Chronic Allergic Eye Disease

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History

A 20-year-old male university student presents with 12 months of symptoms, including:

- Severe itching
- Red eyes
- Photophobia
- Stringy mucus
- Intermittent blurred vision
- Symptoms present throughout the year with intermittent exacerbations

Previous treatments:

- Sodium cromoglicate
- Olopatadine
- Artificial tears

Minimal improvement was found with the above eye drops.

A short course of topical dexamethasone prescribed following an A&E attendance 2 months ago provided dramatic symptom relief, but symptoms returned within 1–2 weeks.

Medical history was pertinent for eczema, asthma and allergic rhinitis

Discussion Question 1:
What diagnoses should be considered?

External examination revealed:

- Eyelid eczema
- Dennie-Morgan folds

Slit lamp examination:

- Conjunctival hyperaemia
- Large papillae on the upper tarsus
- Inferior punctate keratitis
- Mild limbal inflammation

BCVA Right 6/6-3 Left 6/6-2

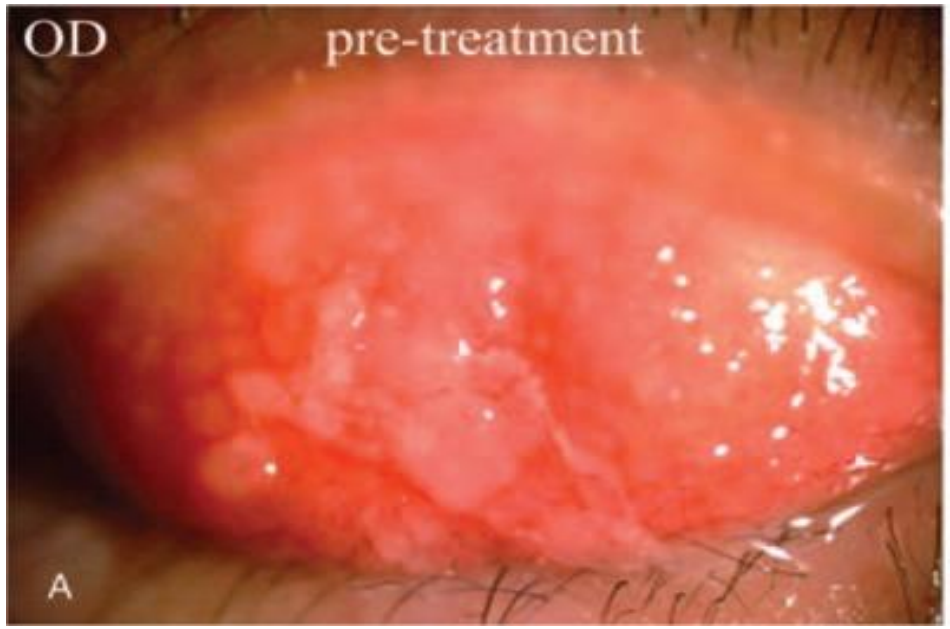
RX Right -2.50/-0.50 x 81 Left -2.75/-1.25 x 96

