

INTERNATIONAL CONGRESS OF THE
EGYPTIAN
OPHTHALMOLOGICAL SOCIETY

In collaboration with:



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MIDDLE EAST AFRICA
COUNCIL OF OPHTHALMOLOGY

OSD AND UNHAPPY CATARACT SURGERY PATIENTS

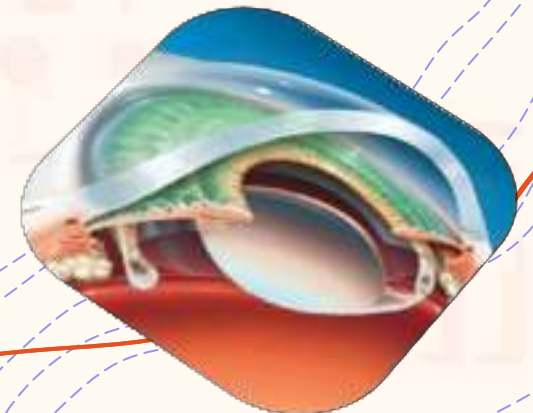
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Cataract surgery and ocular surface disease

- Improvements in technology during the past 2 decades have generated the term “phaco-refractive” surgery.
- Patients now expect outcomes rivaling those of LASIK and similar procedures; However, a sizeable minority of patients who have uneventful cataract surgery are ultimately unhappy with their visual outcome.



Cataract surgery and ocular surface disease (Cont.)

- Despite a 20/20 uncorrected VA, poor vision quality, fluctuating vision, and ocular discomfort caused by undiagnosed or undertreated ocular surface disease (OSD) can derail the surgeon's best efforts.



Cataract surgery and ocular surface disease (Cont.)

- Typically, the patients recognize these symptoms as genuine new ones, insisting that they were better before surgery regarding ocular surface symptoms.
- As patient postoperative expectations grow, and the prevalence of dry eye increases, it is paramount that ophthalmologists to identify and treat patients with pre-operative OSD appropriately.



Prevalence of OSD in cataract population

- OSD is highly prevalent in the cataract population. The Prospective Health Assessment of Cataract Patients' Ocular Surface (PHACO) study evaluated patients presenting for cataract surgery.

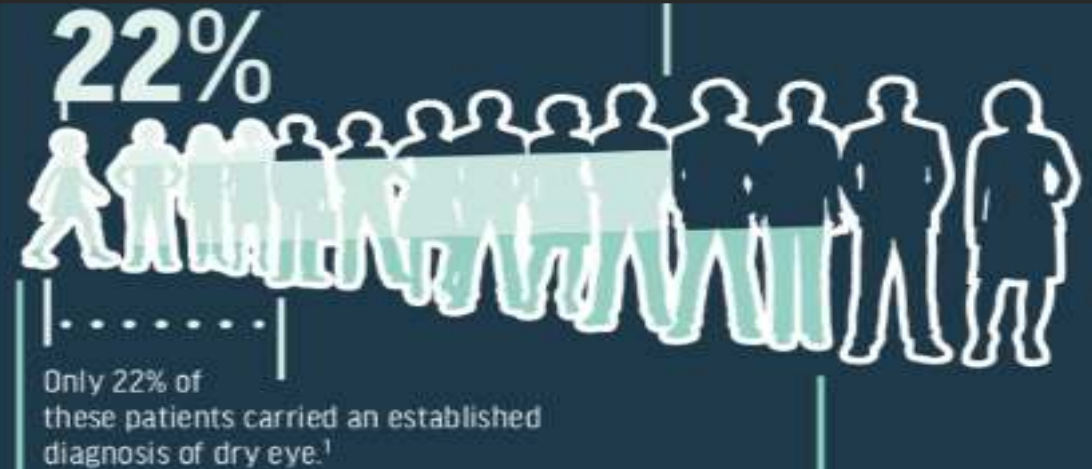
+ Trattler WB, Majmudar PA, Donnenfeld ED, McDonald MB, Stonecipher KG, Goldberg DF. The Prospective Health Assessment of Cataract Patients' Ocular Surface (PHACO) study: the effect of dry eye. Clin Ophthalmol. 2017;11:1423-143

PHACO STUDY RESULTS

63% had a tear breakup time of 5 seconds or less.¹

77% of patients scheduled for surgery had corneal staining (50% had central staining) noted in their preoperative assessment.¹

22%

An infographic showing a row of 10 human silhouettes. The first two silhouettes on the left are filled with a light blue color, representing 22% of the total. The remaining eight silhouettes are white with black outlines. A vertical line is positioned between the second and third silhouettes, and a horizontal dotted line is below the first two silhouettes.

