

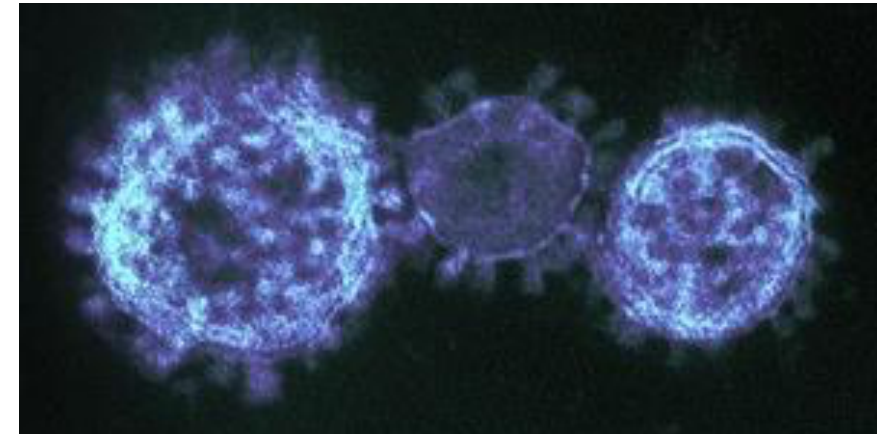
Red Eye Approach During The COVID-19 Era

Protect yourself - Treat your patient

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Disclosure



- Both authors have no commercial interest related to this presentation

COVID19 and the Eye

- A true COVID19 associated conjunctivitis is rare, unlike adenovirus or other viral pathogens.
 - Conjunctival congested vessels were found in less than 1% of 1,000 plus COVID19 patients. Recent NEJM paper (www.nejm.org/doi/pdf/10.1056/NEJMoa2002032)
 - Any fever though can involve congested conjunctival vascular bed.
 - This might explain the higher exposure of Ophthalmologists to early COVID19 patients



COVID19 and the Eye

- Theoretically, once exposed to infected droplets, the conjunctiva can serve as an entry point for COVID19
 - Anecdotal cases that claim ocular source of infection are reported
 - Nurses from Kirkland, Washington, report on eyelid "red shadow appearance" in COVID19 patients. 
 - Corona Virus in tear film was isolated only from one of 59 patients suspected of Corona conjunctivitis. 
onlinelibrary.wiley.com/doi/full/10.1002/jmv.25725



The Red Eye

- Stating the obvious: all red eye pathologies continue to bother our patients with and without COVID19
 - Conjunctivitis is commonly associated with common cold, influenza and other systemic viral diseases
 - Dry eye, blepharitis, bacterial infections and many other red eye cases are also common
 - They are troubling to patients and via disinformation worried patients are anxious about potential Corona virus ocular infection

COVID19 conjunctivitis is rare



Rules of Engagement

- AAO recommends immediate cessation of all ocular patient examination unless it is urgent.
 - Red eye urgent diagnoses include mainly:
 - Herpes related pathology
 - Uveitis
 - Acute angle closure glaucoma
 - Post trauma
 - Foreign body
 - Corneal ulcer, abscess or severe inflammation
 - Suspected endophthalmitis (particularly post surgical)



To Our Aid

- In most cases there are some commonalities that can help us prior to an examination that includes alarming proximity between examiner and a patient
- Most urgent cases are:
 - Acute
 - Unilateral
 - Painful
 - Reduced Vision
- Past ocular history: previous events, quality of vision, trauma, recent surgery, contact lens wear, etc. can be acquired via a phone call.

Some Variabilities Exist

| | Course | Painful | Vision | Laterality | History |
|---------------------------------------|------------------|------------------|-------------------|--------------------------|-------------------------|
| HSK | Acute | Painful | Typically reduced | Uni | Often repeated episodes |
| Uveitis | Chronic or Acute | Variable | Variable | Uni or Bi Usually Uni | Usually known |
| AC Glaucoma | Acute | Very | Reduced | Uni | Usually None |
| Infectious Keratitis | Acute | Very | Variable | Uni | None |
| Noninfectious Keratitis | Chronic or Acute | Variable | Variable | Uni or Bi | Usually known |
| Foreign Body & Post Trauma or surgery | Acute | Usually moderate | Variable | Uni | Typical |



Virtual Visits

Are usually irrelevant in Ophthalmology. But....

- These are extreme times
- We are obliged to protect ourselves and our patients from unnecessary exposure
- Virtual visits may be helpful in some cases, they cannot replace a good slit lamp examination, but can often delay it to safer times.

Are Virtual Visits Practical?

