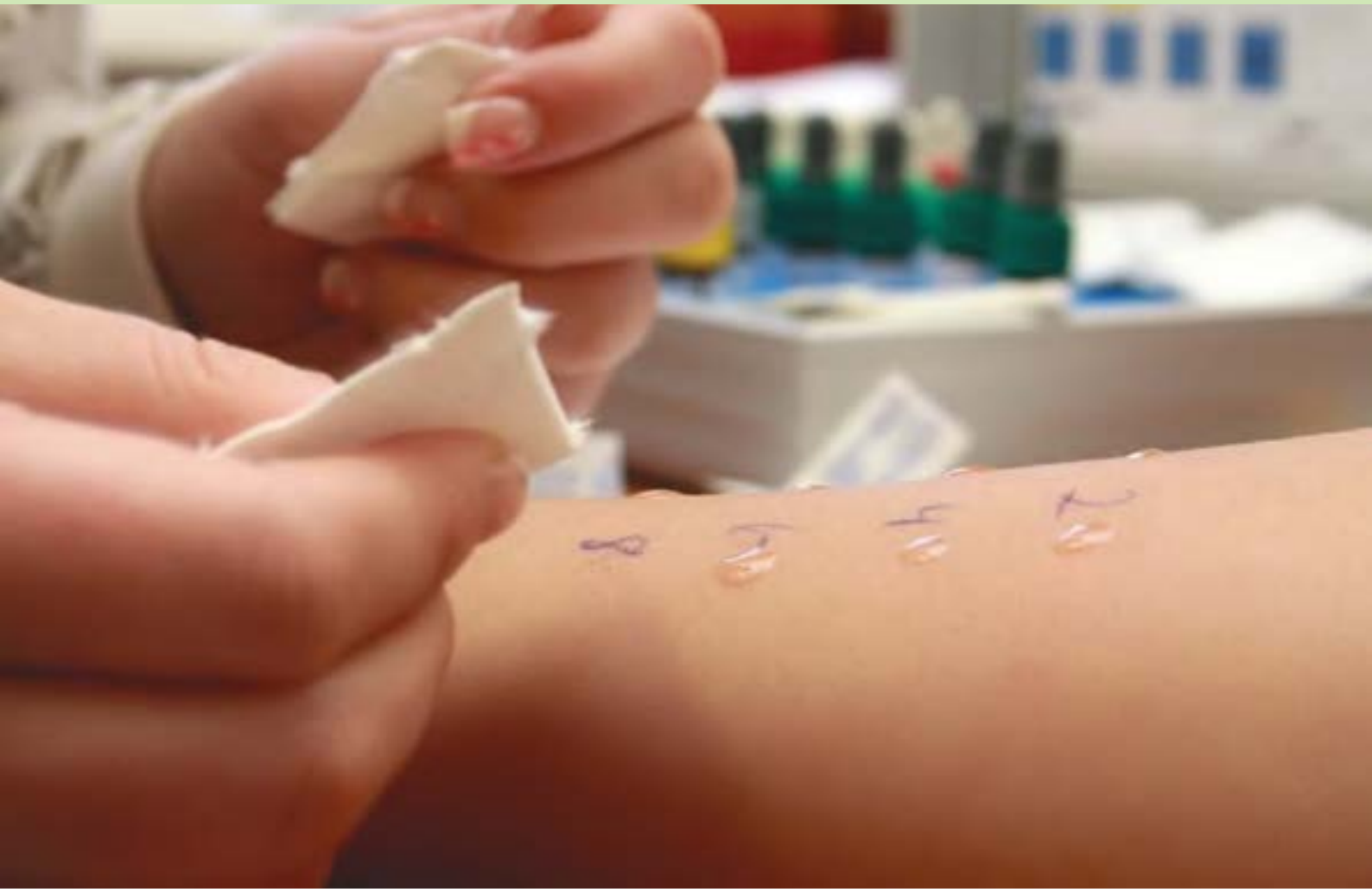
Allergy Today 2013

Allergy UK's publication written by healthcare professionals, for healthcare professionals



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Allergy UK
leading the fight against allergy

Contents

Allergy UK is the leading national medical charity providing advice, information and support to people with allergies and food intolerance.

Foreword

Welcome to the second edition of *Allergy Today*. This is a great opportunity to reflect on the many developments that have taken place over the past year, since our last edition. From an NHS perspective, the changes in the way that allergy services are being commissioned have been enormous. This brings both challenges and opportunities. The inclusion of Allergy as a specialist service in its own right is a definite sign of progress. The scope of what a specialist allergy service actually is, and which complex and severe cases it will manage, is currently being refined but the fact that such services will receive centralised funding is truly good news. This will hopefully ensure that, in future, any patient with the severest forms of allergic disease will be assured that they will receive specialist care at a specialist centre and not lose out if they happen to live in the wrong place. However, for most people with allergies, there remains the challenge of ensuring the provision of high quality locally commissioned services.

I am delighted that Allergy UK has been right at the centre of the work that is going on in both national and local commissioning. It is essential that patients have a strong, clear voice in the process of developing the services that they will rely on for the future.

It is also good to hear that the Allergy UK bursary scheme has successfully provided support for healthcare providers from various backgrounds and that this commitment to education remains on-going. Furthermore, alongside the success of the Nurses Appeal, Allergy UK has also been able to take the important step of more actively supporting research projects that have the potential to directly impact on patient care. The future is definitely looking brighter.

I hope you enjoy reading this edition of *Allergy Today*.

Dr Adam Fox, Chairman of Allergy UK Health Advisory Board; Consultant Paediatric Allergist (St Thomas' Hospital) and Reader in Paediatric Allergy (King's College London)

Welcome

Allergy UK was established to be the voice and advocate of the allergy and intolerance sufferer. Each year thousands of people contact us for help and support; many of those could well be your patients.

In this edition of *Allergy Today* you will find articles relevant to the world of allergy, written by some of the UK's leading allergy specialists. We are most grateful to our colleagues in the healthcare professional community who have contributed articles for this publication.

We produce this publication each year for healthcare professionals. Our website (www.allergyuk.org) is full of information that both you and your patients may find useful. For example, we have 128 downloadable factsheets at your disposal.

I hope that you find this publication both interesting and informative. If you feel that we can be of any further assistance in your role, please contact us on 01322 619898.

Together we can continue to make a difference by providing support and being the advocate for those who suffer with allergies and intolerances.

Jim Bennett
Chief Executive, Allergy UK

Introduction: Director of Clinical Services

Exciting times at Allergy UK with good progress on our Nurse Appeal, enabling us to start the ball rolling for our first Allergy UK Nurse to be in Scotland. Our callers are unable to access allergy services but most could be managed within primary care by a specialist allergy nurse. Asthma, rhinitis or eczema symptoms may be triggered by allergens, so patients are frequently taking unnecessary amounts of medication and having a reduced quality of life. A good allergy assessment can take an hour: out of the question for GPs!

Some callers with complex allergic disorders have been referred to secondary care without resolution. An important role of the Allergy UK nurse is to identify patients needing appropriate referral to an allergist or clinical immunologist.

Other fortunate contacts who have seen an excellent clinician still call us afterwards. We recently spoke to a lady whose son had a consultation with an allergist and, although he gave them time and asked if they had questions, she later worried about medication changes and said there was nobody to call, plus they would have liked to have seen a nurse to talk about eczema care. We were able to explain the changes to her and talk about her son's anaphylaxis, and discuss his brother's condition who has missed 65 per cent of schooling due to allergy.

Our nurses will make a difference!

Maureen Jenkins
Director of Clinical Services, Allergy UK

Allergy News

Obituary

The medical world has lost an amazing character, researcher and clinician. Dr Harry Morrow-Brown has died aged 96 years, still actively researching and advising patients. It was due to Harry's pioneering research that oral steroids became available to treat asthma in the early 1950s, although their use was not widely accepted by the medical profession, due to the variable response to treatment and significant drug toxicity. However, due to Harry's tenacity, in 1958 he showed that patients with asthma who had a particular pattern of inflammation responded reliably and impressively to oral steroids.

In the early 1970s Harry went on to prove that inhaled steroid enabled patients to take control of their asthma without the side effects that could be an issue with oral steroids. The drug was then developed further and was eventually marketed as Becotide. Thanks to Dr Harry Morrow-Brown's research, inhaled steroids are now the most important treatment available for asthma in the UK and around the world. Harry founded Midlands Asthma & Allergy Research Association in 1968, which researched anything linked to aeroallergens, asthma and all forms of allergy.

Congratulations to Three of our Health Advisory Board (HAB)

Our HAB chairman, Dr Adam Fox, Consultant Paediatric Allergist at St Thomas' Hospital, has had an academic promotion and is now also Reader in Paediatric Allergy at King's College London.

Dr Helen Brough is now a Consultant Paediatric Allergist and Roisin Fitzsimons has been appointed as Paediatric Allergy Nurse Consultant, also at St Thomas' Hospital. Helen and Roisin are leading an initiative to offer their allergy patients appointments in a Streatham community clinic.

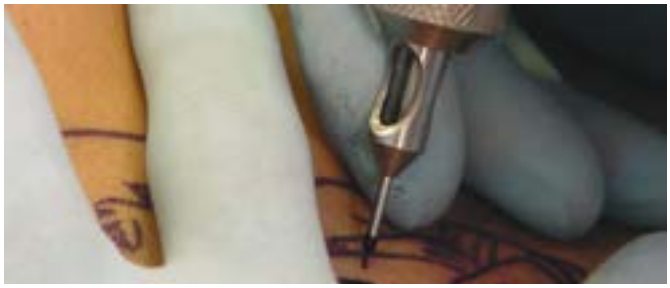
Medical Confirmation of Anaphylaxis

We have been informed of several incidents when young people have been refused entry into nightclubs or festivals when carrying Adrenaline Auto-injectors (AAIs) – Jext or Epipen. Sadly, because of increasing security, all patients at risk of anaphylaxis and carrying auto-injectors should carry a letter from their allergy specialist or GP when going anywhere where they may be challenged. This also applies when travelling by air. We hope that patients will not be charged for a letter confirming that they have this life-threatening condition.