IOP Right 12mmHg, Left 13mmHg

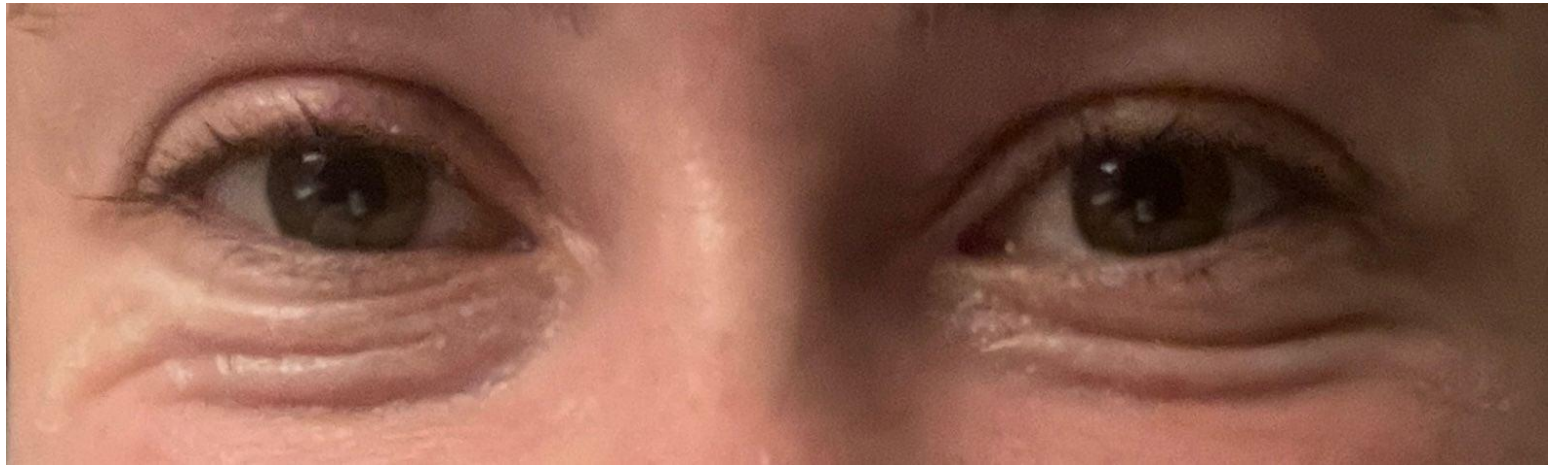
<u>See Figure 1 and 2.</u>

Discussion Question 2:

What is the most likely diagnosis?



