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Management of allergic rhinitis

ASCIA Education Resources information for health professionals

Allergic rhinitis (hay fever) is a common disorder, affecting up to forty per cent of people in Australia and New Zealand. Its prevalence has doubled over the past 25 years. Far from being a trivial illness, untreated allergic rhinitis has a significant impact on quality of life, mood, other medical conditions (including asthma and sinusitis), learning and work performance and can last for several years. Although there are no cures for allergic rhinitis, symptoms can be effectively prevented or treated. Options include:

- **Avoidance of allergic triggers**
- **Medication (topical and oral)**
- **Non medicated treatment**
- **Immunotherapy**

Seasonal allergic rhinitis

Seasonal (or intermittent) allergic rhinitis (most often referred to as hay fever) is triggered by wind borne pollen most commonly from grasses, weeds and sometimes trees. While symptoms occur mostly during the Spring and Summer months, the allergens involved, geographical location and rainfall are all important influences. Pollen exposure is highest in the morning, when outside, on windy days and after thunderstorms.

Perennial allergic rhinitis

Perennial (or persistent) allergic rhinitis occurs throughout the year and is most commonly triggered by exposure to house dust mites. Symptoms are often worse in the early morning or at night. Animal dander (especially cat) and mould spores may trigger similar symptoms. Cockroach is a relatively uncommon allergen in Australia and New Zealand. Food allergens seldom trigger rhinitis.

Symptoms of allergic rhinitis

Most cases of allergic rhinitis begin in the teens or early adult life and improve by the fourth or fifth decade of life. Symptoms include sneezing, itching and copious, thin, watery discharge. Nasal obstruction is also common, particularly in perennial rhinitis. Symptoms are less common in infants or very young children. When they do occur, obstruction may interfere with feeding and contribute to irritability.

Untreated or inappropriately treated allergic rhinitis can result in poor quality sleep, fatigue and daytime sleepiness. Severe allergic rhinitis can also:

- make asthma more difficult to control;
- make people more prone to sinus infections;
- impair learning and behaviour in children;
- result in bad breath, a husky voice and sore throats;
- make people tired and run down due to poor quality sleep;
- worsen snoring and the tendency to have sleep apnoea in adults;

- result in eye infections because people rub itchy eyes; and
- cause abnormal development of the mouth and teeth from chronic mouth breathing.

Taking the history is important

Important information includes:

- the type and duration of symptoms;
- whether they are perennial or seasonal;
- whether there is any seasonal exacerbation;
- aggravating and relieving factors;
- use and compliance with medication;
- other intercurrent allergic disease eg. asthma, atopic dermatitis
- family history;
- occupation and hobbies;
- home and work environments; and
- the presence or absence of systemic symptoms.

Differential diagnosis is important

A common problem in patients is the distinction between allergic rhinitis and infection, either the “common cold” or sinusitis. In allergic rhinitis, watery rhinorrhoea tends to persist and itching of nose, eyes, palate and ears are more prominent.

Infections due to rhinovirus may result in thickened or discoloured secretions, but symptoms rarely persist beyond a week.

Sinusitis should be suspected with prolonged symptoms of discoloured nasal discharge or post-nasal drip, particularly when associated with bad taste or bad breath, impaired sense of smell, facial pain, cervical lymphadenopathy or recurrent sore throats.

Allergic rhinitis should be considered in patients with:

- continuous or recurrent upper respiratory infections;
- frequent sore throats;
- mouth breathing and snoring;
- a feeling of pressure over the sinuses;
- recurrent infective sinusitis;
- headaches; and
- recurrent upper respiratory tract or middle ear infections, particularly in children.