We will continue to raise the awareness of this, so that the general population are aware of the existence and importance of AAIs.

Anaphylactic Reactions to Tattoos and Hair Dye

Two young men have recently suffered anaphylactic reactions whilst in the process of being tattooed. Sadly two women, who had anaphylaxis due to hair dye, have died in the last two years. All of these were caused by paraphenylenediamine, or PPD, a chemical that is in black henna tattoos and dark and black hair dyes. The rapid rise in reactions is due to the increase in the number of people having tattoos, often multiple. It is essential to have a patch test 48 hours prior to having hair dyed, whatever colour, as there are also other agents that can give adverse reactions. Similarly, with tattoos. The natural light brown ones used in Asian celebrations ceremonies are generally safe. See Allergy UK's Reactions to Hair Dye factsheet.



Evidence for Early Life Origins of Allergy

There is increasing evidence that normal interaction between environmental microbes and the microflora in our gut (our microbiome) creates a healthy immune response, which is less likely to develop allergic diseases. The more activity we have outside, close to nature, the greater our chances of remaining healthy. The escalation of Caesarean births is just one of the contributing factors in the global increase in allergies, along with an increase in the use of antibiotics and vaccines, lack of exposure to previously endemic diseases, small nuclear families and other factors of modern westernised lifestyle.

Raising Awareness of CMPA (Cows' Milk Protein Allergy)

Allergy Profile

Dr David Mass MB:ChB; BMedSci; DFFP; Dip ALLERGY; MRCGP

GP, North London

David has been a GP for six years and has an interest in allergy. He is also a trainer and appraiser. He has a Diploma in Allergy from the University of Southampton.

"I have recently been accepted as a GP Advisor for Allergy UK. I am a GP trainer with a BSc in Public Health and Epidemiology from the University of Birmingham, and during my training, completed the Diploma in Allergy at the University of Southampton.

Initially I was inspired to get involved in allergy as a trainee in A&E at Guy's & St Thomas' where I witnessed anaphylaxis. Following a timely educational lecture by one of the local Paediatric Allergy Specialists, I was amazed about how under-resourced allergy services were at the time.

My experience at the coal face in General Practice is that every other child seen has an allergic element to their consultation and this fits with the national trend that approximately 50 per cent of under 18's have a clinician diagnosis of one or more allergic disease in General Practice[1].

"My experience at the coal face in General Practice is that every other child seen has an allergic element to their consultation and this fits with the national trend..."

"I was amazed about how under-resourced allergy services were at the time."

Panning forwards eight years, my wife and I have three boys under 5, one of whom is diagnosed with a delayed type cows' milk allergy ...eventually. As per GMC guidance I do not treat family, and it took months of uncomfortable disruptive symptoms and numerous consultations to get his diagnosis. Sadly, this presentation is normal, but fortunately I was in a position to influence and help educate my colleagues in primary care.

So far I have concentrated my efforts raising awareness of cows' milk protein allergy for colleagues and patients through the ACT campaign in conjunction with Allergy UK[2]. In primary care there is a need for:

(A) AWARENESS of the associated milk conditions

Be educated to **(C) CONNECT** the symptoms and to

(T) TAKE ACTION = ACT

In 2011, the NICE guidelines, Food allergy in children and young people: Diagnosis and assessment of food allergy in young people and children in primary care and the community setting[3] was written and offers a comprehensive guide to food allergies.

Taking in to account different learning styles, the variation of skills in the multidisciplinary team and practical time constraints, the MAP (Milk Allergy in Primary Care) Guideline was published in May 2013[4]. I would recommend looking at the bite-size guideline enclosed (only 2 sides of A4, ideal for a busy GP! [4]), kindly made available in *Allergy Today* by infant nutrition specialists Aptamil Professional and Nutricia Advanced Medical Nutrition, manufacturer of Neocate.

For a more practical in depth look into food allergy in primary care, there are a good range of educational modules on Pulse Learning[5], which offers CPD points. As always the Allergy UK website has loads of useful resources[6].

In the future I hope to explore how as primary care workers, with the support of our secondary care colleagues, we can work in partnership with our patients to empower them to understand their allergic condition. Hopefully this will demonstrate improved understanding and compliance to their medications and ensure that we prescribe appropriately."

Supported by Aptamil Professional and Nutricia Advanced Medical Nutrition, manufacturer of Neocate

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Paediatric Allergic Rhinitis

Allergy Profile

Roisin Fitzsimons

Allergy Nurse Specialist, Evelina Hospital at St Thomas' Hospital, London

In 2013 Roisin was appointed as the first Paediatric Allergy Nurse Consultant at St Thomas' Hospital. Roisin has been a proactive leader in developing new allergy services and in educating others in allergy management, both at Southampton University Medicine and at St Thomas' and has also initiated support services for parents. She is a member of Allergy UK's Health Advisory Board (HAB).

Allergic rhinitis (AR) is a chronic atopic condition affecting between 10 and 40 per cent of children across the world[1,2]. At this point in the year you probably feel you have seen the majority of those children in your clinics, presenting with symptoms such as a nasal congestion, sneezing and itching of the nose and eyes, over the spring and summer months. Rhinitis is a disease process, which affects the lining of the nasal cavity. It is classified as allergic rhinitis if an allergen is identified to which the patient is sensitised[2–6]. Many children suffer with AR all year around, reacting to indoor allergens such as house dust mite or animal epithelium. Seasonal AR presenting during the summer, driven by tree and grass pollens, is more commonly known as 'hay fever'.

Characteristics of Allergic Rhinitis

The tree pollen season begins in the UK in early spring and children who are sensitised to tree pollen may exhibit symptoms from February. Exposure to low levels of pollen at the beginning of the pollen season results in chronic inflammation of the nasal mucosa, known as priming. As the season progresses, increased hypersensitivity of the nasal mucosa means a lower dose of pollen will elicit symptoms of AR[7]. Therefore when the grass pollen season begins in April, those who are sensitised to both allergens will see a worsening of symptoms. In addition to inflammation at the site of contact, there may be a late phase reaction causing a systemic response. This process of inflammation away from the target site is known as organ selective homing and may explain why many children develop exacerbations of eczema during the pollen season[7–9].

There is an inextricable link between the upper and lower airways and a close association between allergic rhinitis and asthma[1,7,8,10]. To explore this further a working party was set up by the World Health Organisation in 1999 to look at AR and its impact on asthma (ARIA). The group defined what is meant by the term AR and developed recommendations for treatment and management of the condition[1]. ARIA highlights the importance of the individual nature of AR; some children suffer with persistent symptoms – at least four times per week, for more than four weeks each year – while others have less frequent or intermittent symptoms. Severity of these symptoms may vary, with children being mildly, moderately or severely affected, which impacts on the child's ability to perform activities of daily living and on their quality of life (QOL)[11].

Treatment

For many years oral-antihistamines have been the mainstay of treatment for an allergic response and are the first line treatment for mild, intermittent AR. They are a safe treatment, with only occasional, mild side effects most commonly; first generation antihistamines, such as Chlorphenamine, have a sedating effect. Antihistamines are widely available over-the-counter and many children will be taking these during the summer months to alleviate their symptoms of AR. In addition to the frustration of a blocked nose, continual sniffing and rubbing of the nose, children may also experience drowsiness due to the sedating effect of antihistamines. For children with AR who are being treated with sedating antihistamines, these behaviours, coupled with sleepless nights and reduced oxygenation, often result in confusion, lack of concentration and extreme fatigue, which can affect their performance in school. Therefore second-generation antihistamines, which do not cross the blood-brain barrier, are less likely to cause drowsiness and are recommended for prolonged use[1,3,5,12].

There are a small number of children suffering with persistent AR, for whom an antihistamine is not enough, who may benefit from an intranasal corticosteroid, which is most commonly available as a nasal spray device. For maximum effect this should be started pre-seasonally, before the pollen enters the nasal mucosa and the allergic response begins. Many families are concerned about the prolonged use of a corticosteroid; however, new generation intranasal corticosteroids are a safe treatment, with very low systemic bioavailability. Side effects include nosebleeds, headaches and symptoms of rhinorrhoea. It is essential families be shown how to administer the nasal spray correctly, as poor efficacy may be attributed to incorrect administration technique rather than the child not responding to the treatment.[1,3,5,12,13]. The British Society of Allergy and Clinical Immunology (BSACI) nurses group has devised guidelines which are available on the BSACI website, demonstrating correct nasal spray administration and outlining the properties of the various nasal sprays currently available in the UK. http://www.bsaci.org/guidelines/SOPs

Oral leukotriene receptor antagonists (LTRA), originally an add-on therapy for the treatment of asthma, have gained popularity in recent years as a therapy for AR, having a beneficial effect on nasal symptoms. LTRA are recommended by ARIA for children suffering with persistent AR and have been found to be particularly effective in the pre-school age child[1,3]. Those children, who suffer with ocular symptoms of AR, may get symptom relief from eyedrops, such as chromoglycate and olopatadine. The mechanism of action is not well understood and, although these products are safe, they are recommended in addition to anti-histamines and intranasal corticosteroids, due to their poor efficacy and short-term effect[1,3]. While allergen avoidance measures (such as mattress covers) are effective for some who suffer with perennial AR, ARIA does not recommend the use of environmental measures to reduce exposure to aeroallergens as they are of considerable expense, with little evidence of efficacy[1].