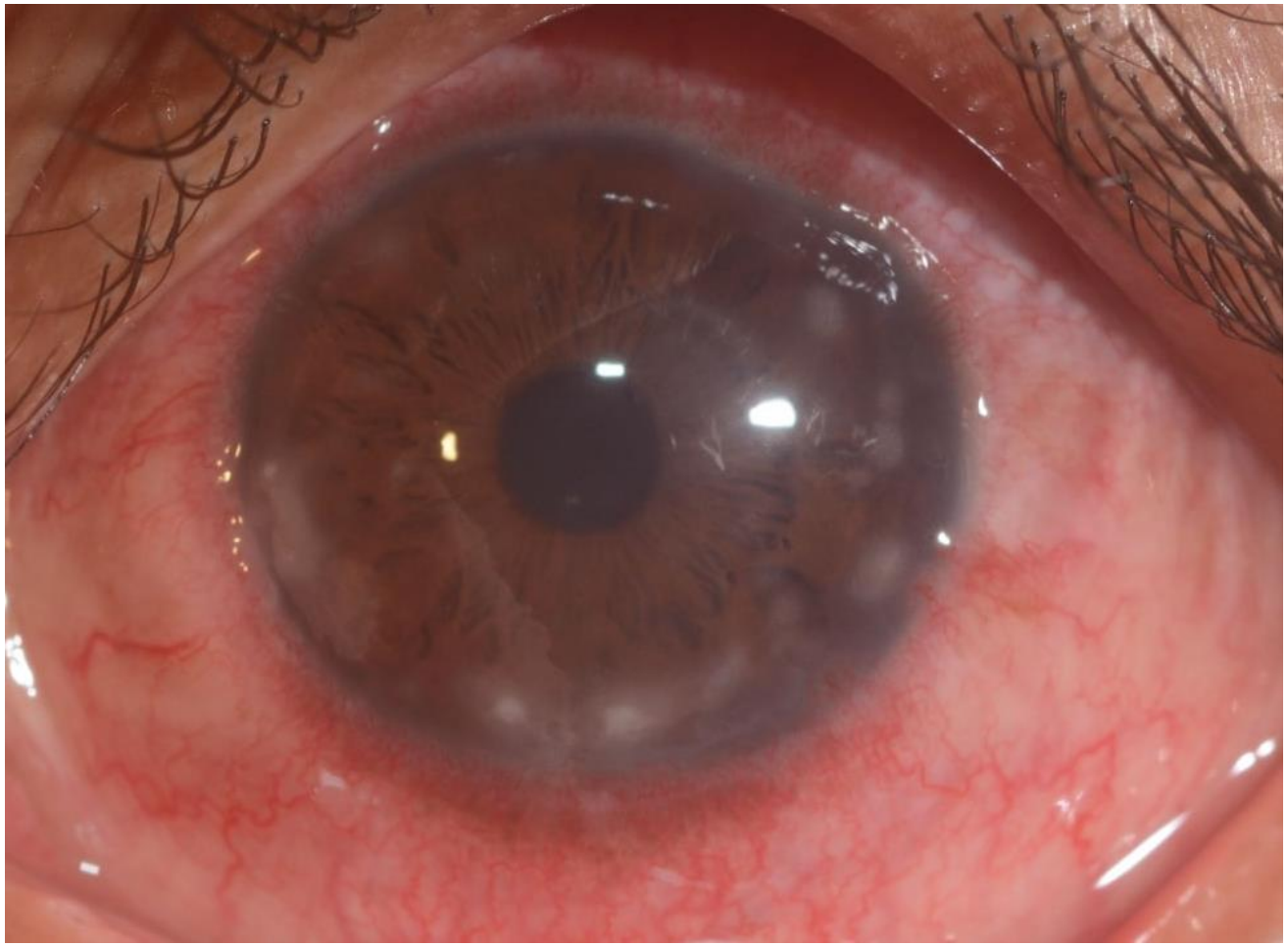
Example of Dennie Morgan Lines

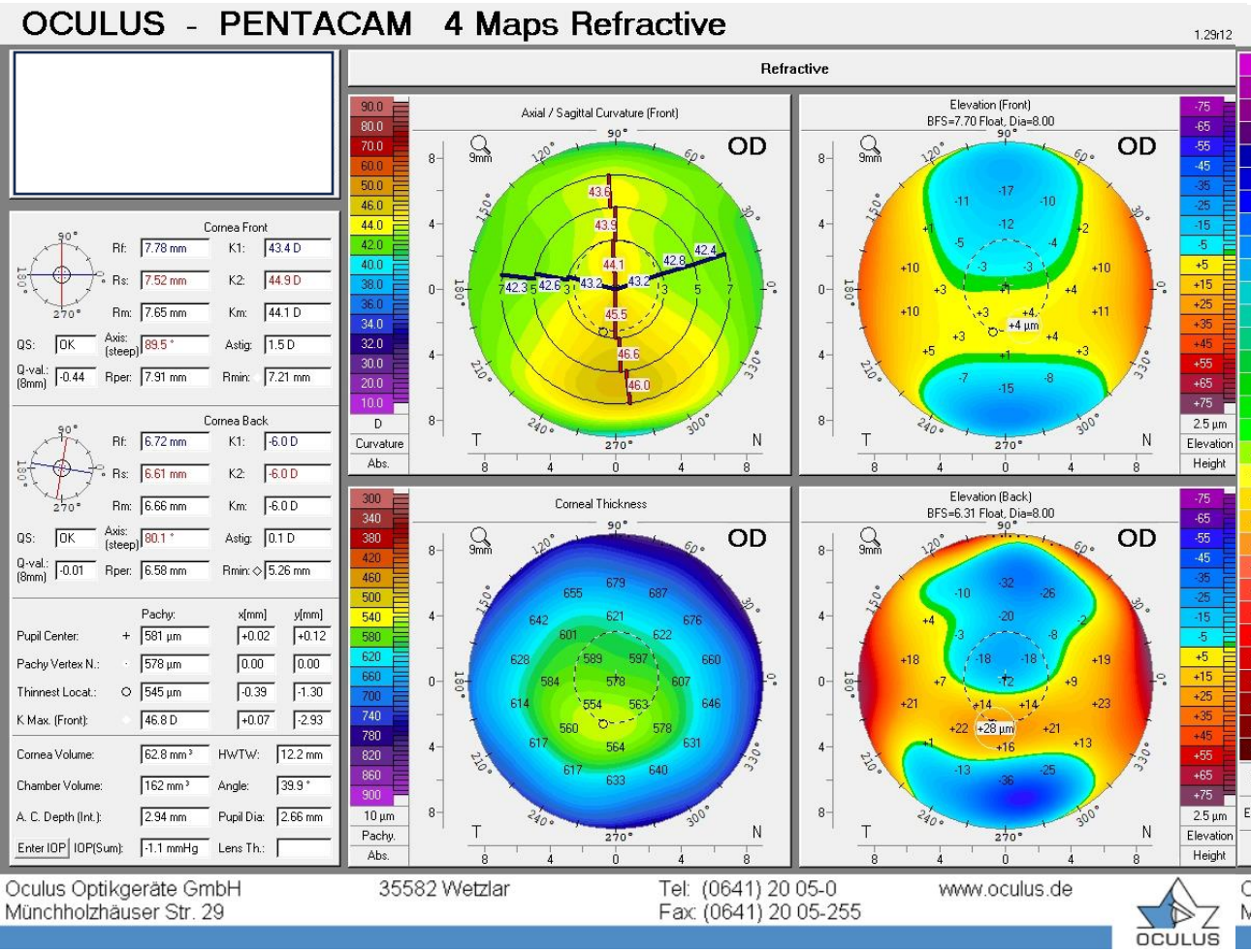


Corneal Involvement

Fluorescein staining demonstrates punctate epithelial erosions and perilimbal small round subepithelial infiltrates +/- superficial corneal vascularization.

Discussion Question 3:
Why is corneal involvement important in allergic eye disease?





Management Challenge

The patient states:
“Steroid drops were the only thing that worked.”

Symptoms persist despite antihistamines and lubricants.

Discussion Question 4:

What is the indication for topical steroid use and what are the risks of repeated steroid use?

Maintenance

2 months after commencing a tapering course of preservative free Dexamethasone 0.1% symptoms are much improved with resolution of corneal infiltrates, reduction in papillae size, resolved hyperaemia and mucoid discharge. The eyes are more comfortable and vision is stable. 1 month later, symptoms begin to return albeit less severe.

Discussion Question 5:
What would you consider as possible next steps?

Clinical Twist

Topical ciclosporin is commenced for the patient twice daily. Two weeks after starting topical ciclosporin the patient returns.

The patient reports that the drops cause burning and he stopped using them.

Symptoms persist:
Itching, redness, photophobia.

Examination:
Persistent papillae and punctate keratitis

Discussion Question 6:
What would you do next?

