


# Management of Vernal Keratoconjunctivitis (VKC) in Children in the United Kingdom: A Review of the Literature and Current Best Practice Across Six Large United Kingdom Centers<sup>1</sup>

## Recognising VKC

VKC is an allergic eye disease underpinned by an immunologically-mediated hypersensitivity reaction to environmental antigens.




### Essential for assessment


Thorough history:      Characteristic symptoms and signs, including:

Family/patient history of atopy	Itching/chronic eye rubbing	Watery
Seasonality	Photophobia*	Pain/burning
Previous treatments	Redness	Reduced vision*
	Tarsal/limbal papillae	Shield ulcer/ clouded cornea*

\*Suggestive of severe disease: urgent referral recommended




To download the full paper [click here](#)



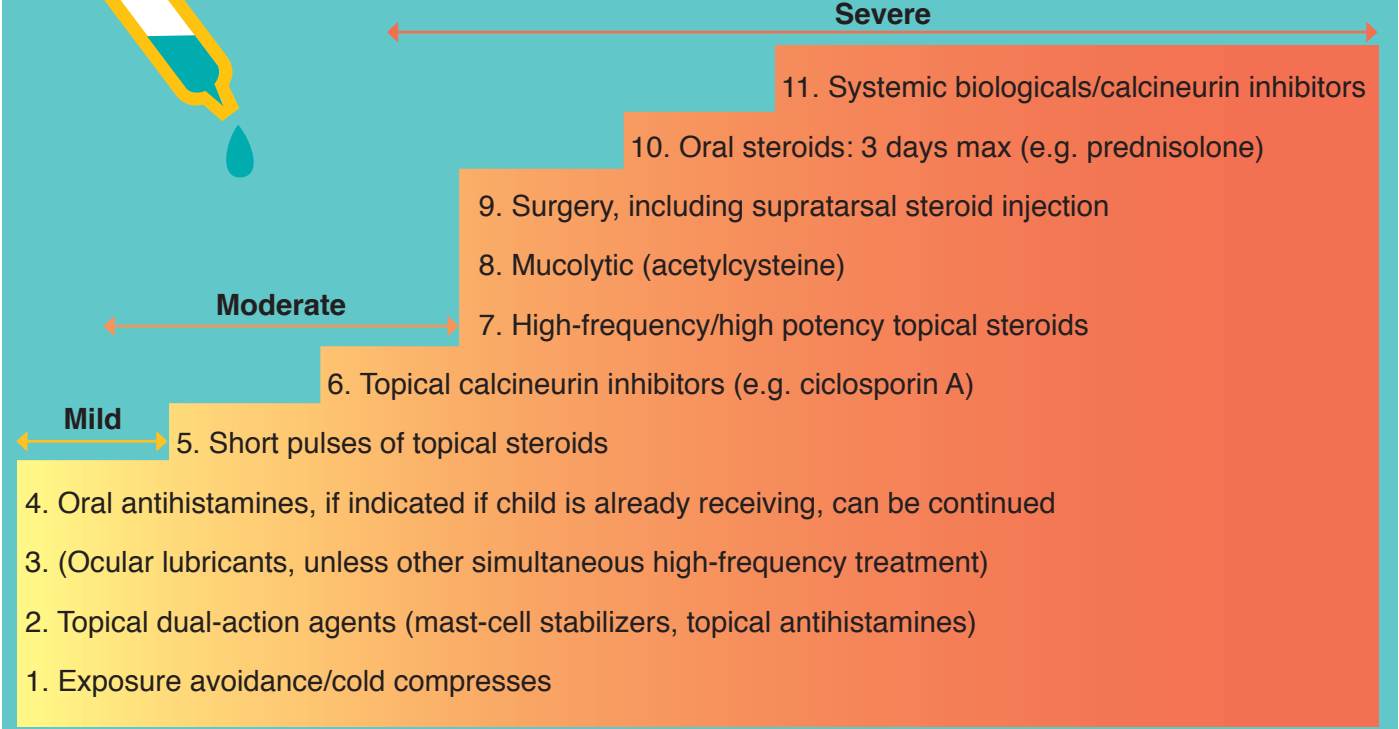
### Severity and referrals

Mild	Moderate	Severe
Treatment-naïve, no sight-threatening signs	Previously treated, symptoms recurred, OR treatment-naïve with limbitis, large cobblestones, punctate keratopathy, mucous discharge	Lack of response to treatment AND/OR repeated flare-ups despite compliance AND/OR shield ulcer, significant corneal vascularisation and/or disabling symptoms
No referral	4-6 weeks	24hr
Managed within primary care; behavioural advice and first-step treatment	Non-urgent referral to paediatric ophthalmologist within 4–6 weeks; initiate treatment	Urgent referral to paediatric ophthalmologist and corneal specialist within 24 hours; initiate treatment






### Treatment and long-term management

Treatment is escalated step by step according to severity and response to previous therapy:



