ORIGINAL RESEARCH

Management of allergic rhinitis in UK primary care: baseline audit

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Received 4 October 2004; accepted 23 March 2005

Summary

Background: Evidence suggests that the UK primary care management of people with allergic rhinitis is sub-optimal. Common deficiencies are thought to include under-diagnosis, mis-diagnosis and sub-optimal treatment.

Objectives: We sought to assess GPs' understanding and perspectives on key issues in the management of allergic rhinitis, comparing these with recommendations contained in the Consensus statement on the treatment of allergic rhinitis.

Methods: Sampling frame of 210 GPs with a self-declared interest in the management of allergic and respiratory disorders from 70 GP practices in the UK. Semi-structured interviews were used to assess GPs' knowledge and views on clinical practice. Trained personnel conducted all interviews. Interviews were taped and transcribed; each transcript was scrutinised to see if GP knowledge and practice was consistent with the standards set.

Standards and criteria: We used the most recent Consensus statement on the treatment of allergic rhinitis as our standard, aiming to assess quality of care in four main domains: identification of symptoms; collection of information to support a clinical diagnosis; examination and investigations performed to support the clinical diagnosis; treating and managing the condition.

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Results: We successfully interviewed 90% ($n=188$) of GPs. Only 14% ($n=26$) of GPs satisfied all the criteria set for Standard 1 (identification of symptoms); 23% ($n=43$) satisfied criteria for Standard 2 (collection of information to support a clinical diagnosis); 0% ($n=0$) satisfied criteria for Standard 3 (examination and investigations performed to support the clinical diagnosis); and 0.6% ($n=1$) satisfied criteria set for Standard 4 (adequate treatment issued).

Conclusions: This national baseline audit of GPs with a self-declared interest in allergic and respiratory disorders reveals considerable scope for improvement in GP awareness and management of allergic rhinitis.

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Introduction

Allergic rhinitis is the commonest chronic disease in the UK population, with an estimated prevalence of 20% [1]. In keeping with many other allergic disorders, disease prevalence is rising in the Western world, for reasons that are at present poorly understood [2–4]. If poorly controlled, allergic rhinitis is known to result in significant disease morbidity; furthermore, inadequately treated disease may be responsible for increased morbidity from asthma [5–7].

The overwhelming majority of cases of persistent and intermittent allergic rhinitis are managed almost exclusively within primary health care in the UK. Differing models of care delivery occur in other European countries [8].

To investigate concerns that sub-optimal disease management might be contributing to potentially preventable morbidity, we conducted a national baseline audit of general practitioners (GPs) with a self-declared interest in the management of allergic disease, assessing their understanding of and clinical practice within key areas in the management of allergic rhinitis, comparing this to recommendations contained in the *Consensus statement on the treatment of allergic rhinitis* [9].

This study, the first of its kind, provides a snapshot of GPs' perceptions of how they provide care to rhinitis sufferers.

Methods

Seventy UK GP practices with a self-declared specialist interest in the management of allergic and respiratory disorders listed in the 1999 issue of Guidelines were identified [10]. Three GPs from each practice were invited to participate in the baseline audit, giving a potential sample of 210 GPs.

Trained audit facilitators conducted face-to-face semi-structured interviews, during which enquiry was made about the GP's knowledge of key

issues and their clinical management of allergic rhinitis through discussion of typical case scenarios. Interviews were taped and transcribed, and content analysis was performed by the audit co-ordinator.

Each interview transcript was scrutinised and compared against a pre-defined checklist to see if the GP demonstrated knowledge or practice consistent with these evidence-linked standards. These standards were derived from the Consensus Statement on the treatment of allergic rhinitis [9]. Four standards were derived that were measured by 21 criteria. These standards related to four broad areas in the management of allergic rhinitis (see Table 1 for details):

- Identification of symptoms (4 criteria)
- Collection of information to support a clinical diagnosis (4 criteria)
- Examining and testing to support the clinical diagnosis (6 criteria)
- Treating and managing the disease (7 criteria).

Results

We successfully established contact and conducted interviews with 90% of the GPs invited to participate ($n=188$).