- We know most of our recurrent patients
- Vision related details can usually be obtained
- Pain is subjective but extreme pain can usually be discerned even via a phone call
- Meticulous history can usually tell apart the chronic dry eyes, the habitual complaining patient and alike from urgent cases
- Cellphone photos can be very helpful particularly if taken with a macro function (conjunctival redness, hemorrhage, lid swelling). They can go a long way in avoiding unnecessary visits





Exemplary Cases (last week)

A phone call from an 85 years old female disabled patient, with advanced glaucoma, IOP stable in the lower teens for the last two years, vision 20/30 both eyes and chronic well-known red eyes. She is hesitant whether she should come to her routine check up. In the phone interview

- Vision is stable
- Eyes are feeling "the same"
- She is compliant with her medication

Prescriptions renewed; new appointment given for three months.

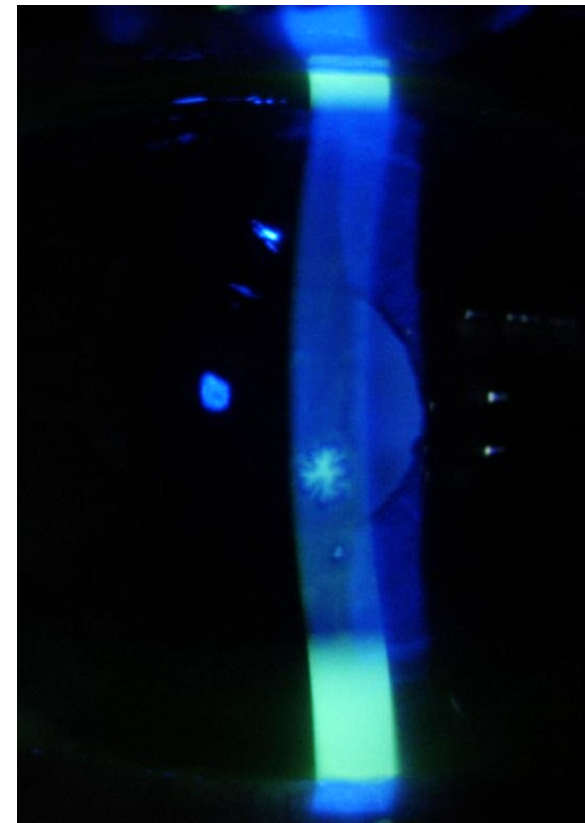
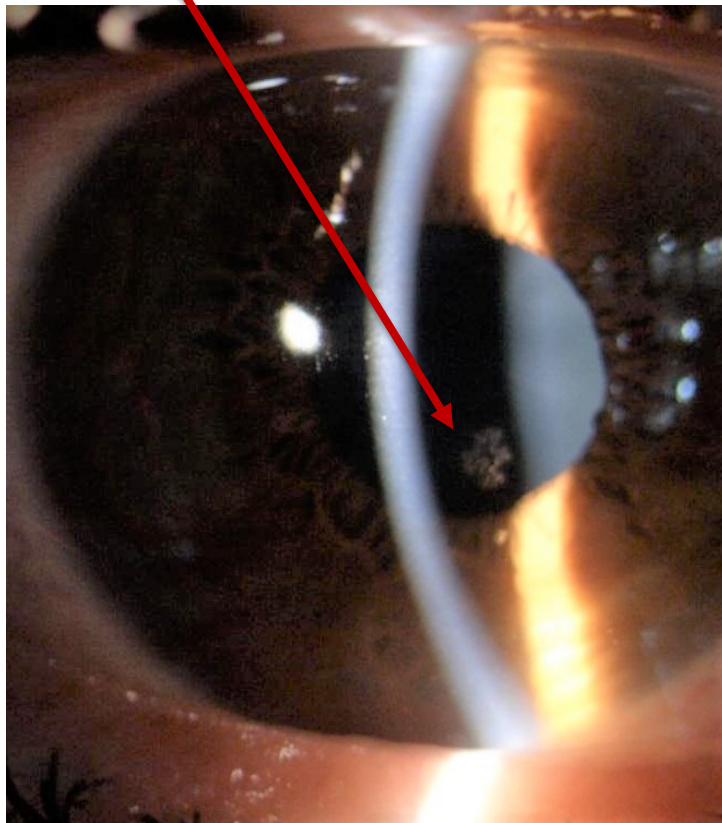


Exemplary Cases (last week)

