Allergic Rhinitis - *What Pharmacists Need to Know*

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Introduction

Allergic Rhinitis (AR) is a common condition, estimated to affect 24% of the European population.[1] It is inflammatory in nature, caused by an IgE mediated response to a spectrum of inhaled environmental allergens. Examples include pollens, dust mites, animal dander and moulds.[2] AR is often thought of as a minor health issue and disregarded as having any significant impact on sufferers. However, this is not the case. AR has the potential to impair sleep, work productivity and academic performance. It can significantly impact quality of life (QOL) and potentially lead to life-long consequences when educational and work performance is negatively impacted.[1, 3]

Classification and Diagnosis

Previously, AR was categorised as either seasonal or perennial. However, the ARIA (Allergic Rhinitis and its Impact on Asthma) Initiative, who develop internationally applicable guidelines for allergic respiratory diseases now recommends classification based on symptom duration; intermittent and persistent, and severity; mild–moderate and severe[4] (figure 1). The main symptoms of AR include sneezing, rhinorrhoea, nasal obstruction and itching of the eyes, nose and palate. Other accompanying symptoms can include postnasal drip (thin nasal mucous fluid), cough, irritability and fatigue. It is important to note that AR can occur in association with other conditions. The unified airway model considers the entire respiratory system to be one functional unit therefore pathophysiologic changes in one portion of the airway can provoke changes in another area, for example- poorly controlled AR leading to sinusitis or an asthma exacerbation.[5] It can sometimes be difficult to differentiate AR from other conditions such as acute infective rhinosinusitis and the 'common cold' (figure 2). There are some clues however in a patient history that can help us determine the likely diagnosis. For example, clear nasal discharge is typical of AR and not of infection or other causes. Also, presenting features such as facial pain/pressure/fullness would not be typical for AR. The 'common cold' often first presents with a sore throat, again, not typical of AR (figure 2) and AR symptoms will continue for greater than the standard natural course of a 'common cold'. In the community, this basic assessment of symptoms can easily identify cases of AR allowing for swift commencement of correct treatment.

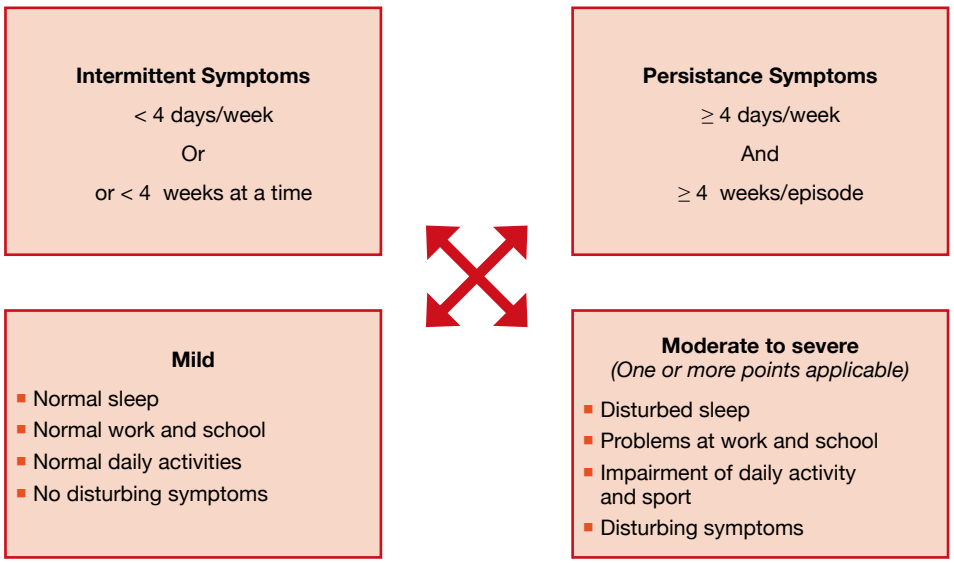
Figure 1: ARIA Classification of Allergic Rhinitis

ARIA guideline https://link.springer.com/article/10.1007/s40629-019-00110-9/figures/7

Management

There are many management strategies that can be trialled in the community to help deal with the troublesome symptoms of AR. These can be pharmacological and non-pharmacological in nature. Non-pharmacological management is primarily allergen avoidance. For example, avoiding animal dander and pollens where possible and avoiding house dust mite (HDM) exposure through use of allergen impermeable bedding or removal of carpets from rooms. However, the costs related to same can be considerable and do not necessarily provide matching benefit. Stopping smoking and avoiding passive smoking can also be beneficial. Unfortunately, lifestyle changes alone will do little to alter the natural course of the disease. Pharmacological management is therefore the mainstay of treatment. In 2019, ARIA updated its evidence based stepwise pharmacological approach to managing AR.

