Allergy Today

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AllergyUK

Allergy News • Treating Allergy in Primary Care • Food Allergy in Clinical Practice
Coping with Food Allergy in Children and Adolescents • Atopic Eczema

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Allergy UK is the leading national charity providing support, advice and information for those living with allergic disease. **www.allergyuk.org**

Foreword

Welcome to this edition of Allergy Today.

This issue includes the latest thinking and information on a range of topics, including treating allergy in primary care. Allergic disorders are now the most common chronic condition in children and young people, accounting for 8% of all general practice consultations in the UK. With only 29% of GPs and 9% of nurses receiving allergy training, there is a real need for more education at primary care level. It can be challenging for a GP in a relatively short consultation to determine a diagnosis and appropriate treatment plan. In this issue there is some practical information and advice designed to help this process.

Food allergy is probably the most high profile allergic condition, often brought to public attention through the media, and seemingly on the rise in developed countries. It is a condition which causes a great deal of anxiety for an individual or a parent and clear guidance for managing these patients is important to ensure the correct diagnosis pathway. An allergy focused clinical history is the starting point for GPs to provide a firm foundation for diagnosis and treatment. A relatively recent advance in this field is the better understanding of the link between food allergy and other conditions, particularly eczema. Emerging evidence shows that the skin barrier problems that cause eczema can allow other proteins (such as peanut protein) to cross the skin barrier and this may lead to peanut allergy. Once food allergy develops, it can also worsen existing eczema.

Allergy is a wide and complex disease area. Research has shown that in its severe forms, it has a more severe impact on quality of life than diabetes or heart disease. It can affect every aspect of life and evidence is building about the impact of both indoor and outdoor air quality on people living with the disease. It is widely acknowledged that our modern lifestyle and surroundings are playing key roles in triggering allergy so we must continue to develop our knowledge and understanding at all levels of our healthcare system to be more effective in diagnosing and treating the increasing number of people who live with this chronic condition.

I hope that you will find this issue helpful.

Dr Adam Fox
Chair of the Allergy UK Health Advisory Board
Consultant Paediatric Allergist, Evelina London Children's Hospital

Welcome

Our vision is for everyone affected by allergy to receive the best possible care and support. To help us realise this vision we work with specialists from across the field of allergy to help us communicate, through up to date articles and other information, the current thinking on a wide range of allergic conditions. Allergy Today provides specialist information and advice for non-specialist healthcare professionals to help support their diagnosis and treatment for those living with this chronic and life changing condition.

Allergy UK is here to support both patients and healthcare professionals. Working together we believe we can help to improve the lives of people living with allergy. We have a rich source of advice and information to support people living with allergic disease, as well as many education-led initiatives and special projects for healthcare professionals. We also have in-house clinicians as well as our Health Advisory Board of leading experts across the field of allergy who provide support and advice where needed.

Allergy Today is just one element of this work, along with our free downloadable Factsheets, wide range of information leaflets and our website www.allergyuk.org with its dedicated area for healthcare professionals.

Our free Masterclasses are always well attended and we receive positive feedback from the healthcare professionals who attend in order to understand more about the key issues across the breadth of allergic conditions.

We do hope you enjoy reading this issue.

Carla Jones, CEO

Amena Warner, Head of Clinical Services

Allergy News

NAP6

The 6th National Audit Report of the Royal College of Anaesthetists was published in May, 2018 as a result of an extensive investigation into perioperative anaphylaxis in the UK. The report provided the first in-depth investigation and highlighted the risk factors and recommendations for some of the 3.5 million people anaesthetised every year.

The study identified antibiotics, which are given to more than half of all patients undergoing surgery, as the most frequent cause of anaphylaxis. This contrasts with previous studies in which the main culprit was found to be muscle relaxant drugs. Nearly half of all anaphylaxis cases were caused by antibiotics used to prevent surgical site infections and one third by muscle relaxants. The authors of the study suggested that anaphylaxis caused by antibiotics may be increasing as a result of wider use and sensitisation in the population.