Only 22% of these patients carried an established diagnosis of dry eye.¹

Prevalence of OSD in cataract population

80 %

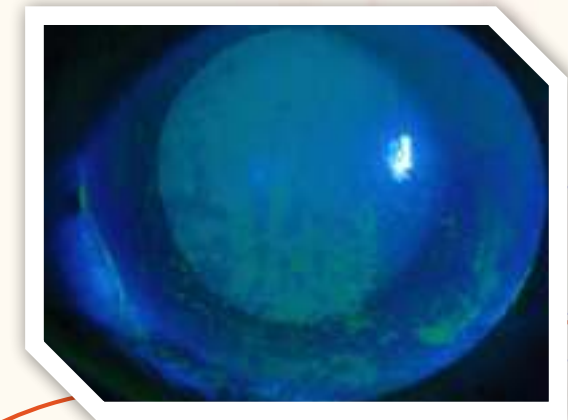
- A study by Gupta et al, utilizing point-of-care diagnostics, showed similar results — 80% of patients presenting for cataract surgery had either an abnormal ocular surface detected during slit-lamp examination, tear film hyperosmolarity, or increased tear matrix metalloproteinase-9 (MMP-9) levels on the ocular surface.



Gupta PK, Drinkwater OJ, VanDusen KW, Brissette AR, Starr CE. Prevalence of ocular surface dysfunction in patients presenting for cataract surgery evaluation. J Cataract Refract Surg. 2018;44(9):1090-1096

