Simple guide for management of dry eyes at primary care level

What may suggest 'dry eyes' in the history?

History of:

- *Soreness,*
- *Gritty sensation/foreign body sensation*
- *Occasional redness*
- *Feeling of 'tiredness'*
- *Symptoms more worse in the early hours of the day*

What to ask if the patient has above symptoms?

Occupation- excessive use of computers, VDU screens, etc
History of:

- *Contact lens use*
- *Laser refractive surgery*
- *Eyelid surgery*
- *Dryness of mouth (constant desire to drink water)/history of Sjogren's syndrome (Caution: Can be primary where the patients may have accompanying pulmonary symptoms or can be secondary which is associated with autoimmune or vasculitic disorders)*
- *Thyroid problems*
- *Flushing of face when having spicy food, wine, emotional upsets, etc/signs of Rosacea (Caution: Ocular rosacea will only have lid margin telangectesia and often no facial signs/symptoms)*
- *Ongoing skin problems*
- *Any other systematic disorders (particularly autoimmune disorders)*

What to look on examination without a slitlamp?

Frequency of blink

1. *Eyelid margin examination for evidence of crusting of eyelashes or inflammation of posterior lid margin*
2. *Whether the blink is complete or incomplete*
3. *Corneal sensations with a wick of cotton/tissue when the patient is asked to stare straight at the distance (Is no sensation – refer to specialist)*
4. *2% Fluorescein instillation and examination under blue filter on direct ophthalmoscope – look for punctate staining of the cornea (diffuse suggest severe dryness, a band of staining suggests exposure/blink lagophthalmos)*

Drafted by: Mr. Mayank A. Nanavaty, DO, FRCOphth
Consultant Ophthalmic Surgeon, Brighton
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How to treat dry eye in primary care set up?

Counsel the patient that dry eye is often incurable but can be managed very well.

1) *If there is evidence of crusting of anterior lid margins or inflammation of posterior lid margin*
    - Warm compresses at least twice a day for approximately 10 minutes every time
    - Cleaning of eyelashes with simple water which is cooled after boiling OR use of eyelid wipes over the counter, at least twice a day
    - Use of simple lubricating eye drops like hydroxypopylmethylcellulose (Hypromellose) to be started as frequently as needed but at least 4-6 times a day.
    - If there is evidence of Rosacea (refer to specialist if severe)– systematic Doxycycline 100mg bd for 3 months +/- topical steroid course

2) *If patients is works long hours on computers, VDU screens, etc:*
    - Advice to remember to blink frequently and take regular rests with eyes closed.

3) *If the patient wears contact lenses for long hours-*
    - Advice to reduce the contact lens wear time/ideally refrain from using them, to use frequent lubrication even whilst wearing the contact lenses

4) *If the patient has blink lagophthalmos:*
    - Advice to blink consciously and frequently

5) *If the patient has history of laser refractive surgery, autoimmune disease, Sjogren's syndrome, etc* –

    Refer to specialist, as they may need other interventions like:
    - Punctal plugs/cautery,
    - Steroid eye drops,
    - Cyclosporine drops,
    - Eyelid surgery, etc

Below are the tabulate options of the lubricants that can be prescribed in the ranking order based on severity of dry eyes:

	Active ingredient	**Brand names**
1	Hydroxypropyl methylcellulose	Hypromellose, Artelac, Isopto eye drops
2	Carbomer	Viscotears, Geltears, Liquivisc, liposic
3	Carmellose	Carmellose, Optive, Optive plus
4	Sodium Hyaluronate	Artelac, Clinitas, Hyabak, Hylo-Care, Hylo-Forte, Hylo-Tear, Lubristil gel, Ocusan, Oxyal, Vismed, Vismed gel, Vismed gel multi, Vismed multi, Lubristil
Once before night use with any severity of dry eyes	White soft paraffin, liquid paraffin, lanolin alcohols	Lacrilube, Refreshing night time ointment