Specific Immunotherapy

A small number of children may still suffer with troublesome persistent AR despite maximising their pharmacotherapy. These children may benefit from a referral to a specialist allergy clinic, where other treatments such as Specific Immunotherapy (SIT) are available. Specific Immunotherapy is a treatment for AR, which alters the disease process by introducing small amounts of the allergen to induce tolerance and eventually reduce the amount of medication needed to control symptoms[1,14,15]. This treatment is only available in a small number of specialised centres in the UK, a list of which can be found on the BSACI website.

AR symptoms remain unrecognised and undertreated by individuals and clinicians alike, with many families resorting to non-prescription, sedating antihistamines for their child's AR[16,17]. ARIA has developed comprehensive resources to disseminate the guidelines to primary care clinicians, including a pocket guide, website and audit tool: http://www.whiar.org/Documents&Resources.php.

Conclusion

The ARIA guidelines outline a step-wise approach to treatment and in addition the BSACI primary care group has developed guidelines for the management of AR. AR poses a significant burden on the health of the country and in particular children. As these children grow, sub-optimal treatment and management of their allergic rhinitis can have a significant impact on their quality of life and on the NHS as a whole[1]. Effective management of AR in children, following evidenced-based guidelines will help us to empower children to lead a life with minimal symptoms of Allergic Rhinitis, thus enhancing their quality of life.

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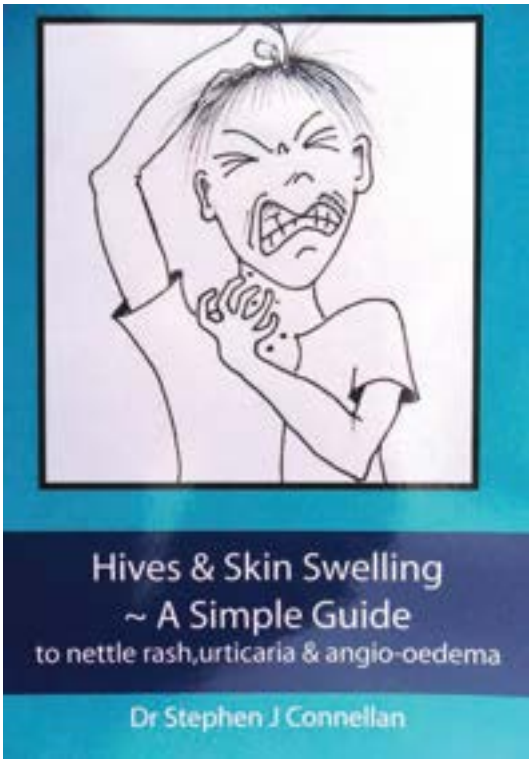
New Publication:

Hives & Skin Swelling by Dr S J Connellan



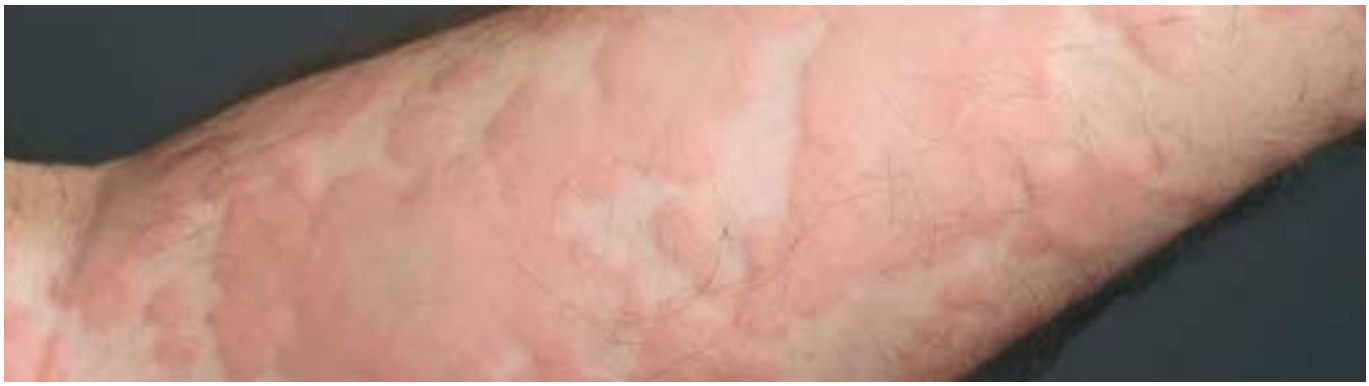
Reviewed by Maureen Jenkins, Director of Clinical Services, Allergy UK

Our Helpline advisors receive many calls from people distressed about intractable urticaria and angioedema, with seemingly little help and understanding, so when this little book was recently brought to my attention, I was fascinated by how the author has made this subject interesting, easily understandable and useful. Although it is written for the lay reader, it is also a great tool for doctors and nurses struggling to explain urticaria and angioedema to their patients, as they can recommend this book, which costs less than a pack of antihistamines! I spoke to the author, Dr Connellan, who told me:

"As part of my role as a Respiratory Physician and in response to a local need, I set up an allergy service. One of the more frustrating conditions, for both the patient and me, was urticaria and angioedema. As the majority of these presentations, particularly the chronic, most distressing cases, were nothing to do with allergy, this added a significant pressure and diagnostic conundrum. Clearly, referring colleagues found the conditions diagnostically very challenging and the sufferers often lost confidence in the medical profession. With time to reflect, I set myself a challenge to write a simple guide that would be understood by those affected and hopefully also be useful to my healthcare professional colleagues. The main aim was to try to reproduce case scenarios that might ring true with patients and provide enough basic information to boost patients' confidence when consulting their doctor. It is hoped that this might improve the chance of providing a firm diagnosis and management plan."

The book explains basic underlying mechanisms of urticarial/angioedema lesions and different time frames of presentation, emphasising characteristics of acute versus chronic forms. The main 'meat' of the book is in chapter 3, which discusses trigger factors, including infections, drugs, allergy, auto-immunity and physical and vasculitic aetiologies. Hereditary and acquired angioedema are considered separately. Simple explanations of the underlying pathologies of auto-immunity, vasculitis and hereditary angioedema are provided.

Case histories used as an educational tool will ring true with some sufferers. The following are examples of physical and auto-immune triggers:



Case study:
Jack

Jack is an IT expert and has been asked to sort out a particularly tricky software problem. This results in him being glued to a computer screen, sitting on a hard plastic chair, for 6 hours. He finally manages to solve the problem and goes home for a well-earned beer and meal. Soon after sitting down he notices a burning discomfort in his buttocks, which he initially puts down to his period of prolonged uncomfortable sitting during the afternoon.

However, the burning sensation becomes quite painful and starts to itch as well. He goes to the bathroom with a mirror to examine his rear end. To his surprise and concern there are large areas of reddened and thickened skin over his buttocks. He goes to the local accident and emergency department and the doctor who sees him is also rather puzzled by the finding. He prescribes an antihistamine, as there is an element of itching. The swelling and redness gradually settle over the next 2 days. One month later he takes part in a 5 mile charity walk and a couple of hours after completing it he notices the same sensation of burning pain in the soles of his feet, the skin of which is thickened and reddened. He is referred to a dermatologist who diagnoses delayed pressure urticaria on the basis of his history. He prescribes a long-acting non-sedating antihistamine. Although Jack has occasional repeat episodes (e.g. when he wore some new socks with rather tight elastic around the ankles) they are much less severe and of shorter duration.

Case study:
Sarah

Sarah is 28 years old and has been feeling generally run down and lethargic and this is interfering with her busy job as a district nurse. She's put a bit of weight on and has been tending to suffer with stubborn bowels. She also feels that she needs to wear more clothes to keep warm. She has also noticed that her skin will quite unpredictably come out in itchy raised lumps.

These come and go without there being any obvious cause that she can pinpoint such as food, medication, etc. She mentions these concerns to her GP colleague who immediately recognizes that she might be suffering with a lack of thyroxin in her blood. This is known as 'hypothyroidism' or the older term of 'myxoedema'. A blood test confirms this and she is started on a regular dose of thyroxin tablets. Because she is relatively young to have developed this condition her doctor wonders whether her thyroid has been inflamed and damaged by some auto-immune process (see description below) and as a result has not been producing enough thyroxin. Sure enough, this is confirmed when a blood test reveals high levels of antibodies to her thyroid gland. Interestingly, once she is established on thyroxin tablets and is back to her normal active self, her episodes of urticaria gradually diminish and finally resolve completely, much to her delight.

Chapters 4 and 5 explain investigations and treatment options. Chapter 6 considers the particular issues relevant to presentations in children and pregnancy. Useful national and international guidelines are listed. A list of questions designed as a history guide also provides confidence when consulting with healthcare professionals. There is a schematic summary of all causations of both urticaria and angioedema and blank pages for patients' own personal notes.

The book is available online for £3.64: http://www.amazon.co.uk/Hives-Skin-Swelling-Simple-Guide/dp/147743934X or from bookshops.