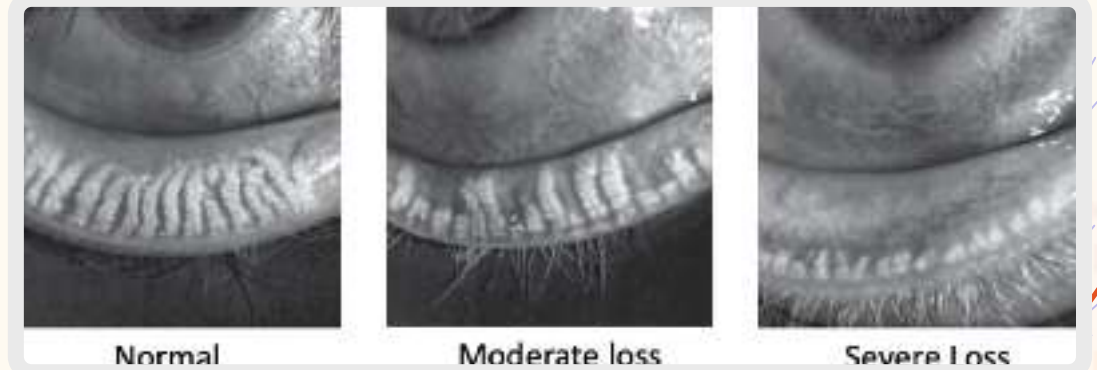
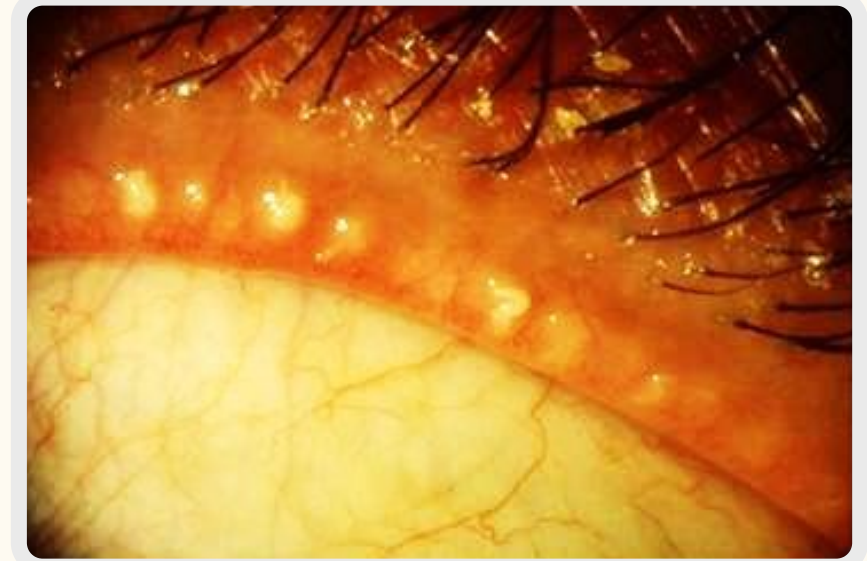
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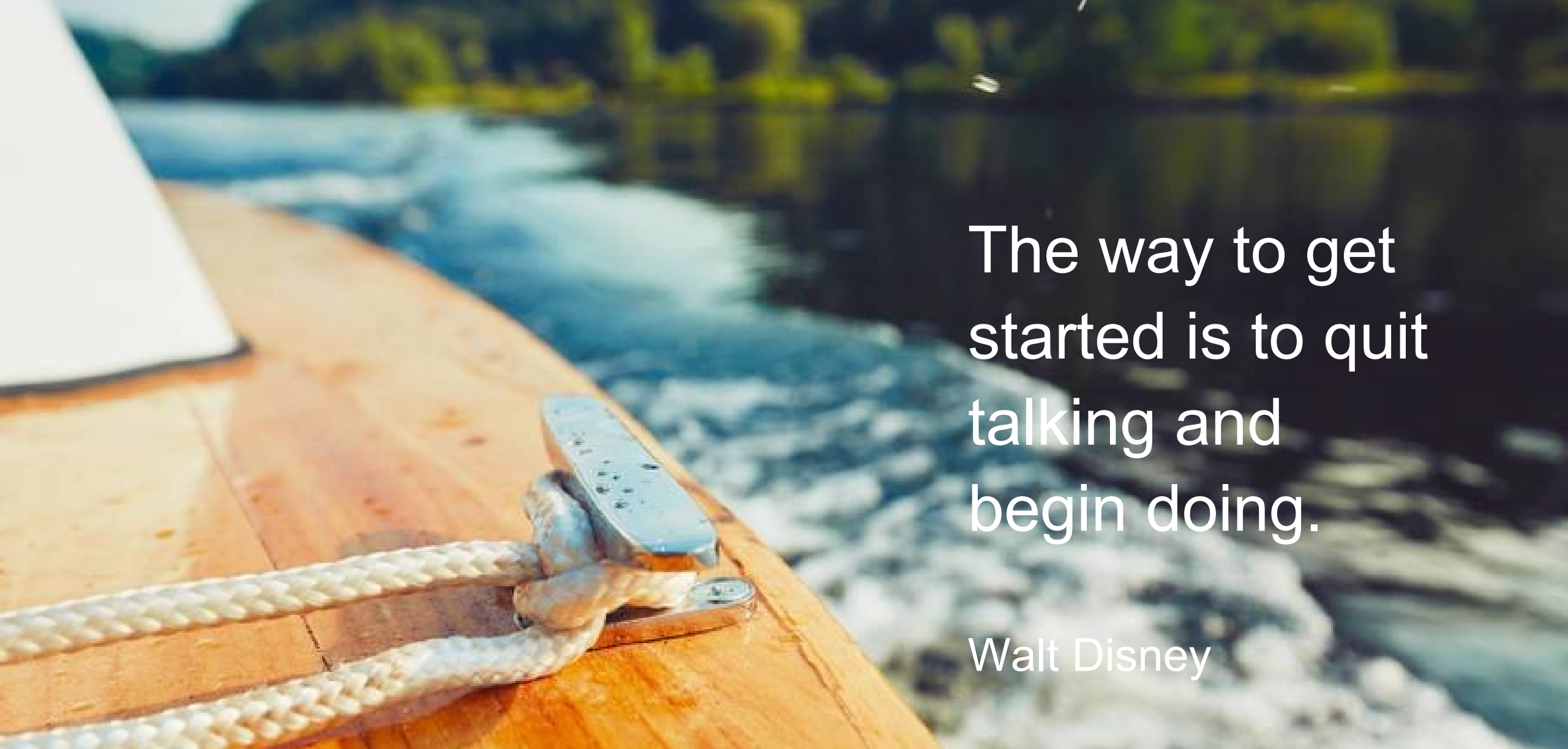
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PERIOPERATIVE OCULAR PARAMETERS ASSOCIATED WITH PERSISTENT DRY EYE SYMPTOMS AFTER CATARACT SURGERY

- Choi et al published the result of a study evaluating 116 eyes of 116 patients undergoing phacoemulsification for DED, at baseline and at 1 and 3 months postoperative to predict DED symptoms that would persist after cataract surgery.
- The risk factors for persistent postoperative DED symptoms were:
 - High baseline OSDI score.
 - Low TBUT.
 - MG orifice obstruction scores 1 month after surgery.
 - Increased MG dropout.