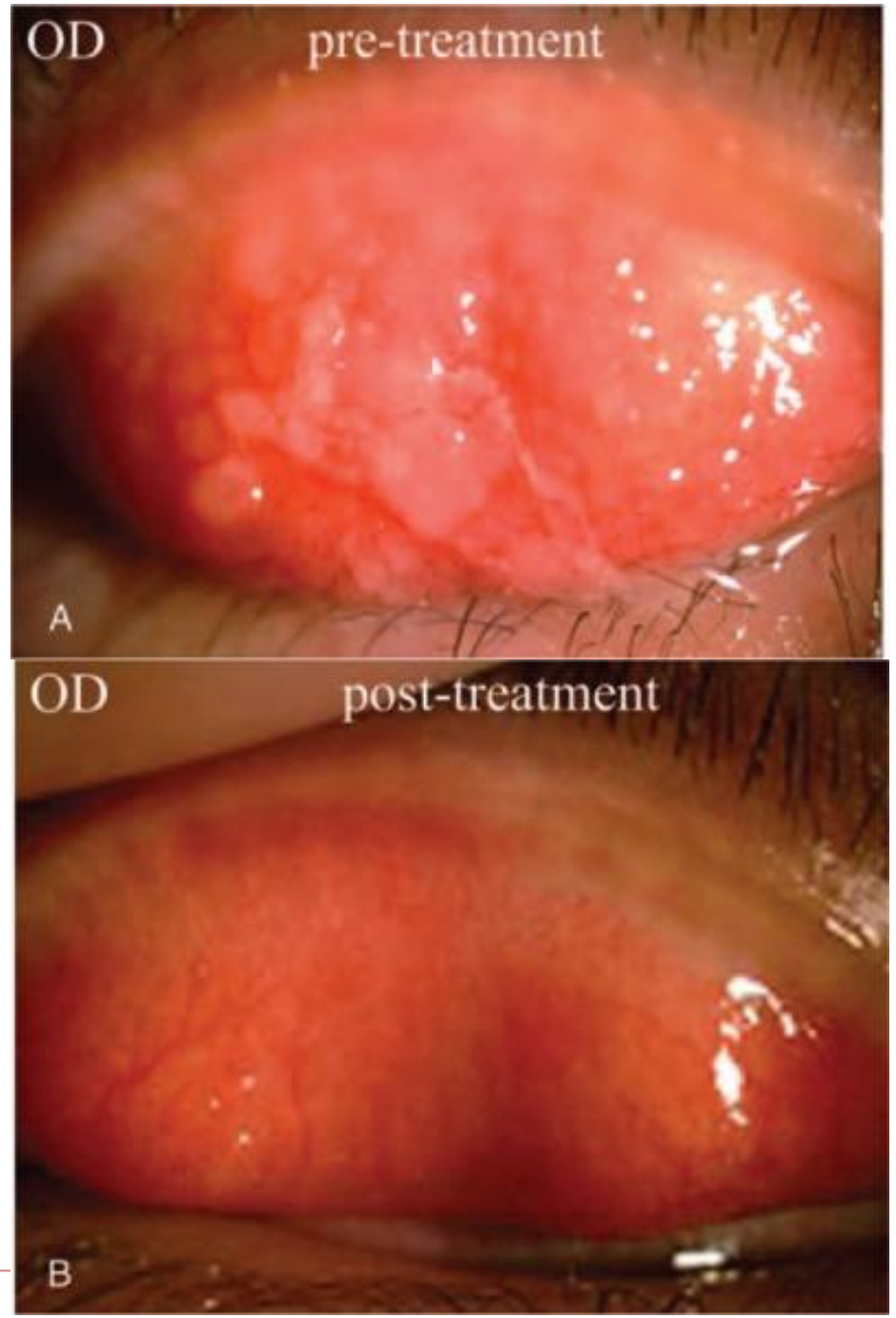
Follow-Up

Three months later the patient reports significant improvement.

Symptoms:
- much less itching
- reduced photophobia

Signs:
Reduced papillae and improved corneal surface.

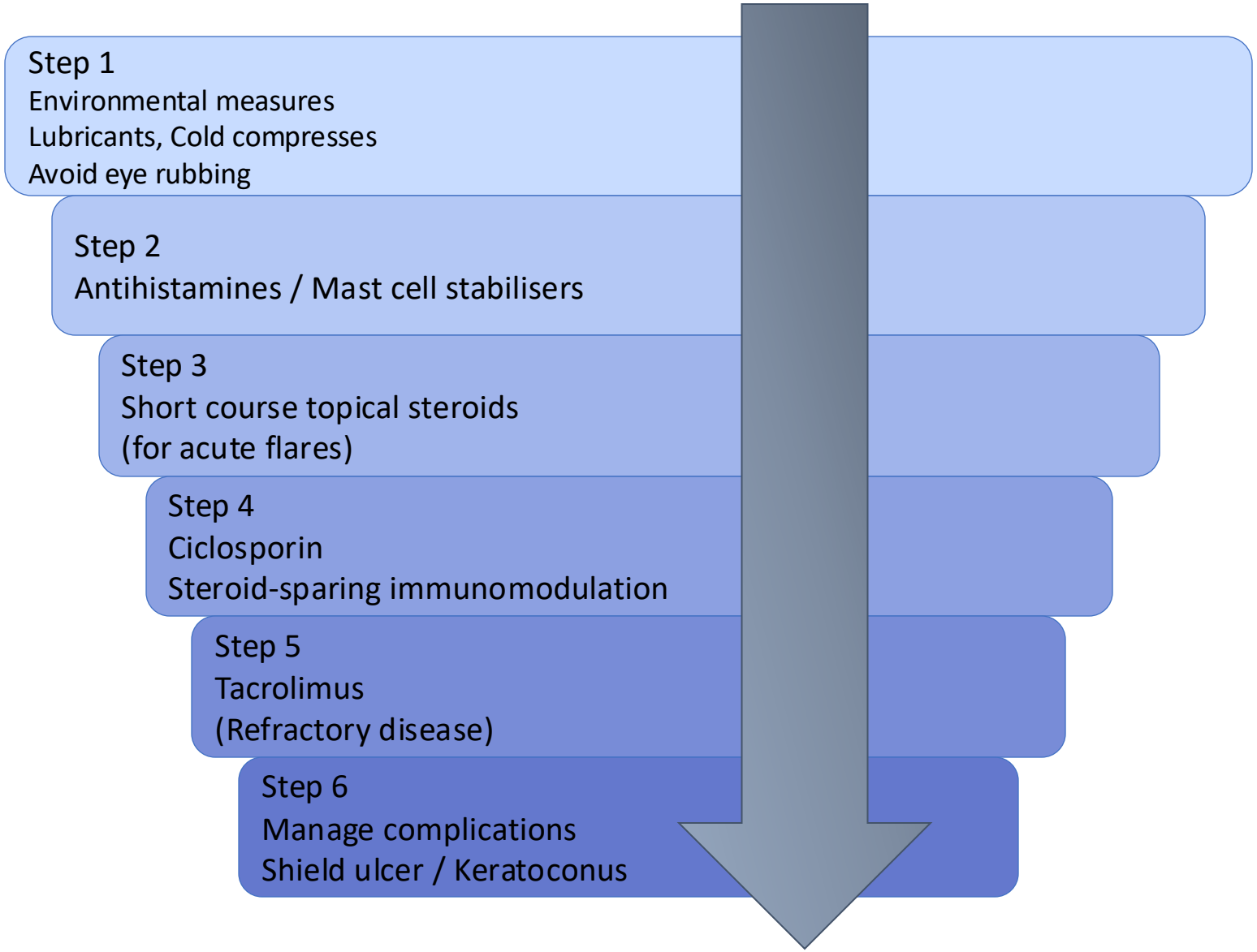
Discussion Question 7:
How long should ciclosporin treatment typically continue?



