

# Allergic Rhinoconjunctivitis

## BACKGROUND

- IgE-mediated inflammatory condition of the nasal mucosa
- Rhinorrhoea, sneezing, nasal obstruction often associated with itchy eyes, nose, palate and irritability or fatigue.
- Affects up to 30% of children  
Uncommon in <2 years old - consider alternate diagnosis
- Associated with other atopic diseases: eczema, asthma, etc
- Significant effect on quality of life

## PATHOPHYSIOLOGY

- Exposure & sensitisation to airborne allergens → nasal mucosal inflammation → continuous exposure to aeroallergen → reacts at lower doses of allergen +/- non-specific irritants

## COMMON TRIGGERS

- **SEASONAL:** Grass, tree, weed pollen
- **PERENNIAL:** House dust mite, mould, animal dander
- **EPISODIC:** animal dander, mould, house dust mite (specific locations)

## IMPORTANT DIFFERENTIALS

- Acute infectious rhinitis
- Non-allergic non-infectious rhinitis
- Structural: Nasal polyps (CF), deviated nasal septum, foreign body, space occupying lesion,
- Adenoidal hypertrophy
- Immunodeficiency
- Vernal keratoconjunctivitis

## REFERRAL

- Diagnostic uncertainty
- Symptoms unresponsive to therapy or intolerable adverse effects from medications
- Moderate-to-severe symptoms who may benefit from immunotherapy
- Structural issues (eg deviated septum)

## HISTORY

- Sites affected (nose/eyes/palate)
- Onset (age, time of year)
- Character/Symptoms (rhinorrhea? congestions? itch? sneezing? sniffing? reduced smell? fatigue?)
- Response (to treatment)
- Associations (personal & family history of atopy, recurrent ENT infections)
- Timing (perennial? seasonal? any pattern?, duration of symptoms)
- Exacerbating factors/Triggers
- Severity
- 1. **Intermittent** (<4days/wk or <4wks/episode) or **Persistent**
- 2. **Impact on QoL:** sleep, school performance, activities

## EXAMINATION

- Infraorbital oedema & darkening 'allergic shiners'
- Transverse nasal crease from rubbing nose 'allergic salute'
- Allergic facies: high-arched palate, mouth breathing & dental malocclusion
- Nasal congestion, pale oedematous nasal mucosa, clear rhinorrhea
- Conjunctivitis or chemosis
- Look for nasal polyps

## INVESTIGATIONS

- Clinical diagnosis
- Allergy testing (skin prick testing/ specific IgE) confirms sensitization to aeroallergen but not necessary for diagnosis

## TREATMENT

- See right column
- Decongestants should not be used
- Montelukast can be considered in children who also have asthma
- Counsel caregiver about possible side-effects.

## MANAGEMENT

- Regular, prophylactic treatment generally more effective than reactive/PRN

## CONSERVATIVE MEASURES

- **NASAL SALINE RINSES:** wash allergens from nasal passages
- **HOUSE DUST MITES:** Use pillow & mattress covers. Reduce rugs & stuffed toys in room. Hot wash bed linen
- **POLLEN:**
  1. Close windows
  2. Shower before bed
  3. Avoid drying laundry outside

## ANTIHISTAMINES (AH)

- 2nd generation non-sedating AH (e.g. cetirizine, loratadine, fexofenadine) are the AH of choice
- Oral AH are less effective than intranasal steroids (INS) but can be effective as single agent in mild to moderate cases
- Concomitant use with INS is not more effective than INS alone
- Useful in treating sudden acute episodes even in those on INS

## INTRANASAL CORTICOSTEROIDS

- First line treatment choice in moderate to severe (persistent) allergic rhinitis
- Proper positioning important: head slightly downward, point spray at lateral wall of nose (ie not septum), sniff gently
- Second generation agents carry lower risk of systemic absorption: fluticasone propionate, mometasone furoate, fluticasone furoate
- Should be tapered to lowest effective dose once symptoms controlled
- Avoid long-term use in under 6yrs

## OCCULAR THERAPIES

- AH eye drops
- Sodium cromoglycate eyedrops If using > 3mths prescribe single use (no preservatives).

## IMMUNOTHERAPY

- The only treatment that alters the disease course
- Available for Pollen and HDM allergy
- Sublingual immunotherapy (SLIT) favoured. Treatment is 3yrs

## REFERENCES:

1. Roberts G, et al. Paediatric rhinitis: position paper of the European Academy of Allergy and Clinical Immunology. *Allergy* 2013; 68:1102–1116.
2. Wise, SK et al. International Consensus Statement on Allergy and Rhinology: Allergic Rhinitis. *Int Forum Allergy Rhinol.* 2018; 8: 108– 352.
3. Schuler IV CF, Montejo JM. Allergic Rhinitis in Children and Adolescents. *The Pediatric clinics of North America.* 2019;66(5):981– 93.
4. UpToDate.com 'Allergic Rhinitis'. 5. Klimek L et al. ARIA guideline 2019: treatment of allergic rhinitis in the German health system. *Allergol Select.* 2019;3(1):22- 50.