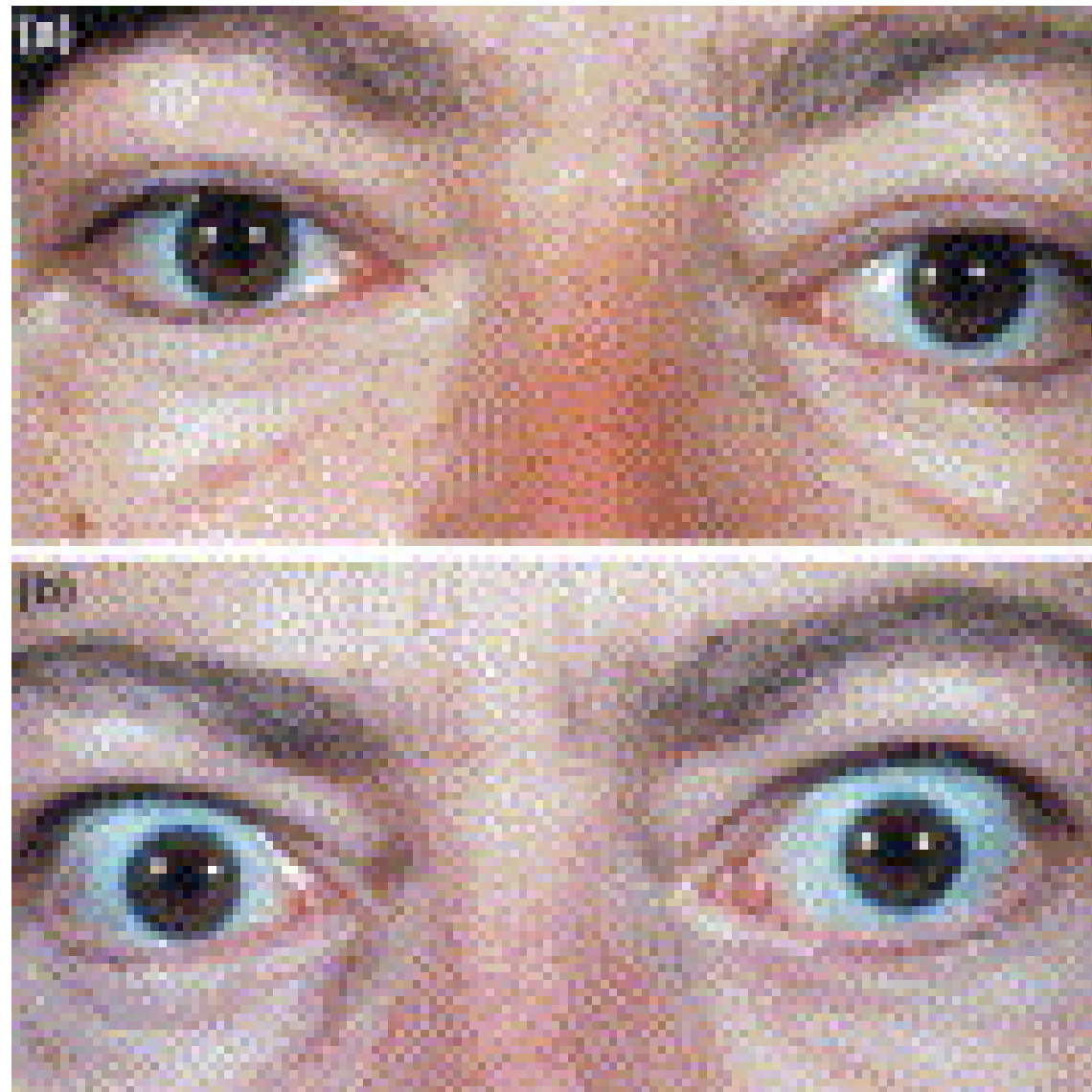


Fig. 1 Appearance of a patient with mild Graves' ophthalmopathy (a) in whom progression to more severe ophthalmopathy was noted during the natural course of the disease one year later (b).