Table 2 details the results of the overall level of attainment with respect to each of the four standards, whilst Fig. 1 illustrates graphically the level of attainment for each of the 21 individual criteria. We found a high level of attainment for criterion 3 (mention of runny nose), 5 (personal history of allergy), 6 (family history of allergy), 12 (examination of the nose), 18 (use of anti-histamines) and 19 (use of nasal corticosteroids). This was contrasted by very low levels of attainment in relation to criterion 10 (investigation of skin symptoms), 11 (investigation to eliminate pollen related allergies), 13 (conducting skin prick testing), 14 (conducting allergy specific blood tests), 15 (advising allergen avoidance), 17

Table 1 Allergic rhinitis standards and criteria.

Standard 1: GP can accurately describe the symptoms of allergic rhinitis as measured by the following criteria:

1. Mentions nasal itching or similar.
2. Mentions sneezing.
3. Mentions watery rhinorrhea or runny nose.
4. Mentions nasal obstruction or blocked nose.

Standard 2: GP takes an adequate history.

5. Asks about personal or family history of allergies.
6. Takes a personal and general family history.
7. Asks about recent symptoms experienced.
8. Asks about any treatment the patient has already received.

Standard 3: GP undertakes adequate examination and investigation of the suspected allergic rhinitis as measured by.

9. Investigates the patient to eliminate any lower respiratory tract disease.
10. Investigates to eliminate skin symptoms.
11. Investigates to eliminate pollen-related allergies.
12. Physically examines the patient's nose.
13. Conducts skin prick testing.
14. Performs blood tests for allergy-specific IgE.

Standard 4: GP operates an adequate therapeutic regime, measured by some, but not necessarily all, of the following criteria.

15. Control the symptoms by prevention of contact with the substance causing the allergy.
16. Identify and advise avoidance of the allergen.
17. Control the patient's environment so the allergen can be removed.
18. If the patient has mild symptoms of seasonal allergic rhinitis (SAR) treat the symptoms with antihistamines if the hay fever season has started, or with cromones if it has not.
19. If the patient has moderate or uncontrolled mild symptoms of seasonal allergic rhinitis, treat with a topical nasal steroid. If eye symptoms are not controlled by this, further treat with a topical ocular antihistamine or cromone.
20. If the patient has severe or uncontrolled moderate symptoms, use a combination of nasal steroids and/or topical antihistamines and adjust drug and dose to control symptoms.
21. If symptoms remain uncontrolled, add oral or topical nasal decongestants, ipratropium bromide for watery rhinorrhea, analgesics for headache, or a short course of oral steroids.

(control of patient's environment) and 21 (other pharmacological interventions).

Many GPs met the criteria for identification of symptoms and family history, and most agreed that they would undertake a simple examination of the nose. They were, however, relatively unlikely to suggest any investigations. They were likely to recommend the use of antihistamines and nasal steroids, but unlikely to discuss allergen avoidance.

Discussion

This study, the first of its kind, provides a snapshot of the provision of care to patients suffering from allergic rhinitis in the UK, and reveals considerable potential deficiencies in standards of care. Given that interviewees' standards were subjective opinions of their own performance and were not subject to objective audit of clinical practice, these findings may present an over-optimistic view

Table 2 Number of GPs meeting standards ($n = 188$).

	GPs meeting standard (n)	% of total GPs
Standard 1: Identification of symptoms	26	13.8
Standard 2: Collection of information to support a clinical diagnosis	43	22.9
Standard 3: Examining and testing to support the clinical diagnosis	0	0
Standard 4: Treating and managing the disease	1	0.6

Figure 1 Numbers of GPs meeting each of the criteria ($n = 188$).

of the situation. The paucity of specialist allergy care provision has been highlighted recently, and suggests that, for the foreseeable future at least, most patients with allergic rhinitis in the UK will continue to be managed in primary care [11].

Potential limitations

Our sampling frame comprised GPs with a self-professed interest in the management of allergic disorders, so it is likely that we are underestimating the actual deficiencies in standards of care nationally.

