

MANAGEMENT OF ALLERGIC RHINITIS: A 10-MINUTE UPDATE

As the hayfever season draws near, Dr Suneeta Kochhar presents a timely review of current considerations in the assessment and management of patients presenting with the typical symptoms of allergic rhinitis.

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Allergic rhinitis is a common condition that is relatively under-diagnosed and under-treated. It has gradually increased in prevalence and may affect up to 20% of the population in the UK.¹ It is caused by an allergic immune response to inhaled allergens. Up to 80% of patients with allergic rhinitis tend to develop symptoms before the age of 20.¹ Men and women are equally affected, but interestingly, boys are more likely to have allergic rhinitis than girls.¹

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Allergic rhinitis causes inflammation of the nasal mucosa which results in sneezing, rhinorrhoea, nasal congestion and itching. Eye symptoms are common in seasonal allergic rhinitis and may be present in up to 50% of cases of perennial rhinitis.¹ The condition is thought to be related to a hypersensitivity response similar to that found in allergic asthma. Atopy, high socioeconomic status, environmental pollution, birth during a pollen season, early weaning and maternal smoking are all risk factors for allergic rhinitis.

Although typically a seasonal condition, there may be persistent inflammation of the nasal mucosa present throughout the year. Allergic rhinitis may be associated with inflammation of other mucous membranes and may be related to asthma, rhinosinusitis and allergic conjunctivitis.¹ There is an increased prevalence of asthma among patients with persistent and/or severe rhinitis; moreover, both allergic and non-allergic rhinitis are risk factors for developing asthma, and allergic rhinitis is thought to increase the risk of sinusitis.¹ There may be a significant impact on quality of life – for example causing poor sleep and affecting school or work attendance.²

Allergic rhinitis may be seasonal or perennial. The former is related to sensitivity to pollens and the latter

to allergens such as dust mites and animal dander. However the ARIA (Allergic Rhinitis and its Impact on Asthma) guideline (www.whiar.org) favours a classification into intermittent or persistent cases that may be mild or moderate to severe.¹

Diagnosis

Allergic rhinitis may be diagnosed by the presence of nasal itching, sneezing, nasal congestion, rhinorrhoea, post-nasal drip and sometimes hyposmia. Symptoms typically arise within minutes of allergen exposure and may last for a couple of hours before resolving. Allergic conjunctivitis may also be present, which may occur as a result of the nasal-ocular reflex (where eye symptoms are caused by nasal allergic reaction), as well as allergen contact with the conjunctival mucosa. In those with seasonal allergic rhinitis related to birch pollen, it is worth considering the possibility of an associated oral allergy syndrome,¹ caused by allergens in fruits, nuts and vegetables.

History and clinical examination

A careful history should include when symptoms start and whether there are factors that precede the onset of symptoms. This may identify triggers for allergen rhinitis in the home or the workplace. Pets and house dust mite may be factors at home, and at work there may be occupational allergens, such as wood dust or

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flour.³ Resolution of symptoms while on holiday may suggest an environmental cause for allergic rhinitis. Rhinitis symptoms may also be attributable to Churg-Strauss syndrome, Wegener's granulomatosis and sarcoidosis,¹ therefore systemic review of symptoms and clinical examination is important.

Clinical examination findings may include: mouth breathing, a horizontal nasal crease across the nose, a depressed or widened nasal bridge, surgical scars (suggesting possible sinus surgery), polyps, crusting, mucosal congestion and nasal discharge.