Stepwise Management of Atopic Keratoconjunctivitis (AKC)

Discussion Question 8:

If the patient were to relapse or become symptomatic what would be the next step up in therapy and/or referral?



1. What's the underlying disease process?
Answer:
Chronic, immune-driven inflammation
Combination of:
•IgE-mediated (mast cells)
•T-cell–mediated (chronic phase)
Key point:
Simple antihistamines are often not enough in moderate–severe disease

2. Why didn't first-line treatment work? (Sodium cromoglicate / olopatadine)
Role:
•Mast cell stabilisation + antihistamine
•Effective in mild–moderate allergy
Why they failed:
•Disease is more severe (VKC/AKC spectrum)
•Driven by T-cell inflammation
Takeaway:
Preventative/mild control only — not sufficient in advanced disease

3. Why did steroids work so well? (Topical dexamethasone)
Role:
•Broad anti-inflammatory effect
•Reduces cytokines, T-cells, eosinophils
Why dramatic response:
•Targets core inflammatory pathway
Takeaway:
Most effective short-term treatment

4. Why can't we keep using steroids?
Risks:
•Raised IOP / glaucoma
•Cataract
•Infection risk
•Delayed healing
Takeaway:
Steroids are for induction, not maintenance

5. What is ciclosporin doing?
Role:
•T-cell immunomodulation
•Reduces chronic inflammation
Why important:
•Treats underlying disease
•Steroid-sparing
•Suitable for long-term use
Takeaway:
Cornerstone of maintenance therapy

6. Why did the patient stop ciclosporin?
Answer:
Burning/stinging sensation (common side effect)
Takeaway:
Main barrier is tolerability, not efficacy

7. What do you do if ciclosporin isn't tolerated?
Answer:
•Improve tolerance:
- Warn patient in advance
- Chill drops
- Use lubricants
- Short steroid "bridge"

Takeaway:
Manage side effects before switching

8. Why did symptoms return after steroid taper?
Answer:
•Underlying disease not controlled
•Steroids suppress but don't modify long-term
Takeaway:
Always introduce maintenance before tapering

9. How long should ciclosporin continue?
Answer:
•Months to years
•Often long-term therapy
Takeaway:
Stopping early leads to relapse

10. What's next if control is inadequate?
Answer:
•Increase ciclosporin dose/frequency
•Intermittent steroid pulses
•Tacrolimus