# Graves' Ophthalmopathy

- Hallmark - increased volume of extra ocular muscles and retro bulbar fat
- Swelling of retro bulbar tissues - excessive secretion of glycosaminoglycans by orbital fibroblasts
- Orbital fibroblasts - primary target of the autoimmune attack
- Treat underlying autoimmune thyroid disease
  - Prednisone +/- radiotherapy

# Neonatal Lupus Erythematosus



# Neonatal Lupus Erythematosus

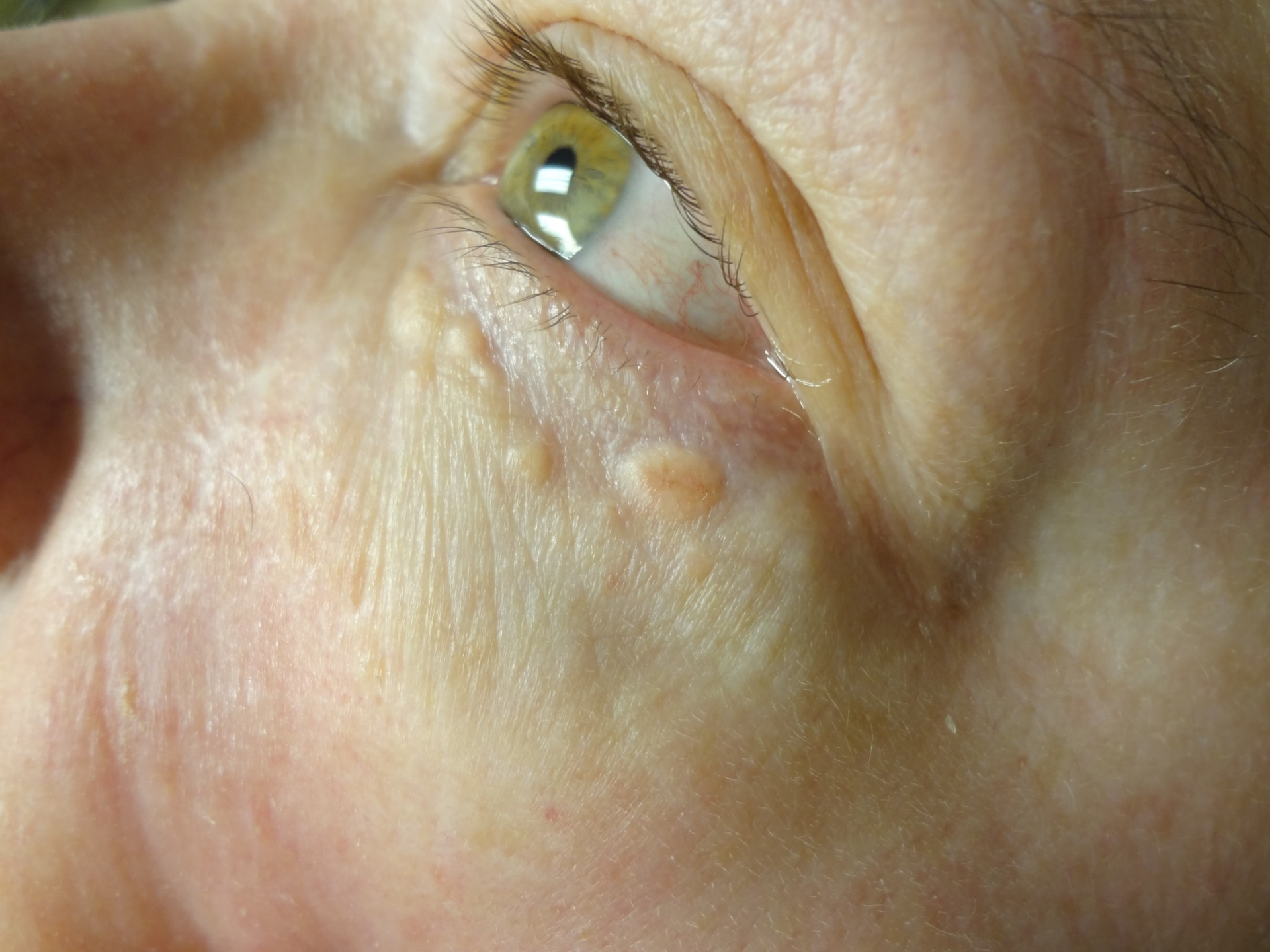
- Most infants with neonatal lupus are girls
- Born to mothers who carry the Ro/SSA antibody
- Develop skin lesions during the first few weeks of life
- Annular erythematous macules, and plaques - head and extremities
- Periocular involvement (raccoon eyes) may be prominent