Urticaria and Chronic Urticaria

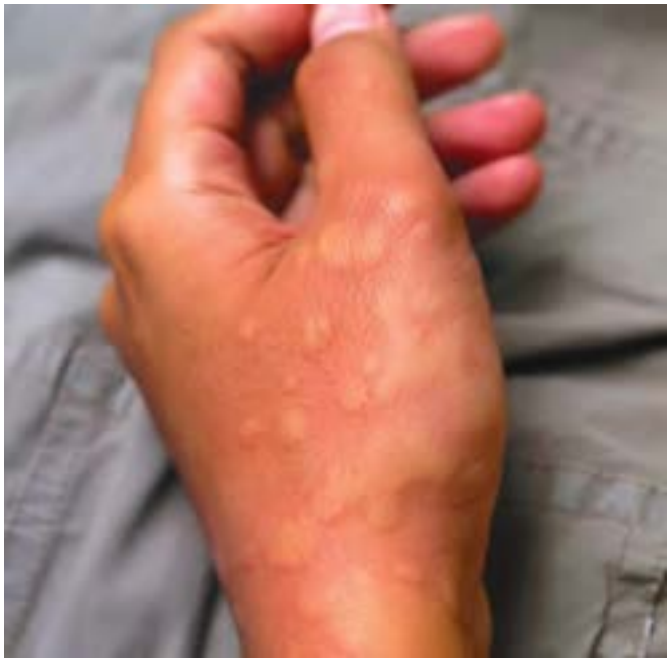
At Allergy UK we are frequently contacted about urticaria, most often from people who have experienced prolonged or recurrent episodes and are unable to get any relief from their symptoms or explanation for their condition. Almost all believe it to be caused by allergy, whilst in reality many cases of urticaria have no allergic trigger. Allergic urticaria, particularly that caused by food, is usually more straightforward to diagnose.

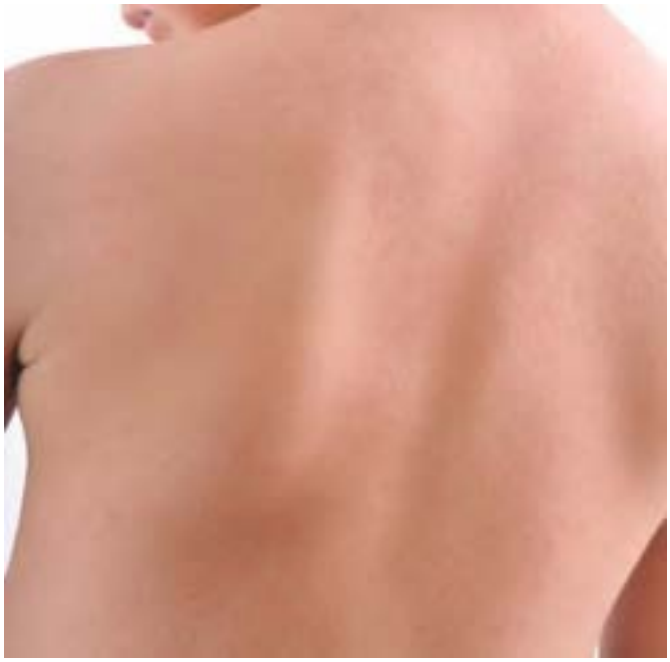
Chronic urticaria (CU) is a most distressing condition that causes red, swollen, itchy and sometimes painful hives or "wheals" on the skin[1].

Antihistamines are currently the mainstay of therapy for CU; however, more than 50 per cent of patients on approved doses do not achieve symptom relief[2]. Medical guidelines allow for increased doses of antihistamines, up to four times the approved dose, to increase symptom control in some patients[3]. However, there remains a critical need for new treatment options as up to 40 per cent of CU patients fail on these increased antihistamine doses[4].

An anti-IgE treatment, omalizumab, which has been available in Europe since 2005 to treat severe allergic asthma, has recently been used in Europe and the USA to treat CU. In the last two years, some of the United Kingdom's leading dermatologists have been using this with good results.

In our next edition of *Allergy Today*, we shall have expert articles on different manifestations of urticaria and angioedema.





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About the BSACI

Allergy Profile

Dr Matt Doyle

GP, Cambridgeshire

Matt is a full time GP in Cambridge with an interest in allergy. He is the Chairman of BSACI Primary Care Committee and was involved in developing the NICE guidelines on anaphylaxis.

The BSACI (British Society for Allergy & Clinical Immunology) is the national body for allergic and immunological disease in the UK and is made up of around 800 healthcare professionals from multiple specialities including Allergy, Immunology, Paediatrics, ENT, Dermatology, and Primary Care, as well as Dietetics, Nursing and research. It has several sub-committees including primary care.

Primary care in the UK is responsible for around 90 per cent of the patient contacts in the NHS. The BSACI Primary Care Committee is a multidisciplinary group with representatives from General Practice, Nursing, Dietetics, Health Visitors and Paediatrics in the group. Over the last few years members have been involved in organising primary care educational events, writing articles for journals on allergic disease and creating guidelines for primary care, including the recently published MAP Guideline on the management of Milk Allergy in Primary Care. Members have also formed part of the Guideline Development Groups for the NICE guidelines on Food Allergy, Anaphylaxis and Drug Allergy (currently in development).

At the national conference in July 2013 we recorded some webinars on taking an allergy-focussed history and managing milk allergy with contributions from Dr Pamela Ewan, Dr Andrew Clark and Dr Adam Fox, as well as members of the primary care group. These are going through the final stages of editing and will hopefully be available on the BSACI website soon. The website also contains links to helpful articles, guidance and other publications useful for primary care workers.

Our Primary Care Days, held around the country, have been very successful educational events over the last year; those interested in organising such an event can contact us via the website for more information on how we can support them.

> "Primary care in the UK is responsible for around 90 per cent of the patient contacts in the NHS."

Allergy and Severe Asthma

Allergy Profile

Dr Monica Salagean

Specialist Allergist, Southampton

Monica completed her training as a specialist allergist as well as conducting severe asthma research at Southampton University Medicine. She is involved with the delivery of allergy services in the Hampshire and Dorset area.

Introduction

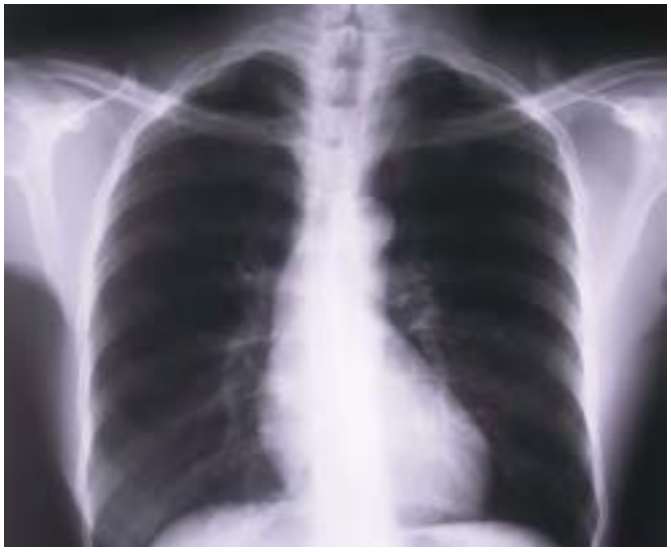
The presence of elevated specific IgE, as detected by skin prick testing or serum ImmunoCap measures is indicative of atopy, the heightened tendency of the individual to generate IgE responses. This can be present in the absence of disease or present independent of disease expression and is only termed allergy when the presence of a specific IgE response against a foreign protein is associated with and linked to the clinical expression of disease, such as, for example, asthma or rhinitis.

Aeroallergen sensitisation

Birth cohort studies that have followed children from birth to adulthood have shown that the development of specific IgE responses against house dust mite and cat allergens is a significant risk factor for the development of persistent asthma and of more severe asthma in children. Both of these are indoor allergens and are thus allergens to which individuals will have prolonged exposure, especially when it is appreciated that children now spend, on average, less than two hours a day outdoors. When present, allergy against fungal allergens is also linked to more severe asthma in both children and adults. For example, a meta-analysis has identified that adult asthmatics with positive skin prick tests to fungal allergens are 2.5 times more likely to have severe asthma than those asthmatics whose skin tests are negative. Furthermore, fungal sensitisation (specific IgE against one or more of Aspergillus sp., Alternaria sp., Cladosporium sp., Penicillium sp. and Candida) has also been linked to risk of hospitalisation for severe asthma. It is also recognised that a small proportion of severe asthmatics who have elevated IgE against Aspergillus develop allergic bronchopulmonary aspergillosis (ABPA), a situation in which the intensity of the allergic reaction to the aspergillus that colonises the airways in these individuals (usually larger airways due to the size of the fungal hyphae) induces an intense airway eosinophilic response that is also evident within the circulation. This leads to airway wall damage with resultant development of bronchiectasis that is present within the proximal (large) airways. This form of asthma often requires oral steroids to try and achieve disease control and is linked to a tendency to severe disease exacerbation. Antifungal therapy has been shown to reduce the intensity of the airway eosinophilia and reduce the tendency to disease exacerbation. Within the UK cockroach allergy is not common but studies in inner city communities in North America identify cockroach allergy to be a significant risk factor both for asthma and for severe disease exacerbation requiring emergency care.

> "...the development of specific IgE responses against house dust mite and cat allergens is a significant risk factor for the development of persistent asthma and of more severe asthma in children."

The importance of aeroallergen sensitisation to the persistence and severity of asthma is also indicated by the beneficial effect of anti-IgE therapy with Omalizumab (Xolair®). In both children and adults with asthma, who have been selected on the basis of 1) uncontrolled disease despite standard asthma therapy, 2) evidence of enhanced specific IgE responses against aeroallergens and 3) total IgE and weight within certain algorithmic limits, treatment with Omalizumab leads to improved quality of life and a reduction in exacerbation frequency.