The way to get
started is to quit
talking and
begin doing.

Walt Disney

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Management of OSD before cataract surgery

Identify

IDENTIFY AND TREAT OSD
AS EARLY AS POSSIBLE

Treat

PREOPERATIVE
TREATMENT SHOULD BE
AGGRESSIVE

Wait & See

BRIEFLY DELAYING
SURGERY UNTIL THE
OCULAR SURFACE IS
STABILIZED IS IN THE
PATIENT'S BEST INTEREST



1. IDENTIFY AND TREAT OSD AS EARLY AS POSSIBLE

- Use of a dry eye symptom screening questionnaire for every patient presenting for a comprehensive examination or surgical evaluation.
- After additional history and risk factor assessment is obtained, perform a careful evaluation of the ocular surface after instillation of sodium fluorescein dye (and, often, Lissamine green) via a saline moistened strip.

DRY EYE QUESTIONNAIRE (DEQ-5)

Name: _____

1. Questions about EYE DISCOMFORT:

a. During a typical day in the past month, how often did your eyes feel discomfort?

NEVER	RARELY	SOMETIMES	FREQUENTLY	CONSTANTLY
0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>

b. When your eyes feel discomfort, how intense was this feeling of discomfort at the end of the day, within two hours of going to bed?

NEVER HAVE IT	NOT INTENSE AT ALL				VERY INTENSE
0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

2. Questions about EYE DRYNESS:

a. During a typical day in the past month, how often did your eyes feel dry?

NEVER	RARELY	SOMETIMES	FREQUENTLY	CONSTANTLY
0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>

b. When your eyes felt dry, how intense was this feeling of dryness at the end of the day, within two hours of going to bed?

NEVER HAVE IT	NOT INTENSE AT ALL				VERY INTENSE
0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

3. Questions about WATERY EYES:

a. During a typical day in the past month, how often did your eyes look or feel excessively watery?

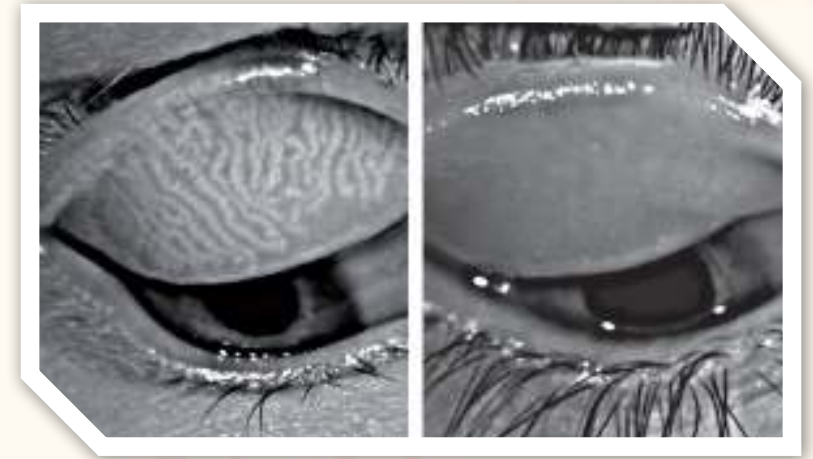
NEVER	RARELY	SOMETIMES	FREQUENTLY	CONSTANTLY
0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>

Score:

1a	1b	2a	2b	3	TOTAL
					0

1. IDENTIFY AND TREAT OSD AS EARLY AS POSSIBLE (Cont.)

- It is critical that a measurement of meibomian gland function be included.
- Slit-lamp photography to capture images of anterior blepharitis, corneal and conjunctival staining, and other significant pathology can be valuable.



2. PREOPERATIVE TREATMENT SHOULD BE AGGRESSIVE

- Patients preparing for cataract surgery often need aggressive, multimodal therapy such as lipidbased artificial tears, omega fatty acid supplements, warm compresses, and lid hygiene products.
- In patients with moderate to severe OSD symptoms and/or significant corneal staining, topical steroids as loteprednol etabonate may work quickly by inhibiting T-cells on the ocular surface.



