OSD Management 2019 & Beyond

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Disclosures

Alcon, Inc: Speaker, consultant research funding
Johnson & Johnson Vision: Speaker, consultant
Tangible Science, Inc.: Research funding, consultant
Written Consent obtained to show this video
Addicted to artificial tears

My eyes feel better than they have in years. I got my life back.
OSD Management 2019 & Beyond
Discuss current and emergent therapeutic tools which can address our patients’ needs.

Discuss diagnostic tools that will lead to appropriate management.
Dry Eye Disease

Double Trouble

Aqueous Deficient Dry Eye
Evaporative Dry Eye

Management of other common ocular surface diseases
A 30 yo female can’t tolerate her soft contact lenses for more than 3-4 hours a day

She has FBS with intermittent blur while using her iPad.

History of Sjogren’s Syndrome
What treatment would you recommend for this patient?

A. Heat warming device
B. Lifitegrast
C. Amniotic membrane
D. Scleral lenses
Dry Eye Redefined

Multifactorial disease

Characterized by a loss of homeostasis of the tear film, and accompanied by ocular symptoms, in which tear film instability and hyperosmolarity, ocular surface inflammation and damage, and neurosensory abnormalities play etiological roles

DED = Symptoms & Signs
Dry Eye
It’s Complicated

Evaporative dry eye

Aqueous deficient dry eye
Dry Eye Disease

Aqueous Deficient Dry Eye
Mixed
Evaporative Dry Eye

Non-mutually exclusive
Exist as a continuum
Preponderance of DED (70%-80%) is evaporative
Critical to appropriate management is determining the major causative factors that contribute to the patient's presentation.

Identify the degree to which EDE, ADDE and/or other OSD conditions are contributing to the patient's presentation.
What is the patient’s predominant dry eye subtype?

Aqueous deficient

OR

Evaporative
What are the newest treatment options?

Aqueous Deficient Dry Eye
The Time Has Come For **TruTears**

**First intranasal neurostimulating smart device**

**Produces** natural tears

Available to the public **April 2018**

Intended to provide a temporary increase in natural tear production during neurostimulation in adult patients

Allergan

https://www.truetear.com/
How Does it Work?

Stimulates the 5th cranial nerve with electrical impulses

Shown to ....

• increase tear production
• increase TBUT
• Improve dry eye symptom

Cohn GS et al. Randomized, Controlled, Double-Masked, Multicenter, Pilot Study Evaluating Safety and Efficacy of Intranasal Neurostimulation for Dry Eye Disease. IOVS 2019


https://www.truetear.com/
Directions

• Use at least BID or as needed
• Max 30 minutes per 24 hour period
• Stimulation no longer than 3 minutes
  (or 3 sequential cycles)

App available to track usage and battery level

https://www.truetear.com/
Candidates

22 years or older

Cardiac pacemaker, implanted or wearable defibrillator, or other implanted metallic or electronic device

Known hypersensitivity to the hydrogel material

Chronic or recurrent nosebleeds, a bleeding disorder or condition that can lead to bleeding

Rx only
lifitegrast ophthalmic solution 5%

1st prescription dry eye medication launched in 13 years
The only medication FDA approved to treat dry eye symptoms and signs
NEW class of drugs known as lymphocyte function-associated antigen-1 antagonist

Novartis
Xiidra is the child proof lock preventing the child (ICAM-1) from opening the cabinet door (LFA-1)
Latest Research

• **Reduction in Contact Lens Discomfort**

• Monthly replacement CL wearers reported improvement in **CLDEQ-8 for eye discomfort** and eye dryness after **8 weeks** of liftegrast use

Frequently Asked Questions

- How often do I use it?
- Does it work?
- How long does it take to work?
- Are there side effects?
- How much does it cost?
# Frequently Asked Questions

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>How often do I use it?</strong></td>
<td><strong>Use Xiidra twice per day</strong></td>
</tr>
<tr>
<td></td>
<td>1 drop, 12 hours apart</td>
</tr>
<tr>
<td><strong>Does it work?</strong></td>
<td><strong>Proven to improve dry eye symptoms and signs of cornea staining</strong></td>
</tr>
<tr>
<td></td>
<td>Four randomized, double-masked, 12-week trials demonstrated improvement</td>
</tr>
<tr>
<td><strong>How long does it take to work?</strong></td>
<td><strong>Symptoms may improve in 2 weeks</strong></td>
</tr>
<tr>
<td></td>
<td>Improvement in signs by 12 weeks</td>
</tr>
<tr>
<td><strong>Are there side effects?</strong></td>
<td><strong>5% to 25% of patients instillation site irritation, dysguesia</strong></td>
</tr>
<tr>
<td></td>
<td>(altered taste sensation) and reduced VA</td>
</tr>
<tr>
<td></td>
<td>Mild to moderate in severity and transient</td>
</tr>
<tr>
<td><strong>How much does it cost?</strong></td>
<td>~$400 - $500</td>
</tr>
</tbody>
</table>

