

Symptom control in patients with hay fever in UK general practice: how well are we doing and is there a need for allergen immunotherapy?

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Summary

Background Seasonal allergic rhinitis is often regarded as a trivial condition which patients should treat themselves. However, a significant proportion of sufferers are not fully controlled on standard hay fever medication, either because they do not use it properly or because their symptoms are resistant to standard therapy. The latter group may be suitable for allergen immunotherapy, which was once widely available in UK general practice but is now only available through specialist centres.

Aims To describe the symptom control of patients with hay fever, to assess concordance with prescribed medication, and to estimate the number of patients who may benefit from referral for allergen immunotherapy.

Setting General practices in Hampshire and Dorset, UK.

Method Survey of adult hay fever sufferers prescribed a non-sedating antihistamine and nasal steroid spray by their general practitioner. A postal questionnaire was sent to all eligible patients aged 16–64 registered with 16 general practices. Self-assessment of symptom control and reported compliance with medication were used to identify those patients who were suboptimally controlled and might therefore benefit from immunotherapy.

Results Eight hundred and forty-six out of 62 500 registered patients aged 16–64 (1.4%) were receiving both drugs, and responses were received from 627 (74.1%); 526 of these met the full entry criteria. One hundred and forty-two patients (27.0%) were using both types of drug regularly. Of the 142 patients using optimum pharmacotherapy, 54 (38.0%) reported good control of their hay fever symptoms. The remaining 62.0% experienced troublesome residual symptoms and described symptom control as partial or poor. Among those using suboptimal pharmacotherapy, 181/376 (48.1%) reported good control.

Conclusion Many patients are using treatment inappropriately. Current guidelines need to be applied better but there is also a significant burden of residual symptoms, even among those receiving current optimal therapy. This indicates a need for patients with severe summer hay fever to receive specialist assessment.

Keywords: antihistamine, hay fever, immunotherapy, rhinitis, steroid, symptom control

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Introduction

Over the last 20 years there has been a fourfold increase in

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general practitioner consultations for allergic rhinitis [1]. This is thought to represent a combination of a true increase in prevalence together with changes in diagnostic skills and awareness [2–4]. Allergen avoidance is of little value for seasonal rhinitis and current treatment plans in the UK are

based on oral antihistamines, nasal sprays (cromoglycate and steroid) and, occasionally, systemic corticosteroids. For those not controlled by pharmacotherapy, allergy immunotherapy (AI) remains a theoretical option [5]. Prior to 1986 AI was widely used in general practice to control the symptoms of both seasonal and perennial rhinitis. This practice ceased in 1986, when the CSM imposed a 2 h observation period after each injection and restricted use of AI to specialist centres where full facilities for cardiopulmonary resuscitation were immediately available [6]. Subsequently, reports have confirmed the efficacy of AI for seasonal and perennial rhinitis that has failed to respond to conventional drug therapy [7,8] and the observation period has been reduced to 1 h [7], but AI has not regained its place among mainstream therapies for hay fever, mainly because specialist allergy services are unevenly distributed across the UK and healthcare purchasers have varied in their willingness to purchase specialist advice for this group of patients. The purpose of this study was to assess the level of symptom control as perceived by patients with seasonal allergic rhinitis in general practice and the potential need for AI for this condition in the UK.

Method

Sixteen general practices in Hampshire and Dorset participated in the study, five in 1994 and 11 in 1995. Practices identified from their computerized prescribing records all patients aged between 16 and 64 who had received a prescription for a non-sedating antihistamine and steroid nasal spray at any time between January and August of the study year. A questionnaire was sent to these patients in September of that year, with a covering letter from their own doctor. A reminder letter was sent after 3 weeks. The four page structured questionnaire had sections on symptoms for each of the target organs (eyes, nose, chest) and general well-being. Patients were asked to grade each symptom as either relieved, partially relieved or not relieved by medication. Information on medication, frequency of use, seasonality of symptoms and contra-indications to immunotherapy were also collected. Descriptive statistical analysis and chi-square tests were performed using SPSS PC version 4.0.