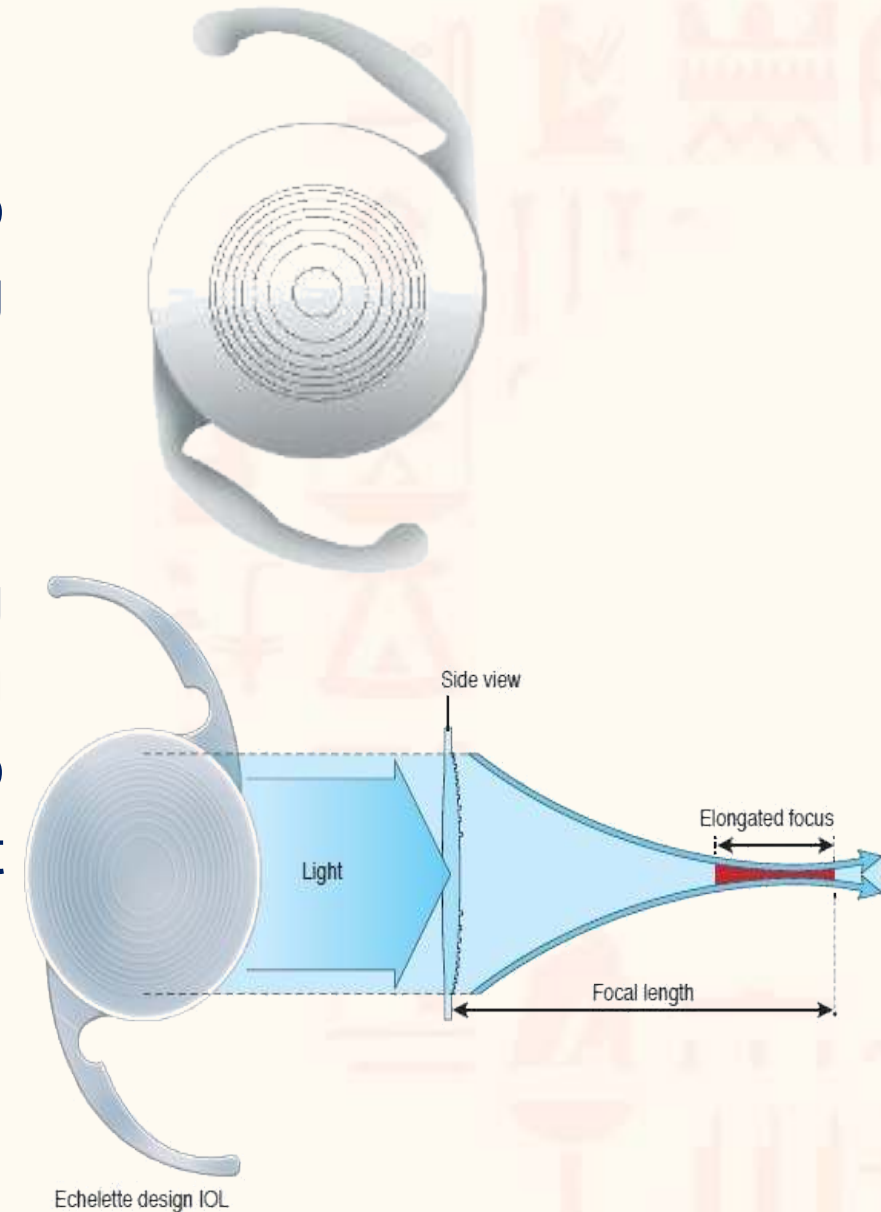
2. PREOPERATIVE TREATMENT SHOULD BE AGGRESSIVE (Cont.)

- Symptomatic patients or those who have minimally symptomatic disease that are interested in an advanced technology IOL, topical cyclosporine or Lifitegrast may have additional benefit.
- Addressing the lid biofilm with a lid cleansing hypochlorous acid agents is helpful in controlling symptoms and reducing bacterial load.



2. PREOPERATIVE TREATMENT SHOULD BE AGGRESSIVE (Cont.)

- ✓ If patients don't improve within 3 to 4 weeks with this regimen, their ocular surface is likely too compromised to seriously consider recommending a multifocal or extended depth of focus IOL.
- ✓ Visually-significant and sometimes incapacitating poor quality of vision may result from implanting such “premium IOLs” in those patient due to decreased contrast sensitivity and significant dysphotopsias.



3. BRIEFLY DELAYING SURGERY UNTIL THE OCULAR SURFACE IS STABILIZED & IN THE PATIENT'S BEST INTEREST

- ✓ Educate patients that neglected dry eye is may potentially compromise the results of their surgery as dry eye signs and symptoms may worsen temporarily with any ocular surgery.
- ✓ Aggressive preoperative management will help minimize this risk. Ophthalmologists should resist the temptation to proceed with surgery until this has been rectified.





Thank You

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