Allergy UK's Head of Clinical Services Amena Warner was a member of the NAP6 Steering Group and Case Review Panel and worked with a member of the Lay Committee of the Royal College of Anaesthetists on the patient experience chapter of the report. Allergy UK welcomed the report, praising the dedication and determination to investigate life-threatening reactions and examine where improvements can be made. In its statement Allergy UK also highlighted the need for clear communication with patients who have suffered life-threatening perioperative anaphylaxis about what has happened to them, what caused the reaction and how it would be investigated.

Health Visitor of the Year Award

Whittington Health, which covers two North London boroughs, has named Jackie Gaventa as Health Visitor of the Year, 2018 in recognition of her work supporting both children and families with allergic disease and her colleagues in the community and hospital. Jackie has been a practicing Health Visitor for the last 30 years and her interest in allergy was prompted by her own experience of having two children with complex food allergies and recognising that, at the time they were babies, there was little knowledge about allergic disease available for families. She is a Fellow of the Institute of Health Visiting and a member of both the BSACI Nurses in Allergy Committee and the BSACI Primary Care Group. She has recently been working with Tokyo University on its Public Health Nurse course, an initiative designed to help with setting up a Health Visitor Programme, the first of its kind in Japan.

"For my work to be recognised by colleagues in Whittington Health makes me feel very proud " she says.

Removal of certain medications from 'routine' prescription

The CEO of Allergy UK and the President of the BSACI have jointly written to all CCGs in England, expressing concerns about the recent NHS England guidance conditions for which over the counter items should not be routinely prescribed in primary care. The focus of concern relates to the understanding and interpretation of terms such as 'self-limiting', 'minor illness' and 'mild to moderate' in the context of chronic allergic conditions, specifically atopic dermatitis,

seasonal and perennial allergic rhinitis and allergic eye conditions.
For people with long term allergic disease, these new guidelines could mean that access to prescriptions for medications to relieve symptoms of conditions such as atopic dermatitis, and allergic asthma (which is sometimes preceded by unrecognised or mismanaged allergic rhinitis) could be denied.

As a patient organisation Allergy UK expressed its concerns that these patients could find themselves disadvantaged from both a health and socio-economic perspective, and even put at risk, because of misinterpretation of these guidelines.

Allergy UK and the BSACI have asked CCGs to consider the concerns raised and the importance of providing local guidance that more accurately addresses the recognition of allergic disease as a chronic condition. CCGs have been asked to communicate these concerns to GPs. The BSACI and Allergy UK are both available to provide further information and support to primary care in relation to allergic disease.

Air Quality – Its impact on people living with allergic disease

The recent consultation document on DEFRA's Clean Air Strategy highlighted air pollution as the top environmental risk to human health in the UK after cancer, heart disease and obesity, causing more harm than passive smoking. The environmental health risks of indoor and outdoor air pollution, and its effect on allergens, has always been a top priority for Allergy UK given the impact poor air quality can have on the allergic community.

Allergy UK welcomed the opportunity to respond to the consultation, outlining its view that any strategies designed to tackle the widespread increase of allergies and their threat to public health must reflect and address the complex interaction between environmental pollution and allergic disease. Allergy UK also asked the government, through this consultation, to include in their strategy the multifactorial aspects that influence the relationship between air pollution and allergic disease, and consider how to raise awareness among audiences that are most susceptible to developing or exacerbating their allergic conditions(s) as a result of indoor and outdoor air pollution.

FEATURE:

Primary care allergy services – what does the future look like?

Liz Anger is a portfolio GP and MSc allergy student at Southampton University. She was a Clinical Fellow at the National Leadership Academy and worked with NHS England with the New Care Models team. She is the current Chair of EAACI Primary Care and Allied Health Interest Group.

Currently there are problems with long waiting times for allergy outpatient appointments in many areas. There is a shortage of specialists with a limited capacity in most units for performing diagnostic challenge tests. There is also uncertainty as to how to assess allergy presentations in the wider community leading to an increase in referrals. Workload pressures in primary care with a lack of access to advice and education worsen this situation.