Results

A total of 846 patients was identified as having been prescribed a non-sedating histamine and a steroid nasal spray in the reference period. Six hundred and twenty-seven (74.1%) questionnaires were returned, of which 61 were excluded from analysis as they reported receiving the medication for conditions other than hay fever, for example urticaria, sinusitis or perennial rhinitis. A further 41 patients

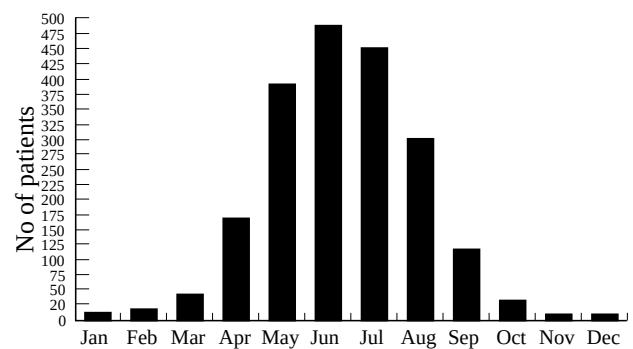


Fig. 1. Number of patients identifying each month as a bad month for their hay fever ($n = 256$). Patients were invited to mark as many months as they wished.

completed the questionnaire but did not report any seasonal peak of their symptoms, suggesting that they had perennial rhinitis without exacerbation in the pollen season.

The subsequent analysis is based on the remaining 526 patients correctly identified as receiving treatment for hay fever. The mean age was 32.8 years [median 31; sd 13.3]; 54.9% (289/526) of respondents were female. Hay fever symptoms were most prevalent between and including May and August with a peak in June (494/526 (93.9%) patients) (Fig. 1); 45.6% (236/517) reported good symptom control, 50.7% (262/517) reported partial control and 3.7% (19/517) poor control. Four patterns of medication use were identified: pattern A — antihistamine and steroid nasal spray daily in 142 (27.0%); pattern B — regular steroid nasal spray and intermittent use of an antihistamine in 97 (18.4%); pattern C — antihistamine daily and nasal steroid spray intermittently in 66 (12.5%); and pattern D — irregular or intermittent use of both antihistamines and steroid nasal spray in 221 (42.0%) (Fig. 2).

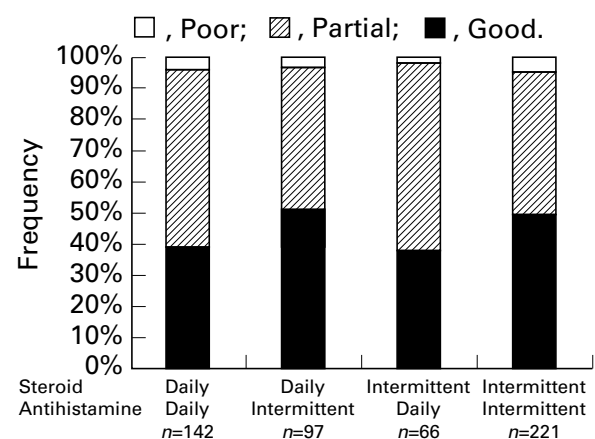


Fig. 2. Proportion of patients in each treatment group reporting good, partial or poor overall control of hay fever symptoms. Daily, daily usage during season; Intermittent, intermittent or irregular use in season.

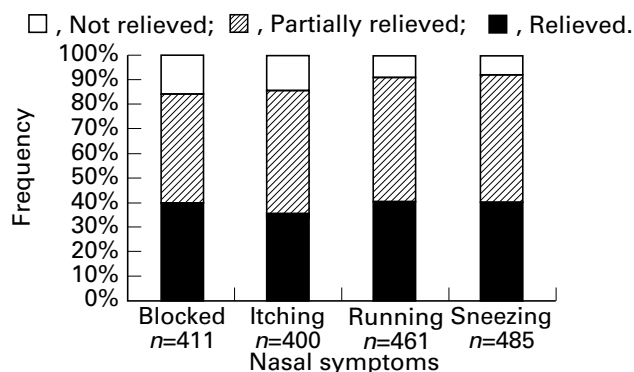


Fig. 3. Proportion of patients reporting good, partial or poor relief of nasal symptoms of hay fever.

