

# Dry Eye Masqueraders

Whitney Hauser, OD  
Founder, Dry Eye Coach



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## Dry Eye Masqueraders

### • Concomitant conditions & masquerades

- Allergy
- Blepharitis
  - Anterior
  - Posterior
- Medications
- Ocular disease
- Systemic disease
- Lid positioning



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## Case #1: My Eyes Run

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### Case History

- 53yo Caucasian, female
- CC: Patient reports "excessive tearing" due to Dry Eye
  - Moderate, severe at times
  - OU, OD=OS
  - Intermittant



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### Case History

<b>Medications</b>	Claritin-D, Prempro, Lexapro
<b>Allergies</b>	NKDA
<b>Ocular conditions</b>	DED for 3-4 years Wears multifocal contact lenses (-4.25 sphere OD) – unhappy with fluctuating vision
<b>Systemic conditions</b>	Mild seasonal allergy per history, generalized anxiety disorder (GAD), mitral valve prolapse

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### Medications & Dry Eye

- **Medications (Oral)**
  - Antihistamines
  - Anti-depressants
  - Anti-hypertensives
  - Decongestants
  - Certain acne drugs



Consider the medications the patient is taking:  
 Claritin-D  
 Prempro  
 Lexapro

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### Diagnostic Data

Visual Acuity	20/20 OD and 20/20 OS
IOP (mmHg)	12 OD/ 14 OS
Osmolarity	302 OD/ 286 OS
Inflammadry	Positive
Lipid Layer Thickness (LLT)	89/92nm OD/OS
Phenol Red Thread (PRT)	30+ OD and OS
OSDI Score	47

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### Anterior Segment Examination

Lids/Lashes	Rare demodex OD/OS Modest edema at puncta OD/OS
Conjunctiva	1-2+ papillary reaction OD/OS (-)CCH OD/OS
Cornea	Clear, (-) SPK
Anterior Chamber	Deep and quiet OD/OS
Lens	Trace NS OD/OS
TBUT	7/8 sec

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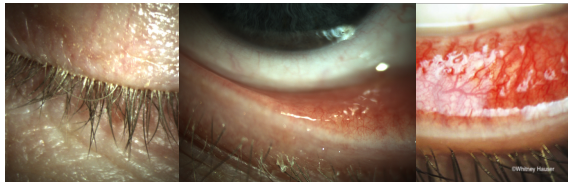
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### Allergic Conjunctivitis



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## Allergic Conjunctivitis

**• Mascarade Complaints**

- Itch (demodex, anterior blepharitis)
- Epiphora
- Foreign body sensation
- Irritation



As many 58% of allergy patients with itch also complaining of dryness in a study by Hom et al. (Ann Allergy Asthma Immunol. 2012;108:163-166)

2018 08/02/2018 09:11 AM Allergy Asthma Immunol. 2012;108:163-166

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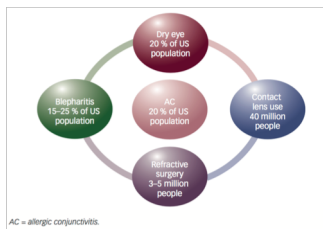
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## Allergic Conjunctivitis



AC = allergic conjunctivitis.

<http://www.tearful2014.com/tearful2014.com/tearful2014.com/tearful2014.pdf>

2018 08/02/2018 09:11 AM Allergy Asthma Immunol. 2012;108:163-166

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## Case #2: My Vision is Gone

2018 08/02/2018 09:11 AM Allergy Asthma Immunol. 2012;108:163-166

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### Case History

- 93yo Caucasian, female
- CC: Patient reports profound blur, affecting ADLs
  - Severe
  - **No pain**
  - OU, OD>OS
  - Constant
  - Uses artificial tear use, history of cyclosporine ophthalmic emulsion X 3 years




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### Case History

<b>Medications</b>	Topical overnight ointment nightly, artificial tears TID by nurse, cyclosporine ophthalmic emulsion BID
<b>Allergies</b>	Codeine
<b>Ocular conditions</b>	s/p cataract extraction OD/OS
<b>Systemic conditions</b>	Mitral valve prolapse, history of migraine

