

PJ PRACTICE CHECKLIST

OTC TREATMENT OF HAY FEVER

The choice of drug for treatment of hay fever in community pharmacy has widened considerably with the recent move of several compounds from POM to P. This card explains how, and when, the various different types of drug should be used.

COUNTERPRESCRIBING POINTS

- **First line treatment** — H₁-antihistamine compounds form the first-line treatment for hay fever. The so-called non-sedative antihistamines may still cause drowsiness in a few patients but the incidence is much lower than with conventional antihistamines
- **Drug interactions** — If terfenadine or astemizole is recommended, be particularly careful about potential drug interactions and disease states which may lead to enhancement of adverse effects
- **Cromoglycate eye drops** — Sodium cromoglycate eye drops, which often give prompt symptom relief, are a useful adjunct to antihistamines when the latter fail to control ocular symptoms
- **Decongestants** — Topical nasal decongestants should only be used intermittently
- **Intranasal corticosteroids** — Intranasal beclomethasone dipropionate and flunisolide are useful for controlling nasal symptoms and are particularly useful at times of high pollen counts when antihistamine cover is inadequate. These products should be avoided in children under 12
- **Prophylaxis** — Intranasal sodium cromoglycate, flunisolide and beclomethasone are best used prophylactically throughout the hay fever season. Such treatment should ideally be recommended only in those with a history of inadequate hay fever control by antihistamines. These agents have a long history of safe use
- **Use in pregnancy and lactation** — There is limited experience of the use of the newer antihistamines in pregnant and lactating women. Therefore the agents should be avoided in those patients. With beclomethasone and flunisolide the usual referral is advised

PREVALENCE OF HAY FEVER:

Estimates of the prevalence of hay fever show wide variation. Studies based on medical diagnosis suggest prevalence rates ranging from 1 per cent to 20 per cent. However, surveys based on self-diagnosis report much higher rates.

AETIOLOGY: Hay fever is an allergy to pollen; hence the synonymous term pollenosis and the marked seasonal pattern in the development of symptoms. The broader term allergic rhinitis encompasses both hay fever and perennial rhinitis, which

is caused by other allergens. In both hay fever and perennial allergic rhinitis, the symptoms are due to the release of vasoactive mediators (histamine, prostaglandin D₂, leukotrienes and chemotactic factors) resulting from coupling of the allergen to mast-cell-bound IgE. These in turn lead to release of neurological mediators, infiltration by inflammatory cells and the symptoms of nasal and ocular allergy, namely, profuse rhinorrhoea, nasal obstruction, sneezing, nasal and ocular itch, and conjunctivitis

TREATMENTS: Hay fever may be controlled pharmacologically through one of several mechanisms:

- Blocking of mediator release following interaction between the pollen allergen and mast-cell-bound IgE
- Competitive blocking of receptors following release of the mediators
- Control of symptoms after their appearance
- Desensitisation

H₁-ANTIHISTAMINES: These

compounds block histamine H₁ receptors competitively and as a result inhibit the adverse effects of histamine, notably itching, sneezing and congestion. As many as half of all hay fever patients become symptom-free on H₁-antihistamine compounds alone. The H₁-antihistamine compounds can be classified into two groups: sedative and essentially non-sedative antihistamines. Typical drugs in the former group are chlorpheniramine and promethazine. The non-sedative antihistamine compounds are acrivastine, astemizole, cetirizine, loratadine,



and terfenadine, which have all relatively recently been transferred from prescription only medicines to pharmacy only drugs. (There is, however, no OTC pack of acrivastine on the market at present.) A major concern with some of the newer antihistamine compounds is their potential cardiotoxic effects. In particular, prolongation of QT interval and ventricular arrhythmias have been reported at doses of terfenadine and astemizole higher than those recommended by manufacturers and in patients with liver disease or patients receiving drugs which inhibit the metabolism of the antihistamines (by inhibiting cytochrome P450). Patients with electrolyte imbalance are also at increased risk of cardiac adverse effects from astemizole and terfenadine. Intranasal antihistamine (azelastine) is now available, albeit on prescription only. There is no reason to expect it to be substantially better than earlier intranasal antihistamines which have now been discontinued.