Whilst aeroallergen avoidance, as a non-pharmacological approach to disease control, would thus seem logical, this has proved difficult to conclusively prove. Simple approaches, such as the application of house dust mite allergen impermeable bedding barrier covers, are insufficient as a single interventional approach to effect disease control, and the evidence suggests that multiple approaches are required for any one individual to effectively limit to a major degree their daily exposure to indoor allergens. Due to the nature of these interventions (changing carpeting, soft furnishings etc.) it is difficult to undertake the randomised double-blind, placebo-controlled trials that are required for evidence-based medicine. Most recently the use of a Temperature Controlled Laminar Airflow (TLA) device (Airsonett®) that delivers ultra-filtered air in the breathing zone whilst an individual sleeps at night (TLA reduces the total number of particles

>0.5 µm in the breathing zone by 3000-fold and cat allergen exposure by 7-fold) has suggested benefit in improving asthma in asthmatics sensitised to indoor allergens. This study, which included asthmatics with a range of severity, suggested that the greatest benefits were in those asthmatics with poor disease control despite a high level of asthma therapy (BTS step 4 or above). This requires further verification in a larger population of patients with severe allergic asthma.

Food allergy

Food allergy is a rare cause of asthma in isolation. Usually food related reactions that are systemic involve other systems, such as the skin (urticarial/angioedema) and circulation (hypotension/tachycardia), as well as the respiratory tract (asthma, rhinitis and upper airway closure) as part of an anaphylactic response. It is appreciated, however, that a group of patients with severe asthma termed "brittle asthma" may have their disease triggered by foods. These patients typically demonstrate wide peak flow variation (greater than 40 per cent diurnal variation for at least 50 per cent of days), despite high dose inhaled steroid therapy (type 1 brittle asthma).

"...evidence suggests that multiple approaches are required for any one individual to effectively limit to a major degree their daily exposure to indoor allergens."

"...it is increasingly appreciated that the airways are not sterile and that there is an altered airway microbiome in asthma as compared to that within the non-asthmatic healthy airways."

Skin testing indicates that over 90 per cent of these patients are strongly atopic and over 60 per cent report at least one food or drink, which makes their asthma worse. Double blind placebo-controlled food challenge has confirmed relevant asthma-related food allergy in over 50 per cent of those with type I brittle asthma, with wheat and dairy products being the most important triggers.

Allergy against bacterial allergens

The presence of specific IgE directed against enterotoxins generated by Staphylococcus aureus sp. (SE-IgE) has been linked to the expression of airways disease such as asthma, rhinitis and nasal polyposis. A four centre European study has recently reported that not only is the presence of SE-IgE linked to asthma but that it is better linked to severe asthma as a risk factor than is aeroallergen sensitisation (house dust mite or grass pollen allergen sensitisation). In this large study (318 asthmatics and 69 healthy controls), logistic regression analyses demonstrated that in comparison to SE-IgE negative subjects, the presence of elevated serum SE-IgE increased the risk of asthma by 7 x fold and for severe asthma 11 x fold. Furthermore it has been shown in a birth cohort study that the expression of elevated SE-IgE by the age of five is an identifiable risk factor for the expression of persistent wheeze and abnormal airway physiology, indicative of the early relevance of SE-IgE to the development of more severe airway disease. The relevance of these findings to the therapy of asthma is yet to be clarified but it is increasingly appreciated that the airways are not sterile and that there is an altered airway microbiome in asthma as compared to that within the non-asthmatic healthy airways. It is thus possible that asthmatics labelled as non-atopic, in that they do not have aeroallergen sensitisation, may yet have allergen-driven disease triggered by allergens not normally appreciated, such as bacterial allergens, rather than those classically considered relevant. As such there are reports of Omalizumab having benefit in non-atopic asthma.

Take home message

- Allergy is an important contributor to the expression and severity of asthma.
- In young children the presence of positive allergy tests to indoor allergens such as those related to house dust mites or pets suggests that a wheezing condition is more likely to be asthma and more likely to be persistent and less likely to resolve than in those who have negative allergy tests.
- In those asthmatics in whom disease control is not achieved or who have a history of disease exacerbation allergy testing may be beneficial in helping direct therapy.
- Consideration should thus be given to referring individuals for allergy testing for whom the above considerations have relevance.

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Aspirin Exacerbated Respiratory Disease (AERD)

Allergy Profile

Dr Glenis Scadding

Hon Consultant Allergist/Rhinologist

Glenis is based at the Royal National Throat, Nose and Ear Hospital, London and is Honorary Senior Lecturer at University College London. Her research interests include rhinitis and its co-morbidities, including rhinosinusitis; aspirin hypersensitivity and sublingual immunotherapy.

Glenis is the former President of the BSACI (British Society for Allergy & Clinical Immunology) and sits on Allergy UK's Health Advisory Board (HAB).

Introduction

"There are some diseases, the symptoms of which amaze not only laymen, but even doctors"[1]. Aspirin sensitive asthma is one of these – but is not rare with 10 per cent prevalence among adult patients with asthma; in the population with nasal polyps the percentage is higher at 14 per cent. It is however frequently under-diagnosed.

The disease in question is related to aspirin – the most popular drug in the world, initially termed "magic in a bottle". Aspirin- related adverse effects were seen within three years of its introduction to therapy at the beginning of the 20th century. In 1922 Parisian doctor Fernand Widal perceived characteristic features of the emerging syndrome: aspirin intolerance, asthma and nasal polyps. This is now sometimes called Samter's triad since a paper on it was published by Samter and Beers, but is better termed Aspirin Exacerbated Respiratory Disease (AERD).

AERD may develop in patients with no prior history of IgE-mediated respiratory disease, or manifest in individuals who already have allergic rhinitis and/or asthma. Typically the condition progresses from the upper to the lower respiratory tract and in half of patients an initiating viral upper respiratory tract infection appears to be the inciting event. The disease begins, usually around the ages of 29–34 years, with symptoms of a common cold and for long months – before it affects the sinuses – it manifests with nasal discharge and blockage, difficult to treat. In an average patient, within two years of onset the disease progresses to the lower respiratory tract with asthma, and within four years aspirin sensitivity and nasal polyposis develop. Approximately 20 per cent of AERD patients also experience skin reactions such as urticaria or angioedema following aspirin challenge. These people are termed dual reactors. Others have skin symptoms only.

AERD is recognised to be an aggressive phenotype of airway disease that often runs a protracted course. It affects women more frequently than men; in women the onset of symptoms is often earlier, and the disease is even more aggressive. Compared with aspirin-tolerant individuals, patients with AERD are more likely to experience irreversible airflow obstruction, to suffer frequent exacerbations, to be diagnosed with severe asthma, to be prescribed high-dose oral steroids and more often require intubation for their severe asthma.

"AERD may develop in patients with no prior history of IgE-mediated respiratory disease, or manifest in individuals who already have allergic rhinitis and/or asthma."

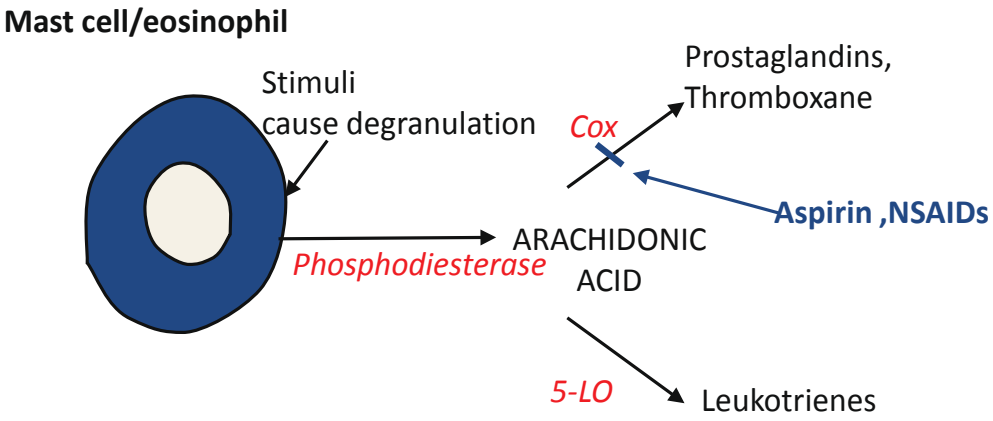


Figure 1
Mast cell and eosinophil degranulation caused by unknown factors results in release of arachidonic acid from the cell membrane via an enzyme phosphodiesterase. The arachidonic acid can pass down one of two pathways – the balance of this is altered by aspirin/NSAIDs which inhibit an enzyme, cyclo-oxygenase 1 (Cox 1). The end result is overproduction of leukotrienes, which cause mucus production and congestion, and a reduction in prostaglandin E2 which is anti-inflammatory and broncho-protective.

Enzymes are shown in red.

Aspirin-sensitive individuals average five episode of sinusitis per year, and typically have a larger volume of polyp tissue than aspirin-tolerant patients; surgery often results in only a transient relief of symptoms. Six months following functional endoscopic sinus surgery (FESS) and polypectomy, patients with AERD have significantly higher rates of symptom recurrence (nasal blockage, facial pain, postnasal drip, and anosmia) in addition to re-growth of nasal polyps. On average, patients with AERD require ten times as many polyp resections compared with their non-aspirin-sensitive counterparts and the frequency of operations correlates with the density of inflammatory cells called mast cells and eosinophils in polyp tissue.

Nasal surgery can be followed by the sudden development of asthma in previously non-asthmatic subjects, but can also lead to a reduction in lower respiratory tract symptoms with decreased inhaled corticosteroid use and improved asthma symptom scores at six months and one year follow-up.