The prevalence of hay fever symptoms experienced by the respondents is shown in Figs 3, 4 and 5. Nasal symptoms were the most commonly reported with 92.2% (484/526) experiencing sneezing, 87.6% (461/526) running nose, 78.1% (411/526) blocked nose and 76.0% (400/526) nasal itch when untreated. Many patients reported full or partial relief of these symptoms on treatment, but 7.6% (37/484) reported continuing sneezing, 8.6% (40/461) running nose, 16.1% (66/411) blocked nose and 14.3% (57/400) itching despite therapy. Patients' assessment of global control was superior to the control they reported for individual symptom groups; only 3.7% (19/517) reported poor overall control although 11.4% reported no relief of nasal symptoms, 13.3% no relief of eye symptoms and 28.0% no relief of general symptoms.

A subgroup of 60 (11.4%) patients had also received a intramuscular depot steroid preparation (usually triamcinolone — Kenalog). Four of these patients (6.8%) reported poor overall control, a similar proportion to those on regular oral and nasal medication (4.3%) ($P = 0.5048$, Fischer's exact test).

Among those hay fever patients taking maximal therapy

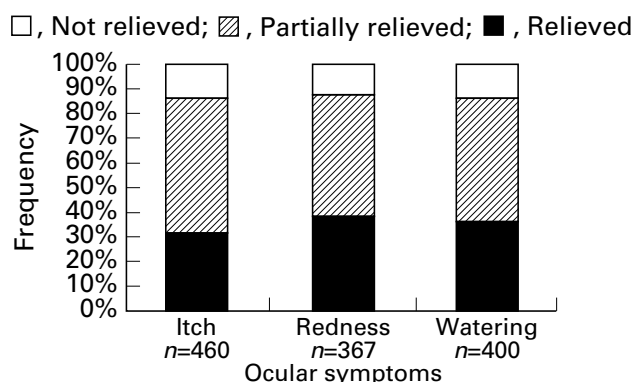


Fig. 4. Proportion of patients reporting good, partial or poor relief of ocular symptoms of hay fever.

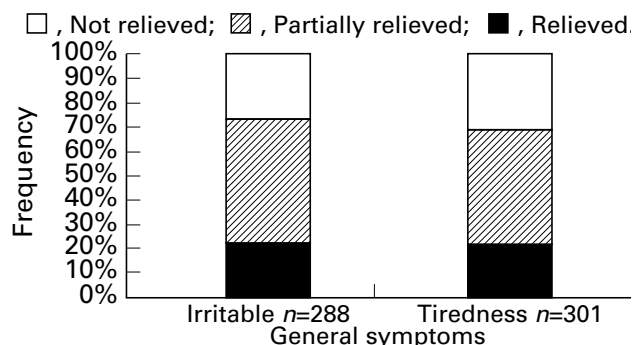


Fig. 5. Proportion of patients reporting good, partial or poor relief of systemic symptoms of hay fever.

(regular antihistamine and regular nasal steroid), 4.3% (6/141) patients reported poor control and 56.7% (80/141) partial control of their hay fever symptoms. Of these maximally treated but inadequately controlled patients, 9.3% (8/86) were judged unsuitable for AI because of comorbidity or medication. A further 20.9% (18/86) had persistent asthma, a relative contraindication to AI. Thus, depending on whether those with asthma are excluded or not, this leaves either 11.4% (60/526) or 14.8% (78/526) of the hay fever patients in this study as suitable for AI under current UK guidelines. If these figures are extrapolated to the whole UK population, assuming a similar age structure and hay fever prevalence elsewhere, this would amount to 64410 patients aged between 16 and 64 who would be eligible for AI across the whole UK.