Referral criteria

If there is unilateral rhinorrhoea, a cerebrospinal fluid (CSF) leak due to factors such as facial or basal skull fracture or intracranial infection should be excluded through history-taking. Unilateral rhinorrhoea may signify the presence of a malignancy, an antrochoanal polyp or a foreign body, or simply septal deviation. In the case of bilateral discharge, consideration should be given to the presence of a granulomatous disorder (such as Wegener's granulomatosis), nasal polyps or a bleeding diathesis.³

Bloody, purulent discharge, pain and nasal blockage may be indicative of an underlying malignancy.³ Wegener's granulomatosis may present with nasal pain, nasal congestion, rhinitis, crusting and epistaxis. If there is diagnostic doubt or red flags are present an ENT referral may be necessary (see Table 1), and if patients are unresponsive to conventional treatment, referral for consideration of immunotherapy may be indicated. Patients with suspected occupational rhinitis or asthma should be referred to secondary care, as should children with asthma and a possible IgE-mediated food allergy.

TABLE 1: RHINITIS: BSACI REFERRAL CRITERIA³

ENT referral

- Unilateral nasal problems
- Nasal perforations, ulceration or collapse
- Blood-stained discharge
- Crusting high in the nasal cavity
- Recurrent infection
- Periorbital cellulitis

Allergy clinic referral

- Inadequate control of symptoms
- Allergen/trigger identification
- Assessment for possible desensitisation
- Recurrent nasal polyps
- Multisystem allergy (e.g. rhinitis with asthma)
- Occupational rhinitis

Investigations

In the majority of cases seen in general practice, no investigations are necessary. If appropriate, the diagnosis may be confirmed by detecting specific IgE to airborne allergens, which may be done on serum or through skin-prick testing. This may be particularly relevant if allergen-specific immunotherapy is being considered. Allergic rhinitis is often related to house dust mite as well as grass and tree pollens. It may be relevant to consider occupational rhinitis; moreover, it may be possible to prevent progression to occupational asthma.

Management

Although allergen avoidance is recommended, it may not be practical or achievable. It may be helpful to avoid walking in grassy open spaces in the early morning and evening and to keep windows shut in cars and buildings in order to reduce the risk of pollen exposure.⁴ There may be nasal hyperactivity to non-specific stimuli such as changes in temperature, exposure to cigarette smoke and pollution.¹ Patient education is important regarding these factors, as well as the risk of disease progression and available treatments.

Unilateral rhinorrhoea may signify the presence of a malignancy, an antrochoanal polyp or a foreign body, or simply septal deviation

Corticosteroids

Intranasal corticosteroids represent the mainstay of treatment.⁵ These are the most effective agents for allergic rhinitis and may be more effective than antihistamines used with an anti-leukotriene.¹ Intranasal corticosteroids may be used for moderate to severe allergic rhinitis¹ and may be helpful where the predominant symptom is that of nasal blockage and congestion.⁴ In order for intranasal treatments to be effective, patients should be advised as to administration techniques. Commonly used preparations include fluticasone and mometasone¹, which may improve conjunctival as well as nasal symptoms. There is also some evidence supporting the use of nasal lavage.¹ Intranasal corticosteroids may exert their peak effect after several hours or days; however, maximum effectiveness is usually achieved after 2-4 weeks.⁶

Antihistamines

Oral antihistamines have a more rapid onset of action when compared with nasal corticosteroids. Second generation antihistamines, including cetirizine and loratadine, are also associated with fewer adverse side effects. Oral antihistamines may be useful in patients presenting with intermittent, mild symptoms of allergic rhinitis, sneezing or rhinorrhoea.⁴ However, an intranasal corticosteroid is likely to be more effective.

Intranasal antihistamines include azelastine and olopatadine,¹ which may help with sneezing, itching and rhinorrhoea (note: azelastine is the only intranasal antihistamine licensed in the UK for the treatment of allergic rhinitis).⁴ There is a rapid onset of action that may last up to four hours, although adverse effects include epistaxis, nasal irritation and sedation. The use of intranasal antihistamines is limited due to

their cost and side-effect profile when compared to second generation oral antihistamines. Furthermore, they are less effective when compared to intranasal corticosteroids. It appears that combination therapy with an intranasal corticosteroid and an antihistamine or leukotriene receptor antagonist is no more effective than monotherapy with intranasal corticosteroids.⁶