Funding has traditionally been channelled towards a tariff based payment system for hospital outpatient review rather than for a patient pathway. Many of the recommendations in allergy reports have not been implemented. Allergy presentations can vary from mild hay fever (rhinitis) to complex multisystem food allergy and anaphylaxis. The challenge is to design sustainable services that can cover all aspects of allergy care with quality pathways and considering patient safety and better patient experience.

Integrated care

One answer to these problems could be integrated care. This has many definitions but essentially it is care delivery that is patient centric. Many countries including the UK are moving towards integrated care systems. Allied health professionals and primary care, if supported and invested in, can offer with secondary care a seamless pathway. The European Academy of Allergy and Clinical Immunology (EAACI) Allied Health Interest Group has just published a paper in Clinical and Translational Allergy on competencies in allied health to support integrated care. They have also contributed towards the EAACI white paper on a strategy to invest in primary care to support pathways. Policy makers and commissioners should be aware of the possibilities of workforce remodelling and the benefits of an agile workforce that leads to sustainable pathways of care. The National Allergy Strategy Group in the UK is currently working on a report with the All Parliamentary Group to raise awareness of allergy and inform policy.

Patients with mild to moderate allergy presentations could be assessed, treated and supported in the community. This would allow patients with more severe presentations to be seen more rapidly in allergy centres. A review of who could be seen where and by whom, needs to be undertaken to look at the potential for utilising other approaches to care. The existing models of outpatients for everyone is now outdated. Care should be tailored to individualised patients. Only those that require the hospital tests, such as challenges and complex skin prick test panels, and specialist advice and treatments need to be referred to allergy clinics.

Allergy: problems and solutions

Allergy presentations account for approximately eight per cent of GP consultations. The recent quality standards in anaphylaxis and food allergy have tried to define key points in management. These are not mandatory and there is no official process to audit and report on them in the community. There are also no quality and outcome framework points in primary care on allergy. These can act as an incentive for service delivery. However this system is being reviewed and in future may be superseded by other markers and payment systems looking at utilisation of services over time.

There is an increasing awareness of the importance of recognising and treating allergies early and in giving advice about potential prevention measures. Parents may enquire about feeding in early infancy and the effects that this might have on the future development of food allergies. This is a common question raised in primary care; the recent guidance released by the British Society of Allergy and Clinical Immunology (BSACI) has been developed by specialists, GPs and dieticians with this in mind **www.bsaci.org.**

Some patients presenting with potential allergy symptoms will require allergy tests. These need to be ordered and interpreted in the light of a good allergy focused clinical history. Many GPs struggle with knowing what tests to order and what the results mean. It can be confusing for patients and reviewing doctors to have multiple "screening" tests which are not related to the history as these may give false positive results. GPs can refer to a number of resources. There are now several NICE guidelines, the BSACI have their own NICE accredited guidelines and the EAACI have published

food allergy guidelines. What is needed are concise documents that are readily accessible by frontline primary care workers. They could be used at the time of consultation, particularly if they are compatible with GP software. This approach could in future guide primary care workers through the process of history taking with decision support and link to advice and guidance. This may also involve the availability of real time advice from an allergy specialist to ensure appropriate tests and advice is given prior to referral.

Another differential diagnosis of allergy is idiopathic angioedema (swellings) and urticarial (hives). More guidance on how to differentiate this from allergy and manage this optimally in primary care would be helpful.

This change in services might, in the future, involve job plan changes for consultants where liaison with the community is written in to their week rather than traditional clinics to ensure the patients are treated closer to home, if possible without unnecessary outpatient journeys. Perverse incentives for tariff payments for outpatients for hospitals can hinder new approaches to care, so work by them on giving advice should be commissioned and funded to recognise this change.

