

CLINICAL ALLERGY IMAGES

Section Editor – George du Toit, MB ChB, FCP, FRCPCH, MMed, DCH, Dip Allergy

Consultant in Paediatric Allergy & Immunology, Imperial College, St Mary's Hospital, London, UK

This is the third in a series about clinical images relevant to the practice of allergy and immunology. Please submit interesting images and discussion for publication to the Section Editor, Dr George du Toit (details below).

ALLERGIC CONJUNCTIVITIS

The following images serve to highlight the clinical features and unique characteristics of the various subtypes of allergic conjunctivitis. Some of the referenced images and much of the text is adapted (with permission) from an excellent recent review in the *Journal of Allergy and Clinical Immunology*.¹

'Allergic conjunctivitis' is an umbrella term for a group of diseases which affect the ocular surface. Two acute disorders exist, seasonal allergic conjunctivitis (SAC) (Fig. 1) and perennial allergic conjunctivitis (PAC), as do three chronic diseases: vernal keratoconjunctivitis, atopic keratoconjunctivitis and giant papillary conjunctivitis. The acute disorders of SAC and PAC represent the majority of all ocular allergy diagnoses.

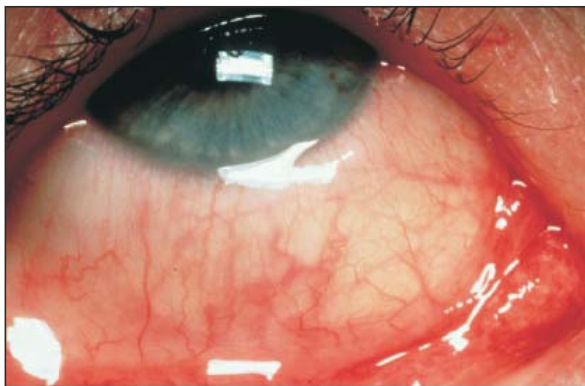


Fig. 1. Seasonal allergic conjunctivitis.

Symptoms associated with allergic conjunctivitis are critical to the diagnosis, but these often go undiagnosed. The pathognomonic symptom of ocular allergy is itching; without itching, the presenting condition



Fig. 2. Periorbital bruising due to persistent aggressive rubbing of the eye.

Correspondence: Dr G du Toit, Department of Paediatric Allergy & Immunology, St Mary's Hospital, Praed St, London W2 1NY, UK. E-mail g.dutoit@imperial.ac.uk



Fig. 3. Conjunctival pigmentation showing allergen exposure.



Fig. 4. Deep pigmentation due to chronic conjunctivitis, often familial.

should not be considered to be ocular allergy. Evidence of the vigour with which children rub their eyes may be evident from periorbital excoriations and bruising (Fig. 2). Additional symptoms include: tearing, lid and conjunctival oedema, redness, and photophobia. Late-phase responses may be accompanied by remodelling of the ocular surface tissues. In severe cases, extreme discomfort may be experienced and the ocular surface may sustain damage.

Seasonal and perennial allergic conjunctivitis

The prevalence of ocular allergy varies markedly between geographic regions and is more common in warmer climates. Approximately 90% of patients with rhinitis experience at least 1 day of ocular symptoms per week.² Given reported ISAAC rates of allergic rhinitis among 13-14-year-old SA children as high as 33% (n = 4 947), it is not surprising that allergic conjunctivitis is a common clinical diagnosis in southern Africa.³

The itching may be accompanied by vasodilation which appears superficial and pink rather than a deep red. Chemosis, swelling of the conjunctiva, may be present, although it is usually subtle and therefore only visible on slit-lamp examination. More readily observable is the glassy appearance of the eye. Swelling can also become apparent in the lids. Although lid swelling peaks within 15-30 minutes of exposure to the allergen, it tends to dissipate slowly.^{4,5} It is not uncommon to see a darkened pigmentation of the conjunctiva over the distribution of air-exposed surfaces, with pristine white conjunctiva revealed by retracting the eyelid (Figs 3 & 4).

Vernal keratoconjunctivitis (VKC) (Fig. 5) and atopic keratoconjunctivitis (AKC)

These rare chronic conditions are potentially serious and warrant specialist ophthalmological attention. VKC is a disease of childhood, with greater prevalence in male subjects living in warm climates. Anecdotally this is commonly seen in black patients in southern Africa.



Fig. 5. Vernal keratoconjunctivitis.