Initial management can include over the counter second generation antihistamines, short-term use decongestants or saline rinses and these can be successful at treating mild intermittent cases. Prescription-only second generation antihistamines or leukotriene receptor antagonists can also be used in these cases. However, in severe persistent AR first line recommended treatment is intranasal corticosteroids (INCS).[6] It has found that oral antihistamines are less effective in controlling all rhinitis symptoms compared to INCS and have limited impact on nasal obstruction which is a key symptom that drives extra-nasal complications such as fatigue. It is acknowledged however that many patients prefer oral medications.[6] The concomitant use of an INCS and oral antihistamine was not found to provide an increased positive effect although this is common practice.[6] For persistent severe symptoms which do not respond to INCS therapy alone a combination therapy of INCS and intranasal antihistamine should be commenced.[6, 7] Second generation antihistamines are preferred based on side effect profiles. The addition of an ocular antihistamine should also be considered in patients suffering from AR conjunctivitis.[6] Ultimately, patients who continue to have persistent symptoms despite maximum treatment should be referred for specialist review and consideration for allergy immunotherapy (AIT).[6] AIT is only available through specialist clinics. Sublingual options are the mainstay in Ireland. These therapies are generally continued for three years duration. Depending on the preparation, the cost may be incurred directly by the patient or via The National Drug Payment Scheme, therefore,



Symptoms suggestive of Allergic Rhinitis	Symptoms usually NOT suggestive of Allergic Rhinitis
One or more symptoms for >1 hour on most days Watery anterior Rhinorrhoea Sneezing Nasal obstruction Nasal pruritis Conjunctivitis	Unilateral symptoms Nasal obstruction without other symptoms Thick mucous production Pain Recurrent epistaxis Anosmia

Figure 2: Symptoms suggestive and not suggestive of AR

significant personal and financial commitment can be required.

Following evidence-based practice and providing patients with the correct treatments is only part of the solution in the treatment of AR. To maximise the chances of success it is vital that patients strictly adhere to and correctly administer their medications. These medications have a limited long-lasting effect and so regular administration is required. Counselling patients on the importance of adherence is paramount when commencing a treatment regime for AR. In the case of AR symptoms related to the pollen season only, patients should be advised to commence regular treatment one to two months before the start of the season to increase the chances of symptom control, by reducing immunological priming of the nasal mucosa. The level of management possible in the local pharmacy will depend on the requirement for over the counter versus prescription only medications.

It is important to recognise when a patient may require prescription medication and/or medical review. For example, when symptoms are persistent and severe despite initial treatments or if there are red flag symptoms such as persistent unilateral nasal obstruction, regular severe epistaxis or anosmia (figure 2).

Pregnancy

Allergic diseases such as AR can affect between 18-30% of females of childbearing age.[8]

Rhinitis secondary to pregnancy can also occur, due to increased oedema of the nasal mucosa, which can in turn aggravate an already diagnosed AR. Like many conditions in pregnancy, AR can improve, worsen, or remain the same. Decisions regarding AR treatment in pregnancy should again be based on best evidence-based practice. Allergen avoidance and non-pharmacological management should be first line for mild symptoms. For those who do not find relief from these measures non-sedating second generation antihistamines are the recommended choice. Cetirizine and loratadine have been found to have favourable safety profiles in pregnancy and are recommended as first line.[9,10] There is limited data on the safety of intranasal corticosteroids during pregnancy, but these do not suggest increased risk of adverse outcomes and budesonide, ciclesonide, fluticasone, and mometasone are considered probably safe in use.[9,10] The use of intranasal antihistamines is not expected to cause an increased risk of congenital anomalies however this is based on animal data at this time.[10]

Take Home Points

- Allergic rhinitis is a common condition yet often underdiagnosed and undertreated leading to significant impairment in quality of life.
- Simple case by case evaluation can elucidate likely cases of AR versus other common respiratory conditions.
- Evidence based guidelines are available for correct treatment of AR and should be used in all cases.
- AR in pregnancy can still be treated with standard medication regimes.
- Persistent and severe AR should be referred to a primary care physician for further management options.
- Onward referral to specialist services may be considered in those who remain highly symptomatic despite adequate adherence to treatment. Specialty services may then consider sublingual immunotherapy options if indicated.

References upon request