1. US Food and Drug Administration. FDA approves new medication for dry eye disease. [www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm510720.htm](http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm510720.htm)
Frequently Asked Questions

When should Xiidra be initiated?

If a patient is well maintained on Restasis, is there a benefit to switching to Xiidra?

Is there a synergistic effect with Restasis for which dual therapy would be beneficial?

Does it work?

How much does it cost?

How long does it take to work?

How often do I use it?

Are there side effects?
Xiidra vs. Restasis- More of the Same?

3 Major Differences

1. Xiidra is approved by the FDA to treat both the signs and symptoms of dry eye.

2. Xiidra appears to work faster than Restasis.

3. Appears to be differing mechanism of action

Still a lot to learn clinically
More studies are needed
OR

Xiidra  Restasis
Who is the Winner?

Xiidra  Restasis

http://eyetubeod.com/2016/10/who-sells-it-better-jennifer-aniston-or-marisa-tomei
Tackling the Right Target

DRY EYE DISEASE

Multifactorial disease
Characterized by a loss of homeostasis of the tear film, and accompanied by ocular symptoms, in which tear film instability and hyperosmolarity, ocular surface inflammation and damage, and neurosensory abnormalities play etiological roles.
INFLAMMATION

Has a key role in Dry Eye Disease

Inflammation is a commonality in both ADDE and EDE, thus Xiidra or Restasis are excellent options when either ADDE or EDE or both forms exist.
What would you recommend for this patient?

A. Heat warming device
B. Lifitegrast
C. Amniotic membrane
D. Scleral contact lenses
Suture-less Amniotic Membranes
For Severe Dry Eye

://www.reviewofcontactlenses.com/content/d/irregular_cornea/
More Than A Bandage

Promotes re-epithelization
Antimicrobial
Antifibrotic and anti-inflammatory properties
Anti-angiogenic

Speeds healing *(acts as a biological bandage and shields the regenerating epithelium from frictional forces generated by blinking)*

Reduces pain

*Impressive regenerative platform*

In-office Use

Courtesy of Dee Weiner.
### Types

#### Cryopreserved
- Refrigeration required
- Shown to better preserve important active ingredients
- Thermoplastic ring
  - Easier handling/increases discomfort

Only tissue cleared for wound healing by the FDA

Shelf life **2 years**

Prokera (Biotissue)

#### Dehydrated

**Refrigeration not required**

- Ring not required
  - Requires more dexterity

- Bandage CL is placed over the AM

- Shelf-life **5 years**
  - Less costly than cryopreserved

*FDA-approved claims are limited to wound coverage*

BioDOptix (BioD)  
AmbioDisk (IOP Ophthalmics)

And others……………………………………

…..
Cryopreserved

Dehydrated

Application and Removal


https://www.youtube.com/watch?v=bP-7NaiVqq4
Cryopreserved (Biotissue)

Newest Prokera® Clear
Maintains visual acuity within the central 6mm Clear-View™ Aperature
Ideal for Dry Eye, post-LASIK/PRK

3 levels of ring thicknesses
Thicker rings for more severe disease
Thicker ring allows more layers of the AM to be applied which extends the treatment time

Prokera® Slim with Comfort Ring
For Mild to Moderate conditions

Prokera® Plus incorporates multiple layers Suitable for severe conditions
Clinical Study

Corneal Nerve Regeneration after Self-Retained Cryopreserved Amniotic Membrane in Dry Eye Disease

Thomas John,1,2 Sean Tighe,3,4 Hosam Sheha,3,4,5 Pedram Hamrah,6,7 Zeina M. Salem,6,7 Anny M. S. Cheng,3,4 Ming X. Wang,6 and Nathan D. Rock6
Which is Better?