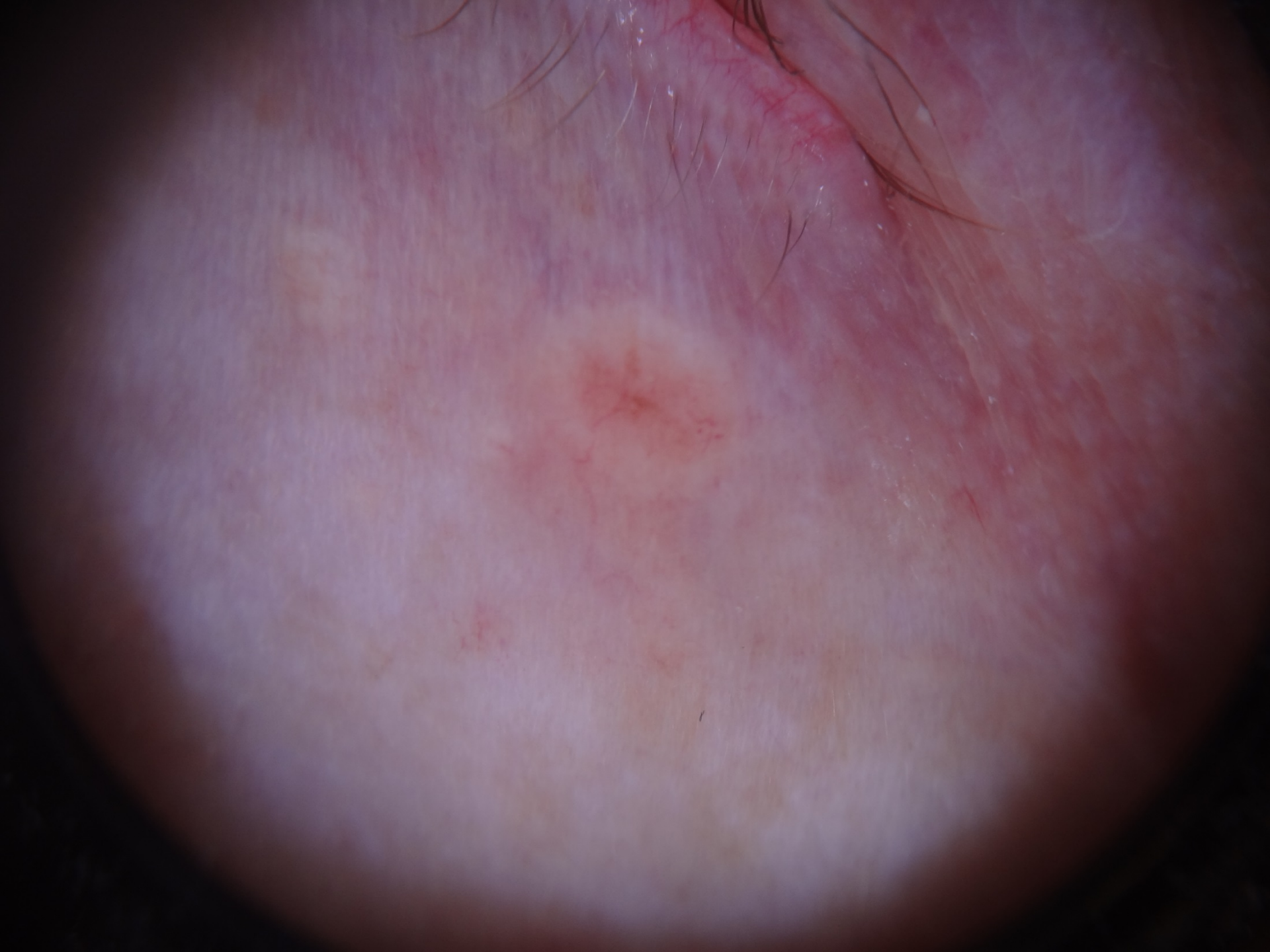
# Periorbital Manifestations of Systemic Diseases

