Update on the treatment of allergic rhinitis

Control of allergic rhinitis has improved significantly, with several safe and effective treatment options now available, writes **Dr Ranbir Kaulsay**

ALLERGIC RHINITIS IS a common IgE (Immunoglobulin E) mediated disease and is associated with both nasal and ocular symptoms. Common presenting nasal symptoms include congestion, itching, rhinorrhoea and sneezing. Nasal symptoms are frequently accompanied by ocular ones, such as itchy eyes, watery eyes and redness.

Most patients presenting to a doctor with allergic rhinitis have moderate to severe disease, meaning that one or more of the following applies:

- Sleep disturbance
- Impairment of daily activities, leisure and or sport
- Impairment of school and or work
- Troublesome symptoms.

These patients experience a negative impact on their quality of life, on their work and on their productivity.

In the past few years there has been an increased awareness of allergic rhinitis on a European level, as the plight of individuals who suffer from a reduced quality of life and productivity was highlighted by the European Academy of Allergy and Immunology as well at a EU parliament level.

The burden of allergic rhinitis and its impact on quality of life, mood and sleep was further reinforced in many recent studies, and the importance of early diagnosis and treatment has been further emphasised. Many other recent studies have especially shown the negative impact that rhinitis has on quality of sleep.

Unfortunately, it has been shown that most patients are unsatisfied with their current control of allergic rhinitis and many patients find themselves on multiple medications to control the disease process. It was found that the most common medications used was a combination of antihistamines and intranasal corticosteroids, still with less than adequate control.

Current guidelines for the treatment of allergic rhinitis based on ARIA (Allergic Rhinitis and its Impact on Asthma) *(see Table 1)* place intranasal corticosteroids as the first line of therapy for the treatment of the disease. Second generation antihistamines may be required, as also may ocular mast-cell stabilisers (cromoglylates etc). New combination intranasal antihistamine/corticosteroid sprays have proven effective in moderate to severe allergic rhinitis and several studies including a recent local study has found this to be an effective treatment.

Diagnosis of allergy

The definitive evidence of allergy, after appropriate history and examination, should be done by either specific IgE measurements or by skin prick testing. There is little value of total IgE measurements and no role for non-medical tests such as kinesiology, VEGA testing or food intolerance testing for rhinitis.

Table 1: Current treatment recommendations (ARIA Guidelines 2010)

	Moderate/ severe intermittent	Mild persistent	Moderate to severe persistent
Mild intermittent	Intranasal corticosteroid		
	Local cromone		
Oral or local non-sedative H1-blocker			
Intranasal decongestant (< 10 days) or oral decongestant			
Allergen and irritant avoidance			
			Immunotherapy

Medical care

The management of allergic rhinitis consists of four major categories of treatment:

- Environmental control measures and allergen avoidance
- Pharmacological management
- Immunotherapy
- Surgery.

Environmental control measures and allergen avoidance involve both the avoidance of known allergens (substances to which the patient has IgE-mediated hypersensitivity) and avoidance of nonspecific, or irritant, triggers. Consider environmental control measures, when practical, in all cases of allergic rhinitis. This reinforces the need for proper and accurate allergy testing.

Pollens and outdoor moulds

Because of their widespread presence in the outdoor air, pollens can be difficult to avoid. Reduction of outdoor exposure during the season in which a particular type of pollen is present can be somewhat helpful. However, it is not ideal to restrict the movement of people when the weather becomes better, nor is it possible in most cases.

In general, tree pollens are present in the spring, grass pollens from the late spring through summer, and weed pollens from late summer through autumn, but

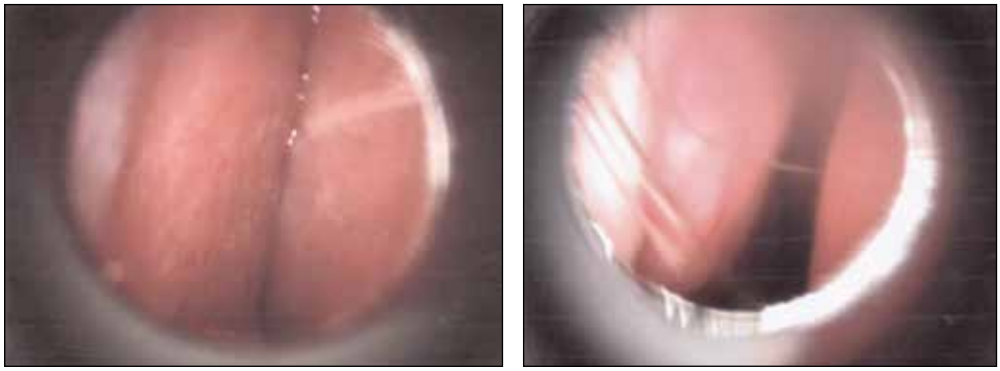

Figure 1. Nasoendoscopic photo of 'boggy' inferior turbinate before (left) and after (right) one month of treatment with intranasal corticosteroid/ antihistamine spray. Improvement in nasal congestion is visible

exceptions to these seasonal patterns exist. Specific area specific pollens such as ragweed and rape seed may also be of importance in certain parts of Ireland. Certain pollen counts tend to be higher on dry, sunny, windy days. Outdoor exposure can be limited during this time, but this may not be reliable because pollen counts can also be influenced by a number of other factors. Keeping the windows and doors of the house and car closed as much as possible during the pollen season (with air conditioning, if necessary, on recirculating mode) can be helpful. Taking a shower after outdoor exposure can be helpful by removing pollen that is stuck to the hair and skin.