There is ongoing debate about prescribing Auto-Injectors for allergy patients in the community and the wider health system. A central point of this is the ability to risk assess from the history to determine whether a patient requires access to adrenaline. The primary care group at the BSACI, plus other stakeholders and allergy charities, are working on this at the moment. With a history of anaphylaxis it should be straightforward to decide that an Adrenaline Auto-Injector should be prescribed. A more difficult scenario is to risk assess patients with mild reactions who might be a risk of a severe reaction in the future. This requires an in depth understanding of how to take the allergy history and what this history means in terms of prediction of future risk, which might require specialist input. The specialist guidelines on adrenaline prescribing need to re-interpreted for implementation in primary care. Appropriate safety netting is required until a patient is reviewed in a specialist clinic when a decision can be made on their individualised requirements.

The Medicine and Healthcare Regulatory Agency guidance and European Medicines Agency guidance currently recommends that two Auto-Injectors should be prescribed to most patients. This is due to the possibility of misfire, misplacement or biphasic reaction.

GPs should also be aware that poorly controlled asthma is a risk factor for anaphylaxis. Therefore asthma treatment should be optimised in these patients. GPs might also not be aware though of common cofactors that can accentuate allergic reactions, such as exercise, alcohol and stress. There is ongoing work on the understanding of these factors.

GPs also need to be aware of the wider holistic picture of the effect on the family living with food allergy and the extra time that is needed to undertake activities and outings. Families and patients should be encouraged to be vigilant and to always carry in date adrenaline devices whilst also being reassured that the likelihood of fatal anaphylaxis is rare. This can be a difficult balance to achieve in consultations. Schools and nurseries also need to be informed; the availability of generic Auto-Injectors is a step forward (www.sparepensinschools.uk) and Allergy UK have Helpline numbers issuing advice and anaphylaxis patients and their carers should be given this information at the time of diagnosis. Patients also need avoidance advice and an anaphylaxis allergy action plan which can be accessed via the BSACI website www.bsaci.org.

There are now well documented workload issues and time constraints in general practice. Workforce issues and capacity can be supported and many areas now have federated GP group models where they employ practitioners with extended roles or consultants in the community to see patients. There is also an opportunity for wider workforce roles and making every contact count. Pharmacists doing adrenaline device training when prescriptions are dispensed or for practice nurses revising Auto-Injector training when doing asthma reviews could be examples of this in the future if they are given funded time and this is an agreed service. We have seen rising numbers of primary care workers in recent years express an interest in allergy which is encouraging. All interested colleagues are welcome to contact the BSACI .The current primary care chair is Dr Helen Howells. The Royal College of General Practice (RCGP) is now also running free, well attended, allergy education days supported by primary care and specialist speakers. Moving ahead allergy networks, whereby adult and paediatric allergy groups form links and working relationships with their local primary care colleagues, will establish pathways of care. Many GPs, dieticians, nurses and psychologists are now working in hospital allergy units. They should be encouraged and recognised as integral members of the interdisciplinary team with investment in training leadership and education rather than them just delivering a purely service role.

There are a number of educational courses focusing on allergy. Newcastle runs an accessible postgraduate certificate in allergy. There are well established and excellent MSc courses at Southampton University and Imperial College London. These have now trained a significant number of specialists, GPs and allied health professionals, many of whom have gone onto run their own services. Short courses at the Allergy Academy alongside the courses run by Allergy UK and Anaphylaxis Campaign and e-learning are other options. NICE also has a free e-Learning module and there is a summary of educational courses on the BSACI website **www.bsaci.org.**

The RCGP, with support from the BSACI, have developed a new allergy undergraduate module which will form part of GP training ensuring new graduates will be familiar with allergy presentations.

Working at scale and across boundaries is now recognised to show improvements in care whether this be by Federations or new models of care. This might mean staff working across sites with a work passport for both the community and hospital. The workforce

has differing needs with many doctors expressing an interest in portfolio roles. This is a time when we could be developing innovations in primary care. This could mean integrated care organisations or clinical commissioning groups employing GPs, or nurses with extended roles, that can work in hospitals and the community with an interest such as respiratory or allergy. The RCGP and Health Education England are currently looking at the credentialing system for practitioners with extended roles. They are also looking at supporting training, indemnity and accreditation. A dermatology project is currently being piloted which will hopefully inform other subjects.