Mechanisms

AERD is not an allergic problem: there is no evidence of IgE and very different molecules called non-steroidal anti-inflammatories (NSAIDs, e.g. ibuprofen, diclofenac) elicit the same reaction. Chronic inflammation of both the upper and lower respiratory tracts is on-going and progressive, even in the complete absence of aspirin/NSAIDs, confirming that their ingestion is not responsible for inducing the disease. Szczeklik over 30 years ago first proposed a non-allergic mechanism of AERD in which impairment of the metabolism of arachidonic acid lies at the root of the disorder, which tends to occur within families. Essential inflammatory molecules such as prostaglandins, leukotrienes and lipoxins, are products of this pathway.

The significant property of aspirin and the NSAIDs which causes the exacerbations is inhibition of an enzyme cyclo-oxygenase 1 (COX-1) which alters the balance of the inflammatory molecules produced: increasing leukotrienes, which cause congestion and mucus production, and decreasing anti-inflammatory molecules such as prostaglandin E2 (Figure 1). The biochemical hallmark of AERD is enhanced leukotriene production both at baseline and following aspirin challenge. The nasal and bronchial mucosa of aspirin-sensitive patients is rich with eosinophils and mast cells, both abundant sources of leukotrienes. In addition there is upregulation of the leukotriene receptor on target cells in AERD, possibly resulting in enhanced end-organ responsiveness.

Diagnosis

This is made by clinical history – one of two separate reactions to aspirin and to another COX 1 NSAID is diagnostic – but many asthma patients will have avoided these on their GP's advice and will need aspirin challenge, as there is no significantly accurate blood test. The challenge can be oral, by inhalation or by application of nasal drops. This last is slightly less sensitive, but much safer and can be undertaken as an out-patient procedure. A negative nasal challenge necessitates subsequent oral administration, but this can be done at the same visit for most patients.

It is important to diagnose AERD because it is associated with near-fatal asthma: between 11 per cent and 15 per cent of all intensive-care admissions with asthma involve aspirin-sensitive patients. In a survey of 500 patients, 15 per cent were unaware of their aspirin-sensitive status prior to aspirin challenge. Lack of patient and doctor awareness, aggravated by limited access to aspirin challenges, therefore, may have potentially grave consequences. Also, once diagnosed as aspirin- tolerant, adult asthmatics can use aspirin and NSAIDs for pain relief, and low dose aspirin for cardiovascular protection.

Treatment

AERD is treated similarly to other inflammatory forms of asthma and chronic rhinosinusitis – with inhaled and nasal corticosteroids, long acting beta agonists and nasal douching being mainstays of therapy. Oral corticosteroids are often required for asthma exacerbations or for a "medical polypectomy" – in which case combination with betamethasone drops enhances the outcome.

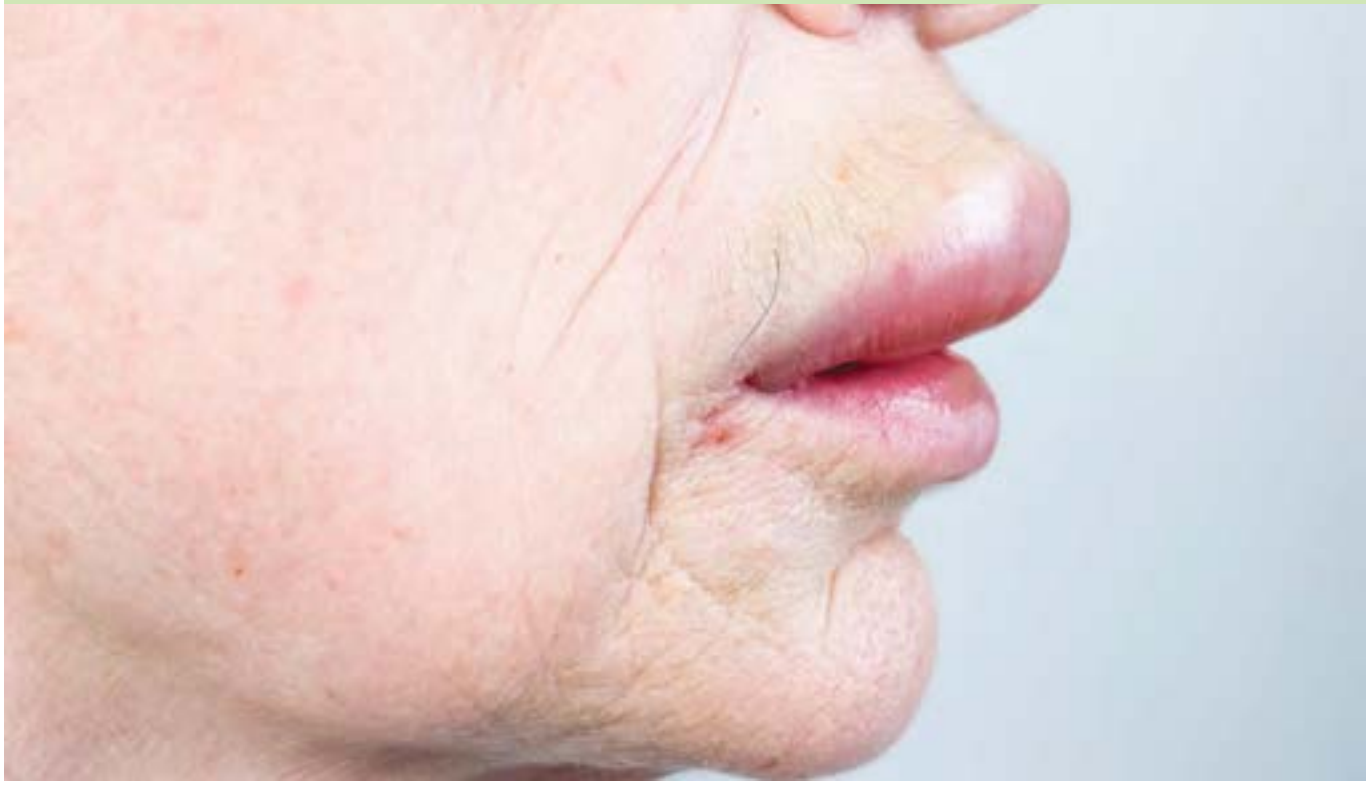
Anti-leukotrienes may be helpful – a therapeutic trial of a month is advocated, with cessation if there is no measurable benefit. Montelukast is available in the UK, but some AERD subjects appear to respond only to zileuton, which has a wider range of anti-leukotriene activity, but which can cause liver problems.

Antihistamines, especially intranasal, and short-acting bronchodilators may also be required for symptom control.

Surgery is no longer routinely recommended for AERD patients, since the benefits are short-lived, but may be needed for intractable obstruction or for complications.

There is one form of very specific treatment, often forgotten in asthma guidelines.

"Approximately 20 per cent of AERD patients also experience skin reactions such as urticaria or angiodema following aspirin challenge."



Aspirin Desensitisation

Aspirin desensitisation remains a useful add-on treatment in patients with moderate-to-severe AERD whose symptoms are poorly controlled despite optimal medical therapy, who require unacceptably frequent doses of oral corticosteroids, or who require multiple polypectomies.

Many aspirin-sensitive individuals can be biochemically desensitised to aspirin. Once successfully desensitised, most will experience improved symptomatic control, require fewer polypectomies, have a reduced requirement for oral corticosteroids, and have fewer hospital admissions for asthma.

In 172 patients taking 650mg of aspirin b.d. for more than a year, 67 per cent of patients derived clinical benefit, and 14 per cent stopped because of side effects, most often intractable urticaria or gastritis. In a typical desensitisation regimen, hospitalised patients receive escalating doses of oral aspirin over two to five days until 325–650mg of aspirin twice daily is tolerated. Daily administration of up to 1300mg of aspirin per day may be required to maintain this state, although some patients show benefit on 300mg orally daily. Unfortunately such doses are commonly associated with side effects and are not cardio-protective.

The mechanism by which desensitisation occurs is incompletely understood. It may be partly explained by selective receptor down-regulation of the major leukotriene receptor in inflammatory cells.

Recently, intranasal therapy with lysine aspirin (the only truly soluble form of aspirin) has been shown to benefit one patient in five in an open audit. The dose used is lower, around 75mg, but this is delivered straight on to sensitive AERD tissue and is compatible with cardiovascular protection since it is swallowed. Therapy is initiated at nasal challenge and then dose escalation continues by the patient at home with close monitoring by hospital staff. There is probably also significant improvement in asthma outcomes. Further work is needed to establish this treatment and to elucidate its mechanisms.

"It is important to diagnose AERD because it is associated with near-fatal asthma: between 11 per cent and 15 per cent of all intensive-care admissions with asthma involve aspirin-sensitive patients."

Infection

Approximately half of all AERD patients describe a flu-like illness triggering the syndrome. A study, in which pre-treatment of aspirin-sensitive individuals with acyclovir (an anti-viral drug) abrogated both bronchoconstriction and the expected increase in urinary leukotriene following aspirin challenge, has led some to suggest an infectious component to the disease. A latent viral infection could induce many of the features of AERD and in addition the epithelium in asthma shows a reduction in ability to clear rhinoviruses (a cause of the common cold).