**Mild**      **Moderate**      **Severe**

- 1. Exposure avoidance/cold compresses
- 2. Topical dual-action agents (mast-cell stabilizers, topical antihistamines)
- 3. (Ocular lubricants, unless other simultaneous high-frequency treatment)
- 4. Oral antihistamines, if indicated if child is already receiving, can be continued
- 5. Short pulses of topical steroids
- 6. Topical calcineurin inhibitors (e.g. ciclosporin A)
- 7. High-frequency/high potency topical steroids
- 8. Mucolytic (acetylcysteine)
- 9. Surgery, including supratarsal steroid injection
- 10. Oral steroids: 3 days max (e.g. prednisolone)
- 11. Systemic biologicals/calcineurin inhibitors

 <p>Children with severe VKC should be treated by a <b>multidisciplinary team</b> where possible</p>	 <p><b>Flare-ups</b> are common, even with effective treatment: families need <b>rapid access</b> to the eye clinic</p>	 <p><b>Quality of life</b> should be assessed at the first appointment and then <b>at least annually</b></p>
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**Follow-up: 2–4 weeks after start of treatment, then:**

every <b>6 weeks</b> if on steroids	<b>3 months</b> after initiating CsA	every <b>6–12 months</b> for stable patients
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### Supportive care


Key elements of supportive care include:

Detailed recommendations are in the full article

<b>Adherence</b> Improving adherence involves:	Restoring confidence in treatment	Minimising the treatment burden	Ensuring understanding and ownership of the management plan
<b>Information outreach and communication</b>	Specialist nurses and AHPs are central to coordinating care	Proactive contact from clinics can be helpful	Outreach to schools is critical
<b>Emotional support</b>	Children may lose faith in their treatment and themselves	Rewarding acceptance of treatment is important	Emotional needs of the patient, parents and caregivers need to be addressed

Although VKC is relapsing/remitting by nature, flare-ups do not mean that treatment has failed: the ultimate outcome for the child is likely to be positive.

Read more about VKC best practice in the UK by scanning the QR code opposite to download the full paper:



**VERKAZIA® 1 mg/mL eye drops, emulsion (ciclosporin)**

**ABBREVIATED PRESCRIBING INFORMATION. Please refer to the Summary of Product Characteristics (SmPC) for full details.**

**Composition:** One mL of emulsion contains 1 mg ciclosporin and 0.05 mg cetalkonium chloride as an excipient. For full list of excipients please refer to SmPC.

**Indication:** Treatment of severe vernal keratoconjunctivitis (VKC) in children from 4 years of age and adolescents.

**Dosage and administration:** Verkazia treatment must be initiated by an ophthalmologist or a healthcare professional qualified in ophthalmology. The recommended dose is one drop of Verkazia 4 times a day to be applied to each affected eye during the VKC season. If signs and symptoms persist after the end of the season, treatment can be maintained at the recommended dose or decreased to 1 drop twice daily once adequate control is achieved.

**Contraindications:** Hypersensitivity to any of the ingredients Ocular or peri-ocular malignancies or premalignant conditions. Active or suspected ocular or periocular infection.

**Warnings and Precautions:** Use with contact lenses not recommended. Verkazia should be used with caution in patients with an active orofacial herpes simplex infection, a history of ocular herpes, varicella-zoster or vaccinia virus infection and concomitant corticosteroid use. Efficacy and safety of Verkazia have not been studied beyond 12 months. Therefore, regular examination of the eye(s) is recommended, e.g. every 3 to 6 months, when Verkazia is used for more than 12 months.

**Pregnancy and Breast-feeding:** Not recommended in women of childbearing potential not using effective contraception or during pregnancy unless the potential benefit to the mother outweighs the potential risk to the foetus. At therapeutic doses of ciclosporin in eye drops, it is unlikely that sufficient amounts would be present in breast milk. A decision must be made whether to discontinue breast-feeding or to discontinue/abstain from Verkazia therapy taking into account the benefit of breast-feeding for the child and the benefit of therapy for the woman.

**Driving and using machines:** Verkazia has moderate influence on the ability to drive and use machines.

**Undesirable effects:** Consult SmPC for full details. The most common adverse reactions seen in clinical trials with Verkazia were eye pain (11%) and eye pruritus (9%) which were usually transitory and occurred during instillation. Other common adverse reactions observed were upper respiratory tract infection, headache, ocular hyperaemia, eye irritation, ocular discomfort, foreign body sensation in eyes, lacrimation increased, vision blurred, erythema of eyelid, eyelid oedema, and cough.

**Package Quantities and Cost:** One pouch contains 5 single dose containers. Pack size 120 single dose containers £288.00.

**Legal Category:** Product subject to medicinal prescription.

**Marketing Authorisation numbers:** PLGB 16058/0028, EU/1/17/1219/004

**Marketing Authorisation Holder:** SANTEN Oy, Niittyhaankatu 20, 33720 Tampere, Finland. VERKAZIA® is a registered trademark of Santen Pharmaceutical Co., Ltd.

**Job No:** NP-VKC-UK-0079

**Date of Prescribing Information:** February 2022

Adverse events should be reported. Reporting forms and information can be found at [www.mhra.gov.uk/yellowcard](http://www.mhra.gov.uk/yellowcard) or search for MHRA Yellow Card in the Google Play or Apple App Store.

Adverse events should also be reported to Santen UK Limited email: [medinfo@santen.co.uk](mailto:medinfo@santen.co.uk) or telephone: 0345 075 4863.