Discussion

This study has confirmed a significant level of morbidity associated with seasonal allergic rhinitis in a population who received both antihistamines and nasal corticosteroids from their GPs. Fifty-four per cent of patients reported partial or poor control of symptoms; 69.4% of these (195/281) were not taking their medication as per current guidelines and might therefore improve if they were encouraged to use their medication to the best effect. The remaining 30.6% of those not fully controlled were already using their drugs as per guidelines and were still suboptimally controlled. Under current UK guidelines these patients would qualify for AI, provided they had no contraindications. Contraindications to AI were identified in 9% of the eligible patients in the present study.

In the past, hay fever has been regarded as a nuisance but not something that requires much attention from doctors. Indeed, most antihistamines and some nasal steroid sprays are now available as over-the-counter products. However, hay fever is becoming more and more common and despite the introduction of second generation, non-sedating

antihistamines, considerable morbidity may occur. Indeed, allergic rhinitis can have at least as much impact on quality of life as severe asthma [9,10].

Poor relief of hay fever symptoms may arise for many reasons. Many patients self-medicate and may not realize that full relief is possible. Treatment failure may be due to commencing therapy too late in the season and prescribing nasal sprays into noses that are already blocked. Poor prescribing, especially the continued use of obsolete sedating antihistamines, means that patients may choose to put up with their symptoms rather than accept treatment side-effects. Steroid nasal sprays are not always well tolerated: about 10% of patients who use them experience epistaxis and are therefore unable to benefit from these sprays. As shown in the present study, a significant proportion of patients with unrelieved symptoms have been prescribed maximal drug therapy but do not use it appropriately. Finally, it should be recognized that there is a significant minority whose symptoms cannot be controlled despite using full pharmacotherapy appropriately. These patients might well benefit from AI but this is not widely available at present.

Patients' concordance with optimum therapy in this study was poor. The design of the study did not enable us to explore why this should be so but we speculate that multiple factors may contribute, including dislike for the multipharmacy approach; failure to warn patients that they need to take their treatment on good as well as bad days; patients trading off medication benefits against inconvenience and side-effects.

A relatively small proportion of patients were identified as receiving both nasal steroids and oral antihistamines on prescription for hay fever, which translates into a population prevalence of 11.4 per 1000 as compared with recent estimates of 11% for all grades of hay fever [5]. Among those receiving both drugs on prescription, only 46% reported complete symptom control. The remaining 54% had partial or poor control and at least 15% would be suitable for AI even on the very restrictive selection criteria currently in force in the UK [5,7]. Our estimate for the number of UK patients who might benefit from AI is conservative. It excludes those patients currently uncontrolled on submaximal therapy who might remain symptomatic even with optimum therapy and a further group of patients who are well controlled but might nevertheless prefer to have a course of immunotherapy rather than the inconvenience of taking regular medication each summer. Recent, widely publicised fears about the safety of certain antihistamines may further enhance patients' requests for immunotherapy [11,12].

We have not attempted here to assess symptom control in patients who are prescribed only one drug, or who purchase all or part of their medication over the counter.

By restricting the present study to those who were prescribed both a nonsedating antihistamine and a nasal steroid by their GP, we should have included most of those who have more severe degrees of hay fever. We have assumed that those hay fever sufferers who self-medicate with over-the-counter preparations or are prescribed only one drug have lesser symptoms than patients receiving both drugs on prescription, and that any residual symptoms in the former group would be controllable on full pharmacotherapy.

In conclusion, the present study has confirmed that a significant proportion of hay fever patients are suboptimally controlled. In part this appears to be due to suboptimal use of prescribed medication, but there is also evidence of a group who are not controlled despite using maximal pharmacotherapy and who might therefore benefit from AI. At present, the number of patients receiving AI for seasonal rhinitis in the UK has reduced to almost zero. This study suggests that the pendulum has swung too far and that careful thought must be given to the development of referral mechanisms and services for the specialist assessment and treatment of hay fever patients with residual symptoms despite optimal drug therapy.

Acknowledgements

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