WHICH NON-SEDATIVE ANTIHISTAMINE? Prolongation of the QT interval has been reported with terfenadine and astemizole but not with the other non-sedative antihistamines. Therefore in the presence of potential drug interactions and risk factors for cardiotoxicity, cetirizine, loratadine and (if an OTC product is marketed) acrivastine may be preferable. However, these three antihistamines are new drugs and vigilance for potential adverse effects is required. Astemizole and loratadine may have a slower onset of action than the other three compounds, although the clinical significance of these differences when treating hay fever is not clear. Acrivastine is

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Drug combinations to be avoided with astemizole and terfenadine

- Oral imidazole antifungal agents, including ketoconazole and itraconazole
- Macrolide antibiotics including erythromycin
- Drugs with arrhythmogenic potential (quinine chloroquine, haiofantrine, mefloquine, tricyclic antidepressant drugs, antipsychotic drugs, antiarrhythmic agents) and those which may cause electrolyte imbalance including diuretics, excessive laxatives

short-acting and is sometimes regarded as a useful rescue antihistamine compound.

CORTICOSTEROIDS: Oral steroids are rarely justified in hay fever. Topical corticosteroids control nasal symptoms effectively. They block mediator release and reduce or abolish the inflammatory response. Beclomethasone dipropionate and flunisolide aqueous nasal sprays are now available without prescription. Following intranasal application the extent of steroid absorption into the systemic circulation is low and adrenal suppression is unlikely. Intranasal corticosteroids usually take a few days to exert optimum effects and continued prophylactic use is required to maintain those effects. Provided there is no other underlying pathology, even prolonged use of such intranasal corticosteroids throughout the hay fever season appears to be safe.

CROMOGLYCAT: Sodium cromoglycate (cromolyn sodium or disodium cromoglycate) is available as a nasal spray, a nasal drop, an eye drop and a dry powder capsule for nasal insufflation. The formulation to be recommended depends very much on the patient's preference and the most distressing symptoms present. With the nasal products, continued use throughout the hay fever

season is required as the drug is essentially prophylactic.

The classical explanation for sodium cromoglycate's mode of action is that it inhibits the release from sensitised mast cells of the mediators participating in the allergic reaction. More recent data suggest that additional mechanisms may be involved, since relief of ocular symptoms can occur within minutes of application of the eye drops. Sodium cromoglycate appears to be less effective at controlling nasal symptoms than ocular symptoms. NB: The preservative in the eye drops interacts with soft contact lenses.

DESENSITISATION: Only patients who fail to respond to the more conventional therapy are considered for desensitisation therapy. This treatment is contraindicated in young children and in patients who are asthmatic, pregnant or receiving beta-blockers. Recalcitrant cases of hay fever may benefit from desensitisation therapy using well-defined extracts.

DECONGESTANTS: Antihistamines often fail to provide relief from nasal congestion. For this reason, decongestants are used both orally and topically in hay fever. Combination products containing H₁-antihistamines and sympathomimetic decongestants are also available. Until more extensive data become available, it would be wise to avoid concomitant use of the newer antihistamines with sympathomimetic agents (ephedrine, pseudoephedrine, phenylpropanolamine and phenylephrine). Topical decongestants should only be used for short periods in order to avoid rebound congestion.

TOPICAL ANTICHLINERGICS: Agents such as ipratropium block cholinergic reflexes and hence control

rhinorrhoea. They leave other symptoms unaffected and are therefore very much second line agents.

TREATMENT ALGORITHM: An oral H₁-antihistamine remains the treatment of first choice for hay fever. Many clinicians will recommend starting with one of the non-sedative compounds. It is important to remember the potential interactions with astemizole and terfenadine. Any patient receiving cardioactive drugs or who suffers from liver disease should also avoid those drugs.

Patients who fail to respond adequately to the H₁-antihistamines often obtain improved relief from the addition of intranasal corticosteroids, ocular or intranasal sodium cromoglycate or topical decongestants (oxymetazoline, xylometazoline). Such supplementary treatment may be particularly required at times of unusually high pollen counts and later in the hay fever season as a result of earlier priming of the IgE response.

Ocular symptoms may benefit from frequent use of sodium cromoglycate eye drops. These drops provide rapid relief and may be considered to be first-line therapy in cases when ocular symptoms of hay fever are the only significant complaint. Likewise, intranasal corticosteroids may be the agents of choice when nasal symptoms are particularly difficult to control. Any patient who fails to obtain adequate relief from H₁-antihistamines with or without sodium cromoglycate or corticosteroids should be referred.

THE
PHARMACEUTICAL
JOURNAL

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The Pharmaceutical
Journal
in collaboration with the
Centre for Pharmacy
Postgraduate Education
at Manchester university