Cryopreserved

OR

Dehydrated

Anectodally faster healing with less scarring & haze
Preserves biological properties

No comparison studies

Better comfort, cost effective

https://www.youtube.com/watch?v=bP7NaIqpp4
The Membrane Alternative

Patient accessible option

Amniotic Drops
Autologous Serum Eye Drops
Your Blood, Better Tears

WHO?
Typically **severe dry eye**

WHAT?
Eye drops derived from patient’s **own serum**

WHY?
Serum contains essential tear components which are depleted in dry eye

HOW?
Blood is drawn by lab, then serum is extracted & diluted with saline (20%-50% serum)
Compounding pharmacy creates bottles

Autologous Serum Eye Drops

**The Good With the Bad**

Safe

Shown to be more effective than artificial tears

Time consuming

Not easily accessible
What would you recommend for this patient?

A. Heat warming device
B. Lifitegrast
C. Amniotic membrane
D. Scleral contact lenses
30 year-old female can’t tolerate her **contact lenses** for more than **3-4 hours a day**. She has FBS with intermittent blur while using her iPad.

Dailies for Dry Eye
What did I recommend for this patient?

A. Heat warming device
B. Lifitegrast
C. Amniotic Membrane
D. Scleral contact lenses
Why Sclerals?

Significantly improved dry eye symptoms and signs in several studies

Typically reserved for moderate or severe dry eye
Why Sclerals?

31.43% of subjects the eye drop fell on the eyelid or cheek

Artificial tears

Provide only temporary dry eye relief

Limited contact with the ocular surface

Why Sclerals?

Creates a long-lasting moist environment due to retention of a lubricating reservoir that can nurture the ocular surface throughout the day.
Effective Treatment

Our 30 year-old Sjogren’s Syndrome patient
It’s Not All Good: The Scleral Challenge
A Tangible Solution for Dry Eye

Surface Treatment
Novel permanently bonded Polyethylene Glycol surface coating
Shown to improve lens wettability and TBUT

Tangible Hydra-PEG (Tangible Science LLC)

Courtesy of Jeffrey Sonsino, OD & Vic McRae MD, CEO Tangible
A Tangible Solution for Dry Eye
Mickles C., Harthan J., Barnett M.
Podium Paper Presentation Global Specialty Symposium 2019

Randomized cross over trial
Significant improvement in
Dry eye symptoms
Lens comfort
Signs
with Hydra-PEG treated lenses compared to untreated lenses

Now research support for it’s use for dry eye patients
Insertion Solutions
Which is Best for Dry Eye?

Yeung, D et al. Osmolarity and pH of Non-Preserved and Preserved Saline Solutions. OVS E-abstract. 2017

pH 6

Only one in range of ocular comfort
Only unit dose option that is buffered
Buffered maybe better
Which is Better?
Filling Solutions In-vivo

Mickles C., Harthan J., Barnett M.
Which is Better? Addipak vs ScleralFil for Dry Eye Scleral Lens Wearers

Patients had significantly less symptoms of dryness & lens discomfort < corneal staining

With ScleralFil
Filling Solutions Future
Fogt J et al AAO 2018

Novel solution that matches the pH and composition of the tears

Solution contains potassium, magnesium, and calcium
A LOOK AHEAD

Aqueous Tear Deficiency
Cyclosporine ophthalmic solution 0.09% (Sun Pharma)

First-in-class topical formulation
Highest FDA-approved concentration of cyclosporine
Novel nanomicelle technology

Calcineurin inhibitor immunosuppressant

BID, single use vials
The Cyclosporine 0.09% Difference

Nanomiceller increases ocular penetration

<table>
<thead>
<tr>
<th>Cyclosporine 0.09%</th>
<th>Lifitegrast 5%</th>
<th>Cyclosporine 0.05%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schirmer’s 3 months Staining 1 month</td>
<td>Schirmer’s 3 months Staining 3 months</td>
<td>Schirmer’s 6 months Staining 6 months</td>
</tr>
</tbody>
</table>

Mandal A et al. Ocular pharmacokinetics of a topical ophthalmic nanomicellar solution of cyclosporine (Cequa) for dry eye disease. Pharm Res. 2019;
The Cyclosporine Surge: Others

**Cyclosporine 0.1% (CyclAsSol, Novaliq)**
Phase II, significant reduction ocular surface staining and conjunctival staining compared with Restasis
2-week onset

**Cyclosporine 0.1% (Ikervis Santen)**
Available in Europe, Dosage QD

**Cyclosporine/chondroitin sulfate 0.1% ophthalmic emulsion (Klarity-C, Imprimis Pharmaceuticals)**
Available now-compounded

0.25% loteprednol etabonate ophthalmic suspension (KP1, Kala Pharmaceuticals)

Could be the first FDA-approved product for the short-term, two-week treatment of DED.
A 61 year-old male with burning especially in the morning.
Aqueous Deficient Dry Eye

Evaporative Dry Eye
MGD

The leading cause of Dry Eye
~ 80% of dry eye patients have MGD

Nichols, KK. The international workshop on meibomian executive summery. IOVS 2011.
How are the glands functioning on a daily basis during everyday blinking?