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### Diagnostic Data

<b>Visual Acuity</b>	<b>20/600 OD and 20/400 OS</b>
<b>IOP (mmHg)</b>	15/14 OD/ 20 OS
<b>Osmolarity</b>	323 OD/ 333 OS
<b>Inflammadry</b>	Faintly positive
<b>Lipid Layer Thickness (LLT)</b>	<b>43/36nm OD/OS</b>
<b>Phenol Red Thread (PRT)</b>	18/17 OD and OS
<b>OSDI Score</b>	46

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### Anterior Segment Examination

<b>Lids/Lashes</b>	Moderate telangiectasias UL/LL, Rare Blepharitis OU, Increased lid laxity OU
<b>Conjunctiva</b>	Mild conjunctival hyperemia OU
<b>Cornea</b>	Diffuse, dense SPK OU
<b>Anterior Chamber</b>	Deep and quiet OD/OS (limited view)
<b>Lens</b>	PCIOL, centered, clear, s/p Yag Cap OU (limited view)
<b>TBUT</b>	Instant OD/OS

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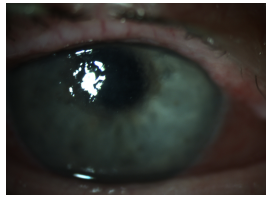
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### Anterior Segment Photo




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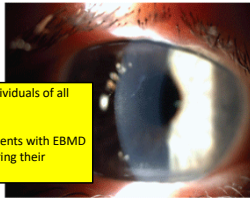
### Epithelial Basement Membrane Disorder

• A condition affecting the anterior cornea

• **Presentation:**

- Severe chronic recurrent corneal erosion
- Glare and photophobia
- May be asymptomatic

EBMD affects ~ 42% of individuals of all ages. Approximately 33% of patients with EBMD experience severe RCE during their lifetime.




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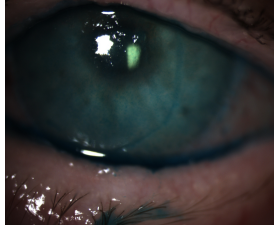
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### Epithelial Basement Membrane Disorder



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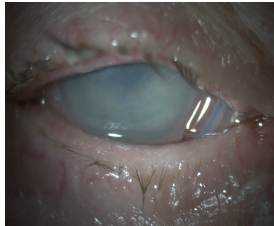
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### Epithelial Basement Membrane Disorder



- **Treatment Plan:**
  - Insertion of cryo-preserved amniotic membrane
  - RTC 4 days for follow up/removal as warranted

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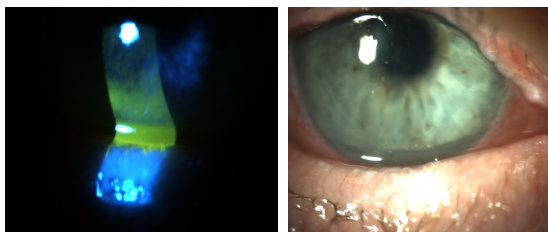
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### Recurrent Corneal Erosion



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# Case #3: I've Got Dry Eye

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### Case History

- 71yo Caucasian, female
- CC: Patient reports "runny eyes" for years
  - Severe
  - OU, OD=OS
  - Daily (near constant)
  - Uses artificial tears as directed without relief
  - Had punctal plugs OU, fell out
- Secondary complaint: Mild itch OU
  - Takes prescription ocular antihistamine
  - Takes loratadine PO prn

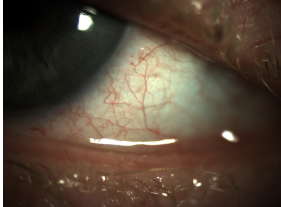


Photo: Whitney Hauser, OD

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### Case History

<b>Medications</b>	Naproxen, Benicar, ophthalmic cyclosporine, 0.05%, Ca <sup>2+</sup> supplement
<b>Allergies</b>	Morphine, Ibuprofen
<b>Ocular conditions</b>	Longstanding DED, s/p CE/IOL OD and OS
<b>Systemic conditions</b>	Osteoarthritis, Osteopenia

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### Diagnostic Data

<b>Visual Acuity</b>	20/25+ OD and 20/25-
<b>IOP (mmHg)</b>	13 OD/ 12 OS
<b>Osmolarity</b>	307 OD/ 315 OS
<b>Inflammadry</b>	Negative
<b>Lipid Layer Thickness (LLT)</b>	70nm OD/ 68nm OS
<b>Phenol Red Thread (PRT)</b>	30+ OD and OS

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### Prior Treatments

- Artificial tears
- Punctal plugs
- Cyclosporine 0.05%, ophthalmic emulsion

What are the objectives of each of these treatments?