Despite all of these measures, patients who are allergic to pollens usually continue to be symptomatic during the pollen season and usually require some other form of management. As with pollens, avoidance of outdoor/seasonal moulds may be difficult. Symptomatic therapy with newer generation antihistamines, nasal corticosteroids and ideally immunotherapy for more severe cases may be necessary.

Indoor allergens

Depending on the allergen, environmental control measures for indoor allergens can be quite helpful. House dust mites are the most common cause of rhinitis throughout the world and this is also the case in Ireland where they are perennial allergens, however, they do tend to peak during the cooler months, when the windows are closed and the central heating is on. This also coincides with a spike in rhinitis and asthma during the cooler months.

Covering the mattress and pillows with impermeable covers helps reduce exposure to dust mites. Bed linens should be washed every two weeks in hot water (60-90˚C) to kill any mites present. Thorough and efficient vacuum cleaning of carpets and rugs with a HEPA based vacuum can help, but ideally carpeting should be removed, especially in the bedroom. The carpet can be treated with one of a number of chemical agents that kill the mites or denature the protein, but the efficacy of these agents does not appear to be dramatic. Dust mites thrive when indoor humidity is above 50%, so dehumidification, is helpful, or better still opening the windows as much as possible.

Indoor environmental control measures for mould allergy focus on reduction of excessive humidity. The environmental control measures for dust mites can also help to reduce mould spores.

For animal allergy, depending on the strength of the allergy, complete avoidance is the best option. For patients who cannot or do not wish to avoid the pet, confinement of the animal in a non-carpeted room may be beneficial, with the exception of large animals where pre-dosing the person with antihistamines may be required for occasional contact. In all cases, immunotherapy is also available in respect to occupational allergy to animals.

Nonspecific triggers

Exposure to smoke, strong perfumes and scents, fumes, rapid changes in temperature (vasomotor rhinitis), and outdoor pollution can be nonspecific triggers in patients with allergic rhinitis. Consider avoidance of these situations or triggers if they seem to aggravate symptoms.

Immunotherapy (desensitisation)

Injectable

A considerable body of clinical research has established the effectiveness of high-dose allergy subcutaneous injections in reducing symptoms and medication requirements. Success rates have been demonstrated to be as high as 80-90% for certain allergens. It is a long-term process; noticeable improvement is often not observed for six to 12 months and, if helpful, therapy should be continued for three years. Injectable immunotherapy is not without risk because severe systemic allergic reactions can sometimes occur. For these reasons, carefully consider the risks and benefits of immunotherapy in each patient and weigh the risks and benefits of immunotherapy against the risks and benefits of the other management options.

Immunotherapy may be considered more strongly with severe disease, poor response to other management options, and the presence of comorbid conditions or complications. Immunotherapy is often combined with pharmacotherapy and environmental control.

Administer immunotherapy with allergens to which the patient is known to be sensitive and which are present in the patient's environment (and cannot be easily avoided). The value of immunotherapy for pollens, dust mites and cats is well established. The value of immunotherapy for dogs and mould is less well established.

There are a number of potential contraindications to immunotherapy, which need to be considered. Immunotherapy should only be performed by individuals who have been appropriately trained, who institute appropriate precautions, and who are equipped for potential adverse events. This route is still used extensively in the US and in other parts of Europe. In my allergy practices I use mostly sublingual immunotherapy.

Sublingual

Sublingual immunotherapy (SLIT) is currently

July/August 2017; Vol 23 No 6 00

increasing in use, particularly in Europe because of its safety and efficacy and the fact that it is licenced and reimbursable for some patients.

In Ireland there have been two sublingual immunotherapy treatments for grass pollen registered and available to us (by GMS and on the Drugs Payment Scheme) since 2008. Oralair (five-grass pollen extract) and Grazax (Timothy grass extract) has been used by myself for patients with severe grass pollen allergy where standard antihistamine and other medicines fail to provide relief). We have many patients on or having completed three years of treatment.

It is then effective in dampening hay fever for at least five years after completion of treatment and as such may be considered to have a disease modifying effect.

Sublingual immunotherapy for house dust mite allergy has been available and used for many years on an unlicensed 'named patient basis'. This has been used in liquid form as sublingual drops with good efficacy and safety, and the greatly anticipated tablet form of this treatment has recently been made available by a number of European allergy companies. One in particular has been manufactured and heavily researched for many years by the same company that makes Grazax and this is known as Acarazax. This tablet is composed of standardised extracts of the two most common species of dust mites, namely *Dermatophagoides pteronyssinus* and *D farinae* and is indicated for allergic rhinitis and allergic asthma due to house dust mite. It has also had a significant positive effect in reducing asthma exacerbations in patients with allergic asthma treated by this sublingual tablet. Hopefully this treatment will get registered by the Irish Medicines Board and become available on the Drug Payment Scheme and Medical Card.

Surgery

For some patients with recurrent sinusitis, nasal polyposis, septal deviation or refractory allergic rhinitis, nasal surgery will be necessary.

Turbinoplasty or radiofrequency turbinoplasty may be the surgical procedure of choice to improve nasal congestion, and to improve ongoing symptoms of allergic rhinitis with or without intranasal medicated sprays and pharmacotherapy.

Nonetheless, control of rhinitis and allergies in general has improved significantly, with many safe and effective treatments and options now available to our patients, young or old.

Reference
1. ARIA Allergic Rhinitis and its Impact on Asthma 2010. J Allergy Clin Immunol 2010 Sep;126(3):466-76. doi: 10.1016/j.jaci.2010.06.047.

Dr Ranbir Kaulsay, Consultant Medical Allergist, Bon Secours Consultants Clinic and Beacon ENT and Allergy Clinic, Dublin

July/August 2017; Vol 23 No 6 00