J&J Vision Vision
Meibomian Gland Evaluator

Standard Force (0.3 psi) 5 glands
Mimics force during Blink

Looks Can Be Deceiving

More than meets the eye
What are the Newer Advanced Diagnostic Tools?
Oculus Keratograph 5M

Topography
TF-Scan
Tear Meniscus Height
NIKIBUT
Lipid Layer Analysis
TF-Dynamic

Bulbar Redness
Meibography
Anterior Segment Imaging
Oculu Keratograph 5M

Tear Meniscus Height

Normal > 0.20 mm
Oculus® Keratograph 5M

Meibography

Healthy glands

Gland atrophy
Getting the Right GRADE

“Oh you meant 1 degree of loss, not that it is cold”

Mistakes Can Be Made
Oculus Keratograph 5M

New Feature

Meibo Grading Scale
<table>
<thead>
<tr>
<th>Exam type</th>
<th>Exam rating</th>
<th>Exam Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tear Meniscus Height</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>NIKBUT</td>
<td>Normal (11 to &lt;15 seconds)</td>
<td>1/10/2018 11:12</td>
</tr>
<tr>
<td>Redness</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>DEQ OSI</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>Meibography</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>Conjunctival Chalasis</td>
<td>n/a</td>
<td></td>
</tr>
</tbody>
</table>
Lid everter
Ensures consistent assessment of all glands

Rapid assessment: <10 secs per eye

High Definition images
Dynamic Meibomian Imaging

J&J Vision   LipiScan
Meibomian gland drop out

In Vivo 3D Meibography of the Human Eyelid Using Real Time Imaging Fourier-Domain OCT

In the pipeline

61 year-old male with burning especially in the morning
What About Warm Compresses?

“Been there, done that”
“That doesn’t work”

https://www.reviewofoptometry.com/article/rubbed-the-wrong-way-43097
Where Do Warm Compresses Go Wrong?

Continuous application of 45°C hot compresses for at least 4-6 mins

Replacing the compress every 2 minutes with a new compress preheated to 45°C to achieve adequate warming of glands > 40 °C/104°F to alter secretions

Poor heat retention
Labor intensive

Murakami DK et al. All warm compresses are not equally efficacious. Optom Vis Sci. 2015 Jul 8
Dry Eye Device Boom

mission: impossible
What are the newest management options?

Evaporative Dry Eye
Newer yet
Tried-and-True

Lipiflow
Intense Pulsed Light
Mibo Thermoflo
Intraductal Probing
New Devices on the Block

iLux

TearCare
Lipiflow
Single use automated device
Applies heat & pressure (42.5°C) to the **inner upper and lower eye lids**

12 minutes both eyes **simultaneously**

Insulated lid warmer
Shields the eye from heat
+ vaults over the cornea
Applies heat to the inner eyelids
Lipiflow: Is it Effective?

Several controlled randomized studies

Single treatment

- Achieves sustained 3X improvement in MG function
- Reducing symptoms by $\frac{1}{2}$ through 12 months

Newest Data

- Increases comfortable CL wearing time by 4 hours
- Significantly more effective than 3 months of daily doxycycline at improving DE symptoms
- Significantly better than WC (2019)

<table>
<thead>
<tr>
<th>Test</th>
<th>Pre-Procedural</th>
<th>Post-Procedural</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSDI</td>
<td>38.64</td>
<td>12.5</td>
</tr>
<tr>
<td>Symptom Score</td>
<td>Moderate</td>
<td>Normal</td>
</tr>
<tr>
<td>MG Score</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>Mild</td>
</tr>
</tbody>
</table>

70 yo female

4 weeks post procedure
Intense Pulsed Light
Light acts as a powerful warm compress (up to 43°C)
Coagulation of telangiectatic vessels reduces inflammation

**MGD Protocol recommendations**
Use Lumenis M22
**Outer lower lid only, MG expression afterwards**
3–4 treatments (3–5 weeks apart)
Maintenance annually