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### Common Causes of Epiphora

- Excessive production
  - External agents
  - Infectious conjunctivitis
  - Allergic conjunctivitis
  - Corneal abrasion
  - Foreign body
  - Trichiasis
  - Entropion
- Blockage
  - Infectious (dacryocystis)
  - Nasal Lacrimal Duct Obstruction (NLDO)




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### Anterior Segment Examination

<b>Lids/Lashes</b>	Clear, no debris OD/OS
<b>Conjunctiva</b>	Significant redundant conjunctiva OD/OS
<b>Cornea</b>	Clear, (-) SPK
<b>Anterior Chamber</b>	Deep and quiet OD/OS
<b>Lens</b>	PCIOL centered, Trace PCO OD/OSD

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### Conjunctivochalasis

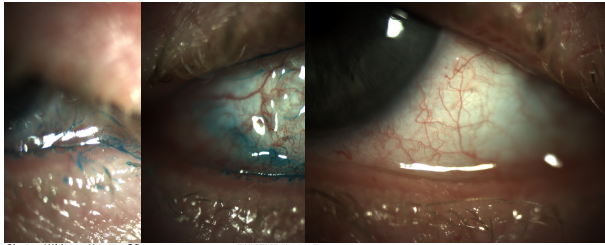


Photo: Whitney Hauser, OD

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### Conjunctivochalasis

- Elderly patients
- Bilateral
- Symptoms include:
  - Ocular irritation
  - Dry eye
  - Epiphora
  - Eye pain
  - Ulceration
  - Subconjunctival hemorrhage

Features	Dry eye syndrome	Conjunctivochalasis
<b>Diurnal variation of symptoms</b>	Worse in the evening	Same all day
<b>Worst gaze</b>	Up	Down
<b>Increased blinking</b>	Improved	Worsened
<b>Rose Bengal</b>	Exposure zone	Non-exposure zone
<b>Punctal occlusion</b>	Improved	Worsened

\* Modified from DiPasquale MA, et al, Br. J. Ophthalmol. 2004;88:388-392.

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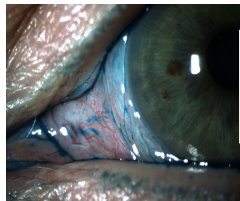
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### Conjunctivochalsis



Grade	Number of folds and relationship to height of tear meniscus
1	No persistent fold
2	Single, small fold
3	More than two folds and not higher than the tear meniscus
4	Multiple folds and higher than the tear meniscus

Photo: Whitney Hauser, OD

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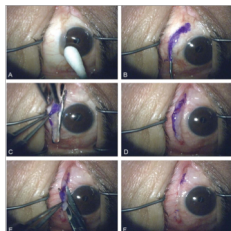
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### Conjunctivochalsis

**Management options:**

- Conjunctivoplasty with amniotic membrane transplantation
- Conjunctival fixation to sclera
- Conjunctivoplasty using a simple medial conjunctival resection
- Pinching the excess conjunctiva and performing bipolar cauterization
- Conjunctivoplasty with argon green laser
- Paste-pinch-cut conjunctivoplasty
- Conjunctival semiperitomy combined with gentle subconjunctival cauterization



From: Pech-Cul Conjunctivoplasty, Subconjunctival Fibrous Sealant Injection in the Repair of Conjunctivochalsis  
 Hess, Lindner & May; Hess & Laxman MD; Chou, & Philip MD; Fink

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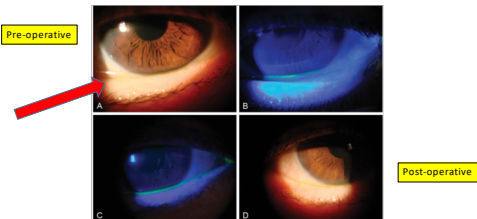
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### Conjunctivochalsis



From: Pech-Cul Conjunctivoplasty, Subconjunctival Fibrous Sealant Injection in the Repair of Conjunctivochalsis  
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