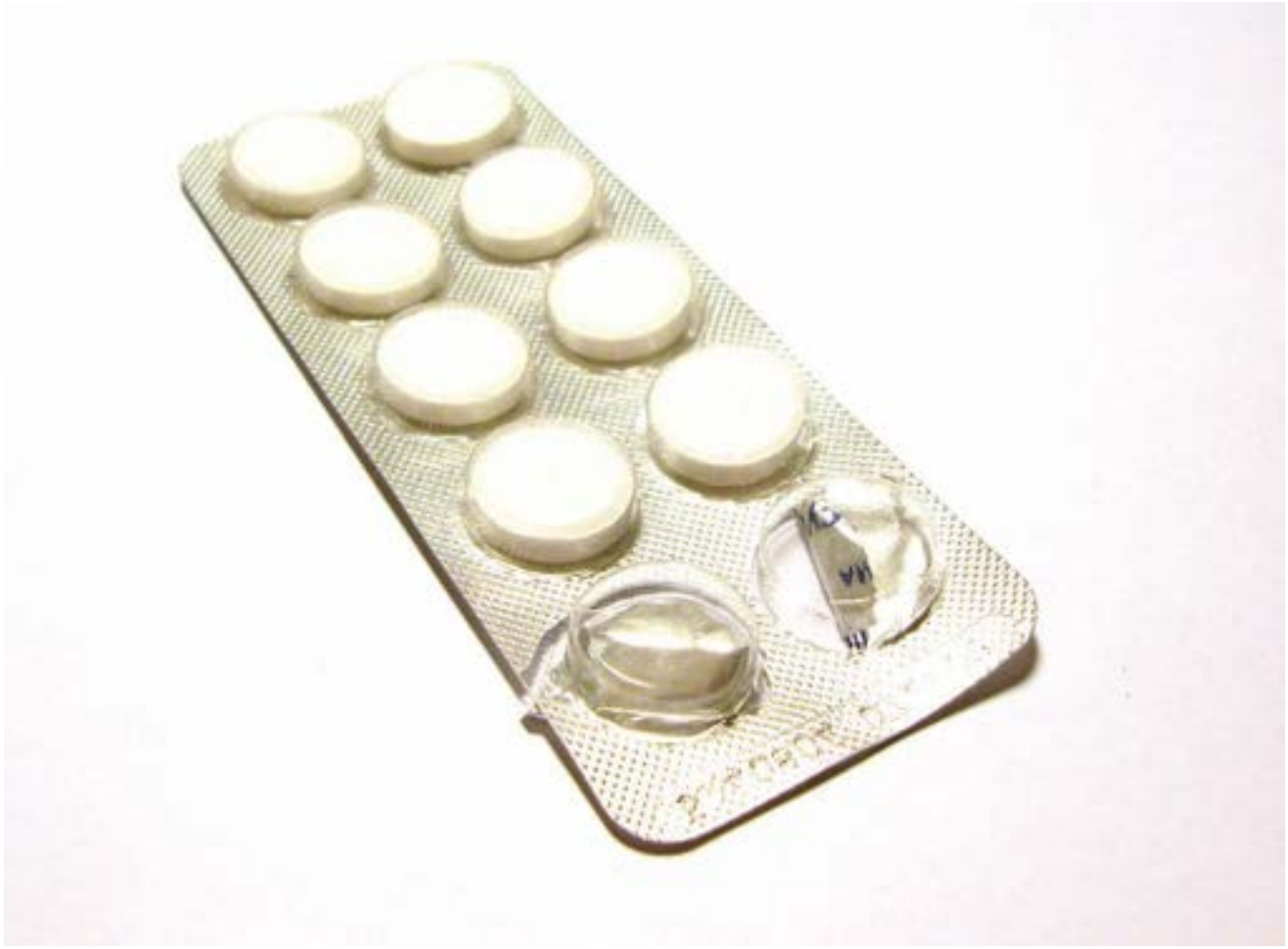
Recent work from Belgium shows that nearly all AERD subjects have a bacterium, Staphylococcus aureus, in their noses, compared to around one third of the general population. In some patients these bacteria reside within epithelial (lining) cells and are thus protected from anti-bacterials. Viral infection allows bacterial access to these cells. The toxins from this bacterium can drive the immune system to produce multiple inflammatory molecules resulting in eosinophilic inflammation as seen in AERD. Studies are required to determine the relevance of chronic infection in perpetuating the inflammatory mechanisms that underpin AERD.

Summary

AERD is a phenotype of asthma, characterised by severe inflammation of the airways and exacerbation by COX 1 inhibitors, which responds poorly to current medications. Accurate diagnosis is needed to correctly warn patients who should avoid aspirin/NSAIDs, to enable those who are tolerant to utilise aspirin/NSAIDs and to identify those who might benefit from aspirin therapy, which may be helpful. Increased understanding of its molecular, cellular, and biochemical basis will probably result in new methods of diagnosis and treatment.

References

[1]A quotation from the late Andrew Szczeklik, who did so much to improve our understanding of AERD.



Allergic Rhinitis in Adults

Allergy Profile

Maureen Jenkins BSc (Hons); RN; NP; Asthma Dip.

Director of Clinical Services, Allergy UK

Maureen has three allergic children, including one with anaphylaxis. She was a sister in intensive care for 9 years before running a primary care Nurse Practitioner "walk-in" and Asthma clinic for 9 years. After this, Maureen ran a primary care allergy service in Sussex for 13 years. A former Nurse Advisor and Training Manager at Allergy UK and a member of the Board of Trustees, Maureen was appointed as the charity's Director of Clinical Services in July 2012.

Allergic rhinitis (AR) is often undiagnosed or trivialised, although it can cause major health problems and have a detrimental effect on the occupational and social lives of those with severe symptoms. More than half of patients with AR also have allergic asthma[1] and almost 90 per cent of patients with allergic asthma also have allergic rhinitis[2]. AR increases the risk of asthma attacks and emergency admissions[3]. As part of the allergic spectrum, some of these patients will also have allergic eczema. In a study of 990 patients consulting general practitioners for symptomatic rhinitis, 48 per cent were classified as having moderate/severe persistent symptoms on first consultation[4].

AR is defined by inflammation of the nasal passages that is triggered by an allergen, a normal protein substance that causes the body to make a specific IgE antibody. On subsequent exposure, that specific allergen promotes a rapid response by cross-linking with IgE receptors on mast cells, which then release histamine and pro-inflammatory mediators. Immediate symptoms such as itchy nose, sneezing, and itchy, watery eyes, often with a cough, are followed by inflammation. Frequent or persistent exposure to the allergen causes nasal congestion, post-nasal drip and often sinus congestion and headache. Other associated symptoms are conjunctivitis, palatal itch, ear irritation, and congested ears with associated deafness. These symptoms cause sleep deprivation, lethargy and impaired concentration, which, combined with poor sense of smell and taste, make many unfit to work or achieve their full potential and unwilling to socialise. Students who have allergic rhinitis symptoms on an exam day are 40 per cent more likely to drop a grade between their mock and their GCSE exams, this figures rises to 70 per cent if they are taking sedating antihistamines[5]. Despite current guidelines advocating the use of widely-available non-sedating medication[6], 28 per cent of the students in a study who were taking medication for their symptoms were on a sedating antihistamine[5].

Seasonal Allergic Rhinitis (Hay fever) Some people experience symptoms during the spring or summer due to airborne pollens from trees, grass or weeds, or in autumn and other mild damp winters, due to mould spores.

Perennial Allergic Rhinitis Many have symptoms in the autumn and winter (and probably all year) due to allergens from pets or other animals or from dust mite allergens from the mites' dried faecal particles, which contains powerful proteins that have the potential to cause damage to inflamed airways and skin.

"Students who have allergic rhinitis symptoms on exam day are 40 per cent more likely to drop a grade between their mock and their GCSE exams."

Rhinitis may be infectious, non-allergic or caused by allergens or occupational triggers. Temporary congestion or watery rhinorrhoea may be triggered by temperature change or sensitivity to ingredients in food or drinks, such as sulphites, alcohol, spices or histamine.

A significant number of people with rhinitis and rhinosinusitis are classified as having severe chronic upper airway disease (SCUAD) and represent a therapeutic challenge. Chronic rhinosinusitis (CRS) is divided into groups with and without endoscopic or radiologic evidence of nasal polyps (CRSwNP and CRSsNP respectively)[7]. One fifth of patients with AR are uncontrolled despite adequate medical treatment of AR[8]. It is important to exclude serious systemic diseases, such as Wegener's, Churg Strauss, sarcoidosis, and other causes. Symptoms may also be due to aspirin/salicylate intolerance (particularly when polyps present) or reaction to hypertensive or topical drugs.

Allergen avoidance

This is an important first step but depending on the allergen may be difficult. Pollens cannot be totally avoided although there are many protective strategies. Most animal allergens can be avoided. House dust mite allergen avoidance programmes, only if aggressively comprehensive and persistent, can achieve impressive symptom reduction. See the Allergy UK website for factsheets on avoiding indoor and outdoor allergens. All traces of damp and mould spores need to be removed from the home and the building fabric treated. Cat allergen is exceptionally difficult to remove as the "sticky" allergen is found on walls, ceilings, fabrics and crevices, long (years) after the cat has been removed.

Treatment

British Society for Allergy and Clinical Immunology (BSACI) guidelines give detailed information on disease, diagnosis, management and treatment options for AR plus essential information about non-allergic rhinitis[9]. Also see www.bsaci.org.

Mild, intermittent symptoms of AR may be relieved by allergen avoidance where possible and antihistamines, topical preparations being more effective for both the eyes and nose. First generation sedating anti-histamines, which only exacerbate the drowsiness caused by the disease itself, should not be used[10]. Prescription only medication, e.g. fexofenadine, is often more effective than those available OTC. Persistent mild and all moderate to severe symptoms need topical nasal steroid sprays. It is important to use these as prescribed and especially with the correct technique, which is the reason for most treatment failures. Additional LRTAs may help some, particularly those with concomitant asthma. Douching is a useful adjunct to all therapies as it washes away allergens, irritants and mucus.

"House dust mite allergen avoidance programmes, only if aggressively comprehensive and persistent, can achieve impressive symptom reduction."