**Limitations**
Can be used on Fitzpatrick type IV or below
Post-treatment restrictions

IPL: Efficacy

Effect of Intense Pulsed Light Therapy on Tear Proteins and Lipids in Meibomian Gland Dysfunction
Salwa Abdelkawi Ahmed, PhD; Ibrahim Mohi Eldin Taher, PhD; Dina Fouad Ghoneim, PhD; Abd Elhakim Mohamed Salwa; MD
*J Ophthalmc Vis Res

Multicenter Study of Intense Pulsed Light Therapy for Patients With Refractory Meibomian Gland Dysfunction
Reiko Arita, MD, PhD; Takanori Mizoguchi, MD; Shima Fukuoka, MD; and Naoyuki Morishige, MD, PhD
*Cornea

Prospective evaluation of intense pulsed light and meibomian gland expression efficacy on relieving signs and symptoms of dry eye disease due to meibomian gland dysfunction
Deil S/ et al.

Overall, improved symptoms & signs of MGD associated DED

Improved tear protein concentration & lipid content

Limited peer-reviewed studies
Mibo Thermoflo
Mibo Thermoflo (Mibo Medical Group)

- Heated Manual Massage (42.5° C)
- Outer upper & lower eyelids
- Up to 3 treatments needed (2 weeks apart)
- 12 minutes per eye = 24 minutes both eyes
Mibo Thermoflo: What to Expect

Limited well controlled randomized studies

- Improvement in symptoms & signs at 1 month out to 4 months post treatment
- Subjects reported immediate relief

<table>
<thead>
<tr>
<th>Test</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSDI Symptoms</td>
<td>32</td>
<td>8.33</td>
</tr>
<tr>
<td>TBUT (s)</td>
<td>1</td>
<td>5.6667</td>
</tr>
<tr>
<td>MG Score</td>
<td>16 Mod</td>
<td>5 Mild</td>
</tr>
</tbody>
</table>

Double TBUT Reduced symptoms by at least ½ 2 weeks post-therapy

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</tr>
</thead>
<tbody>
<tr>
<td>OSDI Symptoms</td>
<td>33</td>
<td>19</td>
</tr>
<tr>
<td>TBUT (s)</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>MG Score</td>
<td>12 Mod</td>
<td>3 Mild</td>
</tr>
</tbody>
</table>
Intraductal Probing
• Procedure to mechanically open MG obstructions

• Procedure ~ 25 minutes

• Single treatment
Intraductal Probing: Is it Effective?

Well-studied

Consistently leads to significant improvements in signs & symptoms of MG dysfunction including refractory cases 4 weeks post treatment

Last up to 1 year

13 studies

Greater improvement in symptoms & signs than WC
Mickles et al. 2014

Improved symptoms & TBUT compared to Retaine group
Narayanan S, Mickles C et al. 2014

Newest Devices on the Block

iLux

TearCare
iLux (Alcon)

- LED-based heat source warms upper + lower inner and outer lids
- Clinician applies compression for expression
- 8-12 minutes to complete total
- Single treatment

Courtesy of Dr. Joseph Allen
http://www.tzartfilm.com/ilux-device/
iLux

Large Multicenter Trial

Non-inferior to Lipiflow at 2 + 4 weeks for symptoms & signs of MGD

No difference in pain compared to Lipiflow

No change in IOP for either device

Clinical trial comparison of iLux to Lipiflow 12 months post single treatment is underway

http://www.tearfilm.com/ilux-device/
- **Single use treatment**
  4 adhesive applicators that deliver adjustable thermal energy (41°-45°C)

- **Open-eye procedure**
  Permits blinking & natural meibum expression

- **12 minutes of heat treatment**

- **Gland evacuation with forceps afterwards**

---

**TearCare** (Sight Sciences)
Initial Study

N=24
12 subjects, TearCare®
12 subjects, WCs
2018

Greater improvement in symptoms
(8 validated questionnaires)
+
Signs at 1 month
than WC control group

Sustained through 6 months

Extension study

N=12
TearCare® subjects retreated
at 7 months
2019

Retreatment restored the
maximum objective and
subjective efficacy levels
seen in the 1st study through
12 months.