Intranasal sodium cromoglicate and nedocromil sodium may help with nasal symptoms, but are considered less effective when compared to nasal corticosteroids.⁷ Anticholinergics such as ipratropium bromide may help with rhinorrhoea. Decongestants such as ephedrine and xylometazoline may help with nasal congestion but are associated with rhinitis medicamentosa (rebound congestion of the nasal mucosa as a result of prolonged nasal decongestant use) if inappropriately used.⁷ The oral anti-leukotriene montelukast is approved in the UK for allergic rhinitis in association with asthma.¹ Oral steroids may be considered if symptoms are severe, and may alleviate symptoms for important events such as examinations. Patients should be advised to re-attend within 2-4 weeks if their symptoms are not controlled by oral steroids.⁴

Immunotherapy

In selected cases, if symptomatic control is not achieved, sublingual or subcutaneous immunotherapy may be considered. This may reduce the symptoms of allergic rhinitis and prevent asthma. Repeated injections with allergen extract are required for subcutaneous immunotherapy.¹ Increasing doses of the causative allergen are given to cause clinical and immunologic tolerance,⁸ and it should be noted that there is a small risk of causing a systemic allergic reaction as a result.

Subcutaneous immunotherapy should be undertaken in secondary care, with resuscitation equipment available, although only the initial treatment in sublingual immunotherapy needs medical supervision.¹ Immunotherapy may result in remission of allergic rhinitis, as well as reducing the risk of progression to asthma;⁸ moreover the risk of developing new sensitisations to allergens is reduced.⁸ Allergen immunotherapy is the only disease-modifying intervention available.⁹

Management in pregnant women

Pregnancy-induced rhinitis may occur in up to 20% of women and this is usually self-limiting.¹⁰ Nasal douching may be helpful in conjunction with intranasal corticosteroids. Decongestants should be avoided in pregnancy, although antihistamine use may be considered.¹⁰ Pregnant women undergoing immunotherapy for allergic rhinitis should continue treatment, although initiation and dose increments in immunotherapy are inadvisable.¹⁰

Medical management is guided by the frequency and severity of symptoms as well as the impact

on quality of life. It is important to assess whether allergic conjunctivitis is present. Previous treatments for allergic rhinitis and their effectiveness should be assessed. Patients may express a preference as to oral or intranasal treatment.⁴

In summary, the prevalence of allergic rhinitis has increased and causes significant morbidity.² Up to 20% of patients do not achieve symptomatic control with nasal corticosteroids, therefore referral for allergen immunotherapy may be considered.¹

Key learning points

- 1 Allergic rhinitis is a common condition that is relatively under-diagnosed and under-treated.
- 2 It may be associated with inflammation of other mucous membranes and may be related to asthma, rhinosinusitis and allergic conjunctivitis.
- 3 There is an increased prevalence of asthma amongst patients with persistent and/or severe rhinitis.
- 4 Allergic rhinitis may be diagnosed by the presence of nasal itching, sneezing, nasal congestion, rhinorrhoea and post-nasal drip. Symptoms may arise within minutes of allergen exposure and may last for a couple of hours before resolving.
- 5 Unilateral rhinorrhoea may signify the presence of a malignancy, an antrochoanal polyp or a foreign body, or simply septal deviation. In the case of bilateral discharge, consideration should be given to the presence of a granulomatous disorder, nasal polyps or a bleeding diathesis.
- 6 Intranasal corticosteroids are the most effective agents for allergic rhinitis. Oral antihistamines may be useful in those with intermittent, mild symptoms of allergic rhinitis and in those who present with sneezing or rhinorrhoea. However, an intranasal corticosteroid is likely to be more effective.
- 7 Up to 20% of patients do not achieve symptomatic control with nasal corticosteroids therefore allergen immunotherapy may be considered.

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