Now available in the UK is a nasal spray prescribable for moderate to severe AR patients that combines corticosteroid plus antihistamine (fluticasone + azelastine) and has been shown to achieve better and more rapid control of nasal symptoms than two or more different therapies[11].

Moderate to severe symptoms caused by a positively identified IgE-specific allergen, e.g. pollens, animals or house dust mite, may benefit from oral specific immunotherapy.

Failure of correctly administered therapy to relieve symptoms should be reassessed and if necessary referred for expert assessment to an allergist or a rhinologist with allergy expertise.

Meda pharmaceutical Ltd continues to support Allergy UK MEDA

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Living with a Food Allergy: What it Means to a Child and their Family

Sarah Stoneham (Trustee of Allergy UK is mother of Ella, aged 12, anaphylactic to dairy and egg, allergic to dust mites, cats and pollen, oral allergy syndrome, eczema, asthma, hay fever, dermatographism; Isabelle, aged 9, anaphylactic to dairy and egg; Matthew, aged 2, no known allergies).

The lives of children with food allergies can be impacted severely, as can the lives of their families. Pre-diagnosis there is obviously the concern as to what may be wrong with a child but once diagnosed the change and effect on lifestyle can be enormous depending on the severity and type of allergy diagnosed.

Home Life

There is a need to learn to live with and accommodate food allergies and, in the first instance, just learning to prepare meals for a child with particular dietary requirements can be very demanding and challenging, particularly in a family environment where there are other children or adults who may not fully understand or accept the need for a change in their own eating or lifestyle habits.

Additionally, there may be some problems caused between siblings where it appears that the allergic child is favoured, as life may often be planned around their needs. This can also be true outside of the home where the children's friends (or their parents) perceive the allergic child to receive preferential treatment.

Anxiety

Parents' anxiety about the safety of their children can be overwhelming and may put them and their child under considerable strain. This can apply in any number of situations inside the home but is far more likely outside of home where the chances of the child coming into contact with the allergen are heightened. This might include obvious situations like parties or eating out but can occur in almost any everyday situation and parents and their children are often subconsciously on high alert at all times outside of their homes.

Social Exclusion

Allergic children may be excluded from social occasions, which can in part be self-induced, as it is often easier to choose not to partake in social activities because of the stress and risk but it can also be due to others feeling that it would be easier or preferable not to include a child. This can be upsetting for parents and children alike. It can also occur because venues refuse to accommodate the allergic child. Festivities often highlight the exclusion of children as traditional food generally includes common allergens.

Where children are included there may still be issues around the way people deal with their condition, the questions that are asked and comments that are made. The child may be sat separately and isolated as a precaution, which they may find upsetting, or they may be fully integrated which then puts them and others in a stressful situation. The effect this has on parents and children obviously varies considerably depending on their personality and the circumstances, which is equally true of their ability to deal with insensitive or ignorant comments.

Allergy Profile

Sarah Stoneham

Allergy UK Trustee

Sarah is a mother of two allergic children, a primary school teacher, an Allergy UK Support Contact and a member of Allergy UK's Board of Trustees. Both of her daughters suffer from severe allergies. They have grown out of some of their allergies but remain extremely allergic to dairy and egg.

Sometimes it may be necessary to ask people to wash their hands or face, before they have any contact with the child, which can be awkward and embarrassing. Even parents will find there are times when they are unable spontaneously to touch or kiss their own child if they have eaten or touched something that could cause a reaction. The child may be wary of physical contact and may appear to withdraw and seem unfriendly when in fact they are simply protecting themselves.

Emergency Kit

Parents need to make sure that the children have their medical kit with them at all times. This means constantly checking the kit is with the child, making sure it isn't forgotten, checking it is in date and, more practically, ensuring that everyone who might need to know is aware of where the kit is at all times. They may, at the same time, have to manage the child's potential embarrassment or unwillingness to carry it. A basic kit of anti-histamines and auto-injectors may be an inconvenience but add into the equation an asthma pump, spacer and eczema cream and the parent or child may be carrying a fairly sizeable bag which may be an awkward addition to everyday baggage (such as school books or shopping) and, if forgotten or lost, can't be replaced at the drop of a hat.

For very young children the responsibility falls solely to the parent or carer but, as the child becomes more independent, they will increasingly need to take this on themselves. This can be a cause of anxiety particularly where the child does not want to carry their kit or is unable to manage or doesn't want the responsibility of doing so.

Allergic Reaction

When a child has an allergic reaction they may be suddenly unwell at the time of the reaction and require hospital treatment, which can be extremely frightening for the parents and children. However, the ramifications can be further reaching; the child may continue to be unwell for some time and they are likely to feel more anxious, as are their parents.

"Even parents will find there are times when they are unable spontaneously to touch or kiss their own child if they have eaten or touched something that could cause a reaction."

Medical Requirements

The parent or child may be required to provide accurate but complex medical information on a regular basis to different medical professionals or organisations. If the child is hospitalised and requires treatment there may be anxiety about their reaction to particular drugs which again makes a stressful situation that bit more stressful and, if they are kept in, there will almost certainly be no provision for them to eat food which excludes their allergens, requiring parents to make very practical arrangements at a time when they are under significant stress.

Child Care

Leaving an allergic child in the care of someone else can be difficult. All parents will make checks but, for parents of an allergic child, they need to be certain that anyone taking care of the child really understands their condition and is prepared to make necessary provision to protect them and, in the case of them having a reaction, to administer medication correctly. This continues every time the child is put in the care of someone new (e.g. nursery, school, family, friends) until the child is able to take responsibility for themselves. Sometimes these discussions go well and sometimes they do not, which can be very upsetting, particularly if the outcome means a child is not included in something in which they would otherwise be able to participate. It can also be extremely difficult to manage relationships when a mistake is made and can put both the parent and the child under significant stress if there is any element of distrust about the level of care provided. (It should be noted that it also puts significant stress on the carer).

Finances

In some cases, the allergy may create a financial burden. Examples of this might include the additional cost of specialised foods which are more expensive than 'normal' food, extra cost of travel insurance, having to buy an adult meal rather than a child's meal in order to have an allergy free option, and buying "free from" toiletries or multiple toiletries like sun creams to find one that does not cause a reaction.

Shopping

Once a child has been diagnosed every purchase made must be checked to ensure that it is safe for them to consume. Initially, this can require significant lengths of time spent checking ingredients until the family are able to establish a 'safe' list of products that are suitable for the child. However, different brands use different ingredients, allergen information isn't always available and, even where it is provided, it is not uncommon for products to have their ingredients changed without any warning. Therefore, even when the family have become accustomed to shopping in this way and have established a regular list, no assumptions can be made and products need to be constantly checked. Add to this the confusion, anxiety and frustration of the increased labelling of products with 'may contain' warnings, and a task, which for most people is very simple, becomes incredibly difficult and even more so when dealing with multiple allergens.

> "...it is not uncommon for products to have their ingredients changed without any warning."

Day to Day

In addition to dealing with emergency situations there may also be on-going day to day issues from allergens that are impacting on life. These may not cause anaphylaxis but can nevertheless be distressing, exhausting and irritating to deal with on an on-going basis, causing tension and anxiety at home and elsewhere. For example, constant scratching of eczema can lead to sleepless nights and blood stained clothing and bedding, or reflux may mean a more limited diet, a distressed child and constant clearing up of vomit.

At the same time, making arrangements to participate in any recreational activities or holidays can no longer be made as spontaneously as in the past and may require significant research and planning to ensure the child's safety. In some circumstances holidays, far from being relaxing, may be more stressful than staying at home.

"Having an allergic child impacts significantly on many aspects of the child's life and that of their family."

Having an allergic child impacts significantly on many aspects of the child's life and that of their family. Over time, as they learn to manage the condition, these may reduce or be alleviated completely but, initially, it can be quite overwhelming to come to terms with these changes.

For further help with managing childhood allergy:

- Allergy UK is the leading national medical charity providing advice, information and support to people with allergies and intolerance. Helpline: 01322 619898 **Downloadable factsheets www.allergyuk.org**
- RCPCH Allergy Care Pathways. June 2011. Royal College of Paediatrics and Child Health **www.rcpch.ac.uk/allergy** Downloadable pathways and videos.
- NICE clinical guideline 116. February 2011. Food allergy in children and young people: Diagnosis and assessment of food allergy in children and young people in primary care and community settings. National Institute for Health and Clinical Excellence. **http://guidance.nice.org.uk/CG116**
- NICE clinical guideline 134. December 2011. Anaphylaxis: assessment to confirm an anaphylactic episode and the decision to refer after emergency treatment for a suspected anaphylactic episode. National Institute for Health and Clinical Excellence. **http://guidance.nice.org.uk/CG134**

How Allergy UK Can Help You

Call Our Helpline **01322 619898**

Our national helpline is here for you and your patients, five days a week (Mon-Fri, 9am-5pm).

Follow us

facebook.com/allergyuk

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youtube.com/allergyukcharity

Factsheets

We have 128 FREE downloadable factsheets on our website, which you can access at any time. They are reviewed and updated regularly and cover a wide range of allergy-related conditions from childhood allergy to food intolerance.

E-newsletter

Sign up to our FREE e-newsletter to receive a monthly update on the latest allergy news and views – **register today on our website.**

Apply for a Bursary Grant

Allergy UK launched its bursary grant scheme in September 2012. We support eligible healthcare professionals such as GPs, pharmacists, nurses, paediatric registrars and research fellows in their ongoing allergy training.

If you would like to apply for an Allergy UK bursary grant or access our resources for healthcare professionals visit our website: **www.allergyuk.org/hcp/healthcare-professionals**

Allergy UK helpline: 01322 619898
Website: www.allergyuk.org
Email: info@allergyuk.org

Allergy UK leading the fight against allergy