Other causes of rhinitis

COMMON

- Non-allergic (vasomotor) rhinitis
- Sinusitis
- Recurrent upper respiratory tract infection (particularly in young children)

LESS COMMON

- Anatomical abnormalities eg nasal septal deviation
- Nasal polyps
- Foreign bodies (particularly in young children)
- Pregnancy
- Hypothyroidism
- Medication eg antihypertensive agents, oral contraceptive pill
- Rhinitis medicamentosa (due to abuse of topical decongestant sprays)
- Occupational rhinitis (eg animal exposure, woods dusts, industrial enzymes, food processing, latex)

RARE

- Malignancy
- Vasculitis (eg Wegeners Granulomatosis)
- Sarcoidosis
- Atrophic rhinitis

- Cocaine abuse

Management of allergic rhinitis - options

SETTING THERAPEUTIC GOALS

It is useful to establish short, medium and long-term goals in managing this chronic condition. These include:

- short-term relief that usually helps within days (medication);
- medium term measures to reduce reliance on medication (allergen avoidance, if possible); and
- long-term options including immunotherapy, particularly if medication is poorly tolerated or ineffective and allergen avoidance is difficult.

AVOIDANCE OF ALLERGIC TRIGGERS

The first step in the management of allergic rhinitis is to identify the cause(s) of the problem, and then remove or avoid the cause(s) where possible. Neither medications nor immunotherapy should be used as substitutes for, but rather as adjuncts to, reducing exposure to allergic triggers.

In some cases a cause may be obvious (eg pet allergies). In other cases it may be necessary to seek medical advice to help identify the offending allergen/s. Skin Prick Tests or RAST test results should be interpreted by a doctor trained in allergy. If the diagnosis is in doubt and the offending allergen is not identified, referral to an allergy specialist may be required. Once the cause(s) is identified, steps can be taken to avoid or minimise exposure.

MEDICATION

TOPICAL MEDICATION

- **Corticosteroid nasal sprays** (eg. Rhinocort, Rhinocort HayFever, Nasonex, Budamax, Beconase, Allermax, Aldecin) have been shown to be effective in the management of allergic rhinitis, particularly in people with severe and prolonged symptoms and when congestion is an important symptom. They relieve nasal blockage, discharge, sneezing, nasal itch, post-nasal drip and eye symptoms. Corticosteroid nasal sprays act as prophylactic agents and are not intended to relieve acute symptoms, hence they need to be used on a regular basis. Careful patient education is necessary to ensure correct usage of the drug. Once control of symptoms has been achieved the dosage should be reduced progressively to the minimum dose to control symptoms. Daily use is required in most patients. Prolonged therapy may be required and they can be used long-term with safety, under medical supervision. While antihistamines are generally considered to be first line therapy for children, recent studies suggest that intra-nasal corticosteroids should be considered for first line therapy in view of their safety profile and cost-effectiveness. When used, caution needs to be taken to ensure that excessive amounts of topical corticosteroids are not being administered (eg in asthma management).
- **Antihistamine nasal sprays and eye drops** – (eg Rhinolast, Livostin, Azep) act rapidly (within minutes) to relieve sneezing or itching and are generally well tolerated. In general, they are less effective at relieving severe nasal congestion.
- **Decongestant nasal sprays or drops** provide quick relief, but should only be used in the short-term (up to a maximum of 5 days) to clear excessive nasal blockage. In patients with severe nasal obstruction, they may be used for a few days to open the air passages to allow access to the nasal mucosa by corticosteroid nasal sprays. Repeated or long term use of nasal decongestant sprays can lead to rebound swelling of nasal mucosa with the need to use ever increasing amounts of medication. This condition is known as rhinitis medicamentosa and it can eventually lead to atrophic rhinitis.

- **Anticholinergic sprays** - (eg Atrovent aqueous) are very effective in reducing watery rhinorrhoea.
- **Mast cell stabilising nasal sprays or eye drops** - (eg Rynacrom nasal sprays, Patanol eye drops, Opticrom eye drops, Lomide eye drops) reduce inflammation with regular use.