- Clear cell syringomas – diabetes mellitus
- Xanthelasma – Hyperlipidemia
- Necrobiotic Xanthogranuloma

# Clear Cell Syringomas







# Clear Cell Syringomas

- Rare histologic variants of syringomas
- Bright and clear cytoplasm of the ductal epithelial cells
- Increased content of intracellular glycogen
- Cutaneous marker for diabetes mellitus

Xanthelasma





# Xanthelasma

- Yellow plaques - most commonly near the inner canthus of the eyelid, more often on the upper lid than the lower lid
- Most common cutaneous xanthoma
- ½ - associated with elevated plasma lipid levels
- Can be treated with 75% TCA application







# Necrobiotic Xanthogranuloma



# Necrobiotic Xanthogranuloma

- Rare, chronic, progressive granulomatous disorder
- Yellowish plaques and nodules, most commonly in the periorbital region
- Commonly associated with monoclonal gammopathy
- Treatments include chemotherapy, intralesional and systemic steroids, radiotherapy and surgical excision

# Periorbital Infections

- Zoster Ophthalmicus
- Molluscum Contagiosum
- Periorbital Cellulitis

# Zoster Ophthalmicus





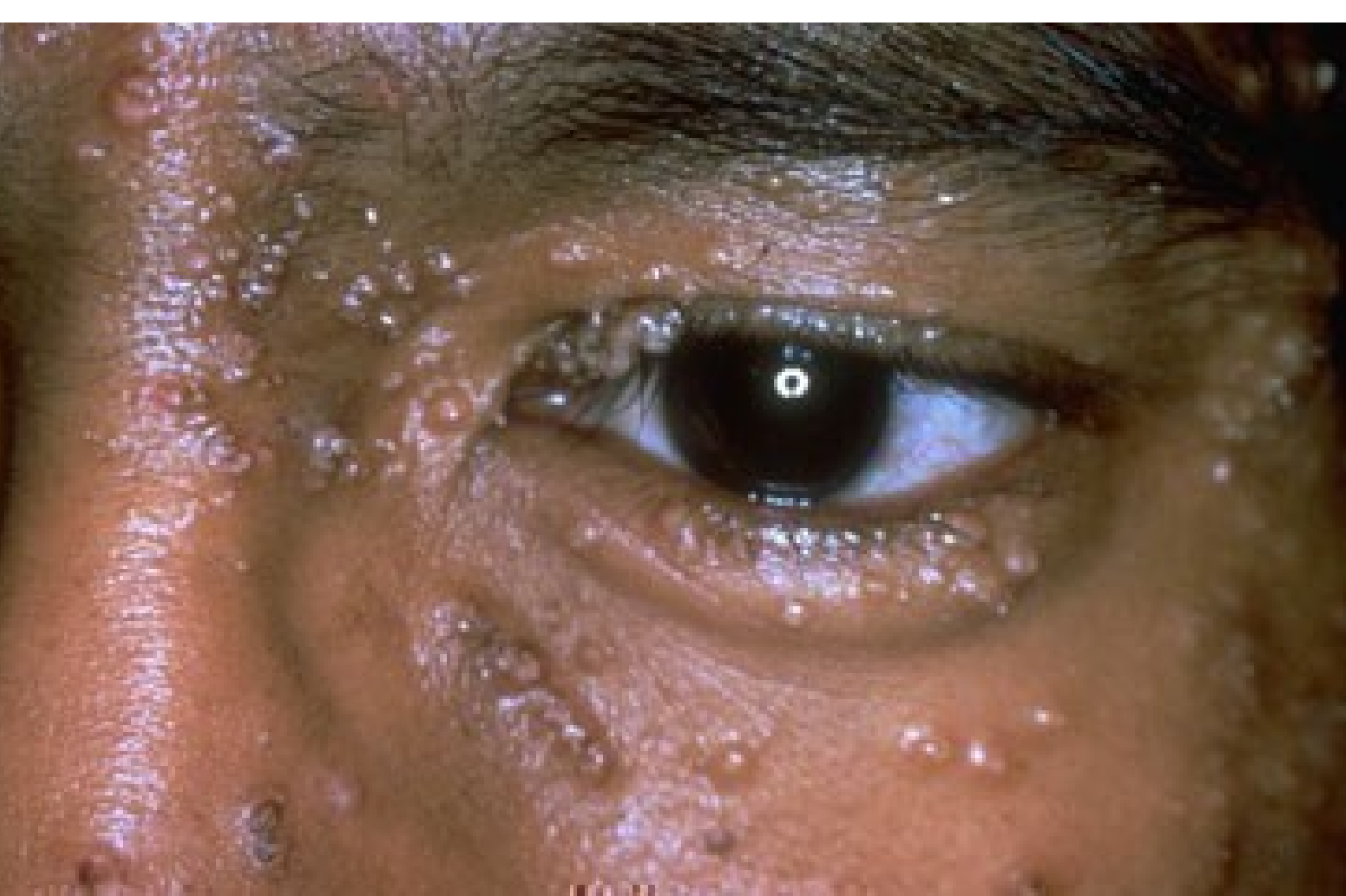


# Zoster Ophthalmicus

- Varicella-zoster virus is reactivated in the ophthalmic division of the trigeminal nerve
- Up to  $\frac{1}{4}$  of all cases of herpes zoster