Badawi D. Clin Ophthalmol. 2019

Large comparison study to Lipiflow is underway
Courtesy of Dr. Joanna Cotter
Which One?
MGD Associated DED Devices

- Efficient
  1 visit, single treatment
- Effective
- Longstanding relief

https://www.aao.org/image/meibomian-gland
Dry Eye Disease
Aqueous Deficient Dry Eye
Evaporative Dry Eye

Management of other common ocular surface conditions
The Imposters

- Demodex Blepharitis
- Conjunctivochalasis
- Binocular Vision Disorders
The Imposters

“Itching, burning, foreign body sensation, and fluctuating blurry vision”

- Demodex Blepharitis
- Conjunctivochalasis
- Binocular Vision Disorder
Mite it Be Mites

Staphylococcal Blepharitis

Demodex Blepharitis

OR

http://www.pecaa.com/effective-management-of-blepharitis/

Courtesy of Justin Kwan, OD, FAAO
The Imposters

Demodex

Ectoparasites
A cause of blepharitis

Cylindrical “sleeves” dandruff
Red lid margins
Eyelash distention

Epilate lash
Microscope can be used to identify
the mites & demo to improve compliance

84% of the population at age 60
100% by age 70, Men>women

* Clue: Patients unresponsive to traditional bleph treatments


Courtesy Justin Kwan, OD, FAAO
The Imposters

Defeating Demodex

*Tea tree oil contains **4-Terpineol - kills the mites

Cliradex Advanced Care Gel:
In-office application that has a stronger concentration of 4-Terpineol than the wipes

50% tea tree oil is effective and less concerns of toxicity
The Imposters
Defeating Demodex

BlephEx (RySurg)

No topical Steroids?
Mite density increased significantly with the length of treatment with topical steroids

Other Options

Ocusoft Oust Demodex Swabstix
(In-office only)

Ocusoft Demodex Wipes

Blephadex lid scrubs (Lunovus)

Avenova (Novabay)
Hypochlorous acid- kills nymph form and toxins, indirect action
*No stinging, doesn’t contain tea tree oil

http://www.ocusoft.com/oust-demodex-swabstix
Dialing Down Demodex Management

Can’t Handle the Truth

Alternative Facts

Patient Education

http://www.reviewofcontactlenses.com/content/d/complications/c/52261/
http://www.news-medical.net/health/New-Approaches-for-Fighting-Demodex-Mites.aspx
The Imposters

Conjunctivochalasis

Often mistaken for dry eye

Symptoms: FBS + epiphora

Tenon’s fascia has loosened or is absent-Conjunctiva folds on itself

Risks: >50, dry eye, surgery, or history of chemosis

http://webeye.ophth.uiowa.edu/eyeforum/cases/162-conjunctivochalasis.htm
The Imposters

Conjunctivochalasis Management

Artificial tears may give temporary relief

Corticosteroids may reduce symptoms and signs

Often requires surgical intervention: Excising the redundant tissue or loose conjunctiva

Amniotic membrane may be used to assist healing
23 year old female

“Burning, dryness, blurred vision most significant when on her computer and other electronic devices.”
23 year old female

OSDI Questionnaire

39.58
Moderate-Severe

Taking breaks helped relieve symptoms

Ocular Surface
BVD not MGD
Asthenopia can mimic dry eye symptoms

Practice Pearls
Lookout for **binocular vision disorders**

- Symptoms do not correlated with signs
- Symptoms don’t improve with dry eye therapy
  - mild dry eye signs may improve as on digital devices have “stare reflex”
- Tired eyes/fatigue

Probe for headache, double vision
Digital Dry Eye

Among individuals using digital devices, greater than 75% report dryness at least once per week.

48% digital device users suffer from dryness as reported by OSDI scores.

Smartphone use in children was strongly associated with pediatric DED.
Digital Dry Eye Management
Think about the Blink

Conventional DE treatment based on etiology
Taking breaks: 20-20-20 rule
Blink exercises with Donald Korb Blink Training App (TearScience)
Or during activities that they perform frequently such as sending an email
Overcoming OSD in 2019

“I got my life back”
OSD Management 2019 & Beyond

New diagnostic tools

New management options

Increase our Precision

Improve Outcomes
think about OSD

DON’T ignore plaque on teeth
DO promote regular cleanings

DON’T ignore blockages that build up over time
DO promote regular in-office treatments

Stay in on it & Stay in Front of it

https://www.mommypotamus.com/whiten-teeth-naturally-turmeric/
http://blogs.discovermagazine.com/seriouslyscience/2013/09/19/will-eye-whitening-become-the-next-big-thing/
Thank you

cmickles@nova.edu