However, it may be argued that these findings reflect inappropriateness of the guidelines used as our study standard for primary care use. At the time of the audit the only other guidelines available for any practitioner in the UK were the BASCI Rhinitis guidelines [12]. We do not possess evidence of the impact of these guidelines on the primary care physician but suspect that there was little awareness of them. Some support for this argument comes from the observation that these guidelines were developed by secondary

and tertiary care practitioners who, by definition, tend to deal with more complex and severe cases and therefore need to adopt a more in-depth approach to assessment and management than is routinely needed in primary care [13]. The Consensus Statement on the treatment of allergic rhinitis [9] represents the gold standard in rhinitis management and may be more applicable to the patient whose symptoms cannot be remedied by relatively simple interventions. They do not contain specific recommendations for onward referral to a specialist, suggesting that the guideline was not intended as a tool for primary care. Furthermore, the leading authors of the guidelines practice in continental Europe and therefore the guidelines may well be better suited to health care systems which have superior provision of allergy services when compared to the UK.

Notwithstanding these possible explanatory factors, one would have expected a higher proportion of GPs to have met the criteria for standards 1 and 2. Although this study shows that only 41% of GPs routinely enquired about all four key symptoms, it was clear from the majority

of interview transcripts that the GP expected a description of symptoms to form the basis for the rest of the consultation.

Another limitation of our questionnaire was in omitting to enquire whether or not interviewees posed questions pertaining to the effects of the disease on patients' quality of life, whether they asked any questions about what treatments had been purchased over the counter, and whether they asked for a demonstration of nasal inhaler technique, although there was no prompt in the guidelines to ask these important questions.

Contextualising key findings

It is only recently that attention has been drawn to the intimate link between upper and lower airway allergic disease, and many practitioners recognised the importance of this potential association [7]. The other deficiencies of care in standard 3 (examining and testing to support diagnosis) accurately reflect practice in UK general practice, and access to and use of investigations. The interview transcripts reveal many reasons for this: lack of time; lack of knowing what to look for; lack of knowledge on how to interpret results; lack of belief that it is necessary to undertake such investigations, particularly blood testing for specific IgE (testing for antibodies to a particular allergen); and, most strikingly, a reluctance to carry out skin-prick testing in the surgery.

Data relating to Standard 4 (treating and managing disease) are somewhat more difficult to interpret in that many of the set criteria have large areas of overlap which confounds analysis. Interview transcripts reveal the philosophy behind the GPs' actions or apparent lack of them. Thus many GPs do not believe it possible to identify, let alone avoid, the offending allergen or allergens, as there is a lack of evidence to support the recommendations made in the guidelines [14].

Conclusions

This baseline audit has uncovered areas of GP knowledge and practice that are at considerable variance with established evidence-linked guidelines for the management of allergic rhinitis. Whilst there are areas of knowledge and practice which achieved better scores in the audit than others, it is significant that no GP met all standards or criteria, and that less than

half of our sample of GPs with a self-professed interest in the management of allergic conditions satisfied 12 out of the 21 criteria. We suggest that an educational intervention for GPs on all aspects of management of allergic rhinitis is now developed and evaluated. We further suggest that representatives of primary care are involved in the development of subsequent guidelines to ensure their relevance to that environment.

Source of Funding: Schwarz Pharma Limited

Statement of existing or potential conflicts of interest:

Dermot Ryan has been sponsored to attend major symposia by, received consultancy fees and speaker fees from, and arranged educational activities for, 3M Pharmaceuticals, Astra Zeneca, GlaxoSmithKline, Schering-Plough, MSD and Novartis Pharma.

John Grant-Casey: The audit was conducted using funds provided as an unconditional educational grant from Schwarz Pharma, who also sponsored John Grant-Casey's attendance at three conferences to make presentations on the audit findings.

Glenis Scadding: has lectured for: Schering Plough, MSD, GSK, Aventis, makers of mizolastine, ALK, Almirall. and has undertaken research for: GSK, ALK, UCB, Schering Plough. Glenis has also undertaken advisory panel/consultancy work for: GSK, Schering Plough, UCB, Aventis, MSD, Pfizer.

Scott Pereira: None declared

Hilary Pinnock: None declared

Aziz Sheikh: has received reimbursement for lectures and meetings from Schering-Plough Ltd., UCB Pharma, Aventis, Pfizer Ltd., GlaxoSmithKline.

Acknowledgements

The authors would like to thank Schwarz Pharma Ltd for their financial support.

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