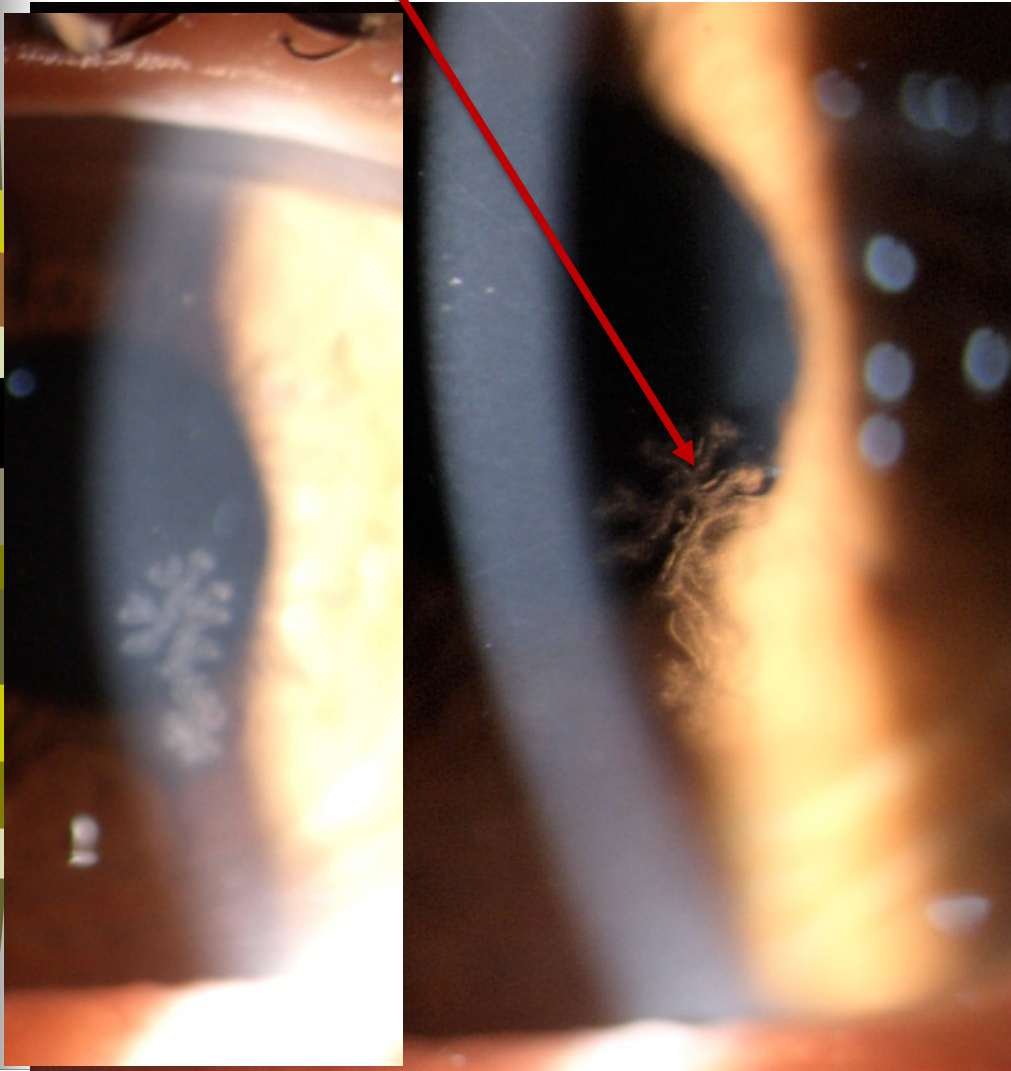
- A 50 years old healthy female calls clinic with:
 - Acute painful, watery, red eye
 - Vision quality "not good"
 - No previous encounter with another red eye
 - No history of a similar event
 - No trauma or clear feeling of foreign body
 - Differential: All the culprits detailed above with uveitis and keratitis being the most troubling potential diagnoses
 - Patient is summoned for examination:

A Picture is Better Than...

Though, not a classical dendrite,
good enough to start Acyclovir treatment



A Picture is Better Than...



Three days later despite systemic Acyclovir Rx - a classic dendrite is obvious

No doubt, a clinical examination was mandatory as well as a follow-up



Approaching The Urgent Patient

- Complete and careful Corona Hx taking:
 - Proximity to epidemic neighborhoods and Dx patients
 - Fever
 - Upper respiratory complaints (dry cough, trouble breathing)
 - Recent participation (less than two weeks) in crowded events
- If “yes” to any of those questions, take extra precautions or refer to Corona centers with ocular services.



Approaching The Urgent Patient

- For patients who are cleared from suspected active or exposure to Corona virus.
- Careful clinic visit can be allowed:
 - Timely: no rush
 - Spacious waiting room: keeping patients apart, and keep accompanying persons outside of the waiting area
 - Spacious examination rooms allowing at least two meters between patient and physician for discussion and directions while away from the slit lamp



During Slit Lamp Examination

- Physical separation between patient and examiner
 - Appropriate plastic shield on the slit-lamp
- Patient wearing a surgical mask
- Examiner wearing a mask (N95 if despite screening patient is likely to be infectious) and gloves
- Careful cleaning of slit lamp between patients
- No talking during examination
- Avoid lengthy examination
 - Limit the whole visit time to less than 15 minutes

Make the patient aware in advance to all these limitations

Plan,
Think ahead,
Avoid unnecessary visits,
Stay Safe
Sunshine is just behind the horizon