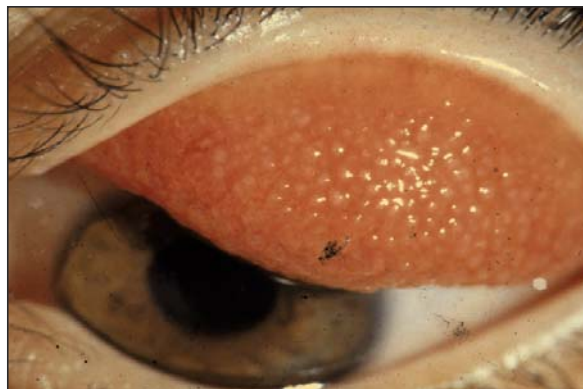


Fig. 9. Giant papillary conjunctivitis.

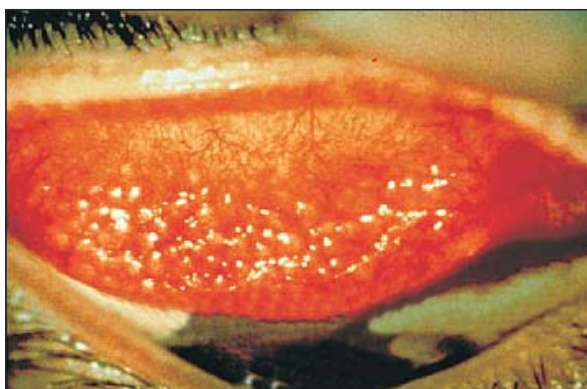


Fig. 6. Superior cobblestone papillae.



Fig. 10. Ophthalmia herpeticum complicated by allergic conjunctivitis.



Fig. 7. Vernal keratoconjunctivitis with extensive limbal gelatinous infiltrates.

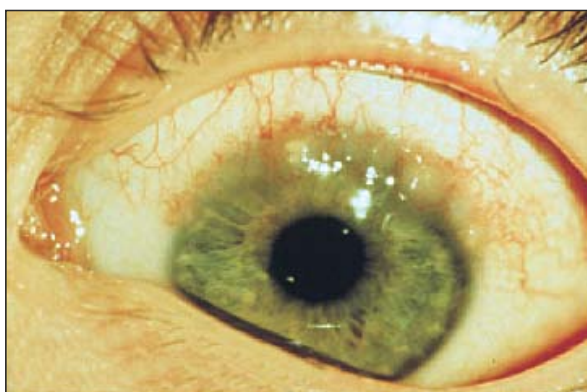


Fig. 8. Vernal keratoconjunctivitis with Trantas dots.

In tarsal VKC, in addition to all clinical features of allergic conjunctivitis, tarsal cobblestone-like papillae are also present (Fig. 6). In limbal VKC gelatinous yellow-grey infiltrates are observed on the limbus, the circumference of which might appear thickened and opaque, with a peripheral and superficial neovascularisation (Fig. 7). Intense itching, tearing, mucous secretion, and severe photophobia characterise all forms of VKC. Research has documented that histaminase deficiency exists with VKC.⁶

AKC occurs more frequently in men aged 30-50 years. A family history of allergies, asthma, urticaria, and/or hay fever is often present. Typically, patients have had atopic dermatitis or eczema since childhood, with ocular symptoms developing later in life. The primary symptom of AKC is intense bilateral itching of the lid skin, periorbital area, and conjunctiva. Tearing, burning, photophobia, blurred vision, and a stringy, rope-like mucous discharge are also observed. Atopic blepharitis is evident, with tylosis and swollen eyelids that have a scaly indurated appearance, with meibomian gland dysfunction and associated dry eye. The conjunctiva can be hyperaemic and oedematous, and tarsal conjunctival papillae are common. Gelatinous nodules can be present around the limbus with or without Trantas dots (Fig. 8).

Giant papillary conjunctivitis (GPC) (Fig. 9)

Giant papillary conjunctivitis (GPC) is not a true ocular allergic reaction. It is a consequence of mechanical irritation (as in the case of contact lens wearers) and is aggravated by concomitant allergy.

Additional complications caused as a result of excessive rubbing

Persistent rubbing of the allergic eye is a risk factor for the introduction of eye infections (Fig. 10). In addition, children are at risk for shield ulcers which are best diagnosed post fluorescein drop insertion (Fig. 11).

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Fig. 11. Shield ulcer (fluorescein stain).

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ATTENTION ALLSA MEMBERS

This is to inform you that the 2005 ALLSA Annual General Meeting (AGM) will be held at the Holiday Inn Elangeni, Durban during the ALLSA Congress.

Details of the AGM are listed below:

TIME: 13h00 - 14h00

DATE: Saturday 27th August 2005

VENUE: Holiday Inn Elangeni, Durban

AGENDA

1. Minutes of previous meeting
2. Matters arising
3. Chairman's report
4. Secretary's report
5. Treasurer's report
6. General

Prof Cas Motala

Dr Sharon Kling

Dr Adrian Morris