ORAL MEDICATION

- **Antihistamines** are the first line of treatment in allergic rhinitis, particularly in children, who may prefer an oral medication to topical nasal sprays. Having a systemic effect they are particularly useful where there is multiple organ involvement, for example allergic conjunctivitis and atopic eczema together with allergic rhinitis. They are useful in helping to control sneezing, itching, nasal congestion and runny nose due to allergy, but not as successful at controlling severe nasal blockage and dribble. The advantage of antihistamines is their flexibility. They can be used as needed, regularly or to prevent symptoms when exposure to allergen is anticipated. The newer antihistamines (eg Zyrtec, Telfast, Lorastyne, Claratyne, Claramax) are significantly less sedating than the older antihistamines.
- **Decongestant (Pseudoephedrine or Phenylephrine) tablets** (eg Sudafed) will unblock and dry the nose. They should be used with caution in patients with hypertension, angina, prostatism and thyrotoxicosis. They are contra-indicated in patients taking monoamine oxidase inhibitor antidepressants. Side-effects include restlessness, insomnia, and tachyarrhythmias.
- **Combination drugs containing antihistamines and decongestants** (eg Telfast Decongestant, Clarinase) provide greater symptomatic relief than antihistamines alone, particularly when nasal congestion is a prominent symptom. However, as they contain decongestants, the same cautions, contraindications and side effects apply to them as with decongestants used alone.
- **Systemic corticosteroids** are indicated for allergic rhinitis only in exceptional circumstances, where there is intense irritability of the nose or severe obstruction. They should only be used short-term under medical supervision. There is no justification for the use of depot injections of steroids.
- **Leucotriene antagonists** (eg Singulair) have been used in some studies with limited success, either alone or in combination with antihistamines. While topical nasal steroids appear to provide superior symptoms control, these drugs may provide additional relief in selected patients.

NON-MEDICATED TREATMENT

However 'natural' they may seem, patients should be encouraged to provide information about any 'non medicated' treatments (eg dietary supplements, herbs) they are taking, as some can cause adverse side effects and interactions with medications. It is important to emphasise to patients that alternative medicines have not been subjected to the rigorous study of effectiveness and side effects that conventional drugs undergo.

Steam and salt water (saline) sprays used on a regular basis can help to relieve nasal blockage and thick secretions.

Echinacea should be used with caution, particularly in people who are allergic to pollen, as several adverse reactions have been reported. Information on this be obtained on the ASCIA website.

DIET AND RHINITIS

Diet has only a minor influence on symptoms in most people. The results from strict "elimination diets" are usually disappointing and may affect nutrition. Despite common

mythology, there is no good evidence that "milk makes mucus", or that milk worsens either hay fever or asthma. Nasal symptoms may sometimes occur after eating hot or spicy food or alcohol. This is called "gustatory rhinitis". It appears to be a reflex phenomenon, resulting from stimulation of nerve endings that trigger glands to secrete more mucus. Anticholinergic (Atrovent) nasal spray is often effective, particularly if used before eating.

IMMUNOTHERAPY

Immunotherapy (desensitisation) is the closest thing to a cure for allergic rhinitis and an effective adjunct to drug therapy in selected patients. It should be prescribed only by allergy specialists and only after allergen avoidance and drug treatment have been instituted.

Immunotherapy involves the administration of gradually increasing amounts of allergic material, usually given to patients by injection over a period of years. These allergy injections alter the way in which the immune system reacts to allergens, by "switching off" allergy. The end result is that patients become "immune" to the allergens, so that they can tolerate them with fewer or no symptoms.

Immunotherapy is often recommended for treatment of allergic rhinitis (and sometimes asthma) when:

- symptoms are severe;
- the cause is difficult to avoid (eg grass pollen);
- medications are unhelpful or cause adverse side effects; and
- patients need medication most days.

ALLERGY PREVENTION IN CHILDREN

Allergies are often life-long and although treatable, there are not curable. It therefore makes sense to try to prevent allergies in children.

In children with a strong family history of allergies it is suggested to breast feed infants (where possible), avoid exposure to environmental tobacco smoke, delay introduction of allergenic foods and minimise exposure to dust mites.

Indications for specialist referral

- Suboptimal response to standard treatment
- Atypical presentation
- Diagnosis uncertain
- Recurrent/chronic sinus or middle ear infection
- Systemic symptoms
- Immunotherapy is contemplated

FURTHER READING FOR HEALTH PROFESSIONALS

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For further information on allergy, asthma or immune diseases, visit www.allergy.org.au – the web site of the Australasian Society of Clinical Immunology and Allergy (ASCIA). ASCIA is the peak professional body of Clinical Allergists and Immunologists in Australia and New Zealand.

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