There are a number of examples of new approaches to delivering allergy care in the community. The Itchy, Sneezy, Wheezy project in London is a Health Services Journal award winning project. It brought together community practices and outreach staff with educational videos www.itchysneezywheezy.co.uk. A key point is to encourage peer learning rather than staff just going out into practices and using rooms. Another example is the North West Paediatric Allergy network project working as part of the Royal College Physicians (RCP) future hospitals programme. Their progress, reflections and work with patients and primary care are on the RCP website.

The management of straightforward allergies such as mild rhinitis can be enhanced by self-management and sign posting to appropriate websites. The role of trained primary care navigators can be helpful here in directing patients to these. Enhanced pharmacy and nurse training, so that the patient gets consistent advice and treatment, would also be helpful. Many GP practices now have in house pharmacists and they are often the first line of call for allergy patients.
For those primary care practices thinking of offering allergy services, there have been successful models. Dr Sam Walker and Dr Mark Levy ran a successful community clinic in London (ref PCRS Journal). There are other examples of GPs with an extended role running clinics, such as Dr Isobel El-Shanawany, who runs a paediatric clinic in London. GPs should look at their local allergy pathways and liaise with the appropriate local secondary care allergy networks that the BSACI has set up. Ideally these networks could establish integrated local care pathways with agreed referral guidance and support. The improvement of allergy services requires strong leadership especially now from primary care but also across boundaries. Allergy is ideally placed to have community services if the right training and support is in place in a hub and spoke model. Allergy questionnaires that myself and other colleagues have developed have shown gaps in GPs knowledge which as a system we are trying to address.

Other primary care societies, such as the Primary Care Respiratory Society, are holding leadership courses for setting up community clinics. These include advice on talking to commissioners and drawing up business plans, it might be beneficial to join forces with them for shared experience as there are transferable learning points. Frameworks for equipment required, ordering, storing and maintenance of skin prick test solutions, competencies and pathways all need to be defined, alongside methods of referral and appointments with adequate time for the history, testing, training and administration.

In the meantime, we need to work closely with our specialist colleagues to talk to Clinical Commissioning Groups and integrated care organisations about how allergy is commissioned across the health system. In the future it may be co-commissioned or become part of a capitation based payment across an integrated system. The focus should be on what matters most to patients and how we can improve the patient journey. There are many questions that still need to be addressed in this area. A new primary care research group in allergy has just been formed within the Society of Academic Primary Care to look at these.

My hope is that the allergy community will itself raise the profile of this condition. In the future, a social movement could form around allergy. This could educate the community about the needs of allergy patients and how we embrace them as a society. That might involve a better understanding of allergy in schools, universities, airlines and social gatherings as well as the provision of Adrenaline Auto-Injectors alongside defibrillators. Social change theory experts, such as Helen Bevan and her team, might be able to advise us on how to move this forward. We should also work alongside patients and co-design services with them that put the patient at the centre of care, whilst continuing to campaign for a better understanding of allergy across the whole community.

FEATURE:

Food for Thought: Food Allergy in Clinical Practice

Holly Shaw works in an advisory capacity as a nurse for Allergy UK. Her professional interests include paediatric food allergy, education and knowledge translation. Holly has international nursing experience having worked in Australia in Population Health Research on the Health Nuts study at The Murdoch Children's Research institute in Melbourne. She is a member of the BSACI and takes an active interest in raising the profile on the impact of allergy.

Introduction

Food allergy continues to be a hot topic of conversation in clinical practice. Allergy is often brought to public attention through the media, and food allergy has been reported to be on the rise in developed countries. The UK picture is that an estimated 21 million people suffer from at least one form of