- Periorbital vesicular rash affected dermatome
- Conjunctivitis, keratitis, uveitis, and ocular cranial-nerve palsies – rare complications
- Sequelae may include chronic ocular inflammation, loss of vision, and debilitating pain
- Treat with oral antivirals

# Molluscum Contagiosum





# Molluscum Contagiosum

- MCV virus (molluscum contagiosum virus)
  - Can infect the eye
  - Single or multiple eyelid lesions, which are small, round, waxy, whitish, umbilicated nodules on the eyelid
  - Affected eye will be red, with some discharge
  - Patients with HIV/AIDS can have multiple lesions
- Treatment
  - Curettage, excision, cryotherapy, imiquimod therapy

# Periorbital Cellulitis



# Periorbital Cellulitis

- Preseptal cellulitis (periorbital cellulitis)
- Infectious inflammation of the tissues anterior to the orbital septum
  - More often encountered in children with upper respiratory infections
  - Secondary to trauma or skin infection in kids and adults
- EOM's, pupils, visual acuity are normal
- Teens and adults – oral antibiotics – if worsening - CT and admit for IV antibiotics
- >5 years old - may have bacteremia (H flu)
  - IV 3rd gen cephalosporin antibiotics after blood cultures taken



# Periorbital Rejuvenation

**Botox**



Filler



**Before**



**After**



Periorbital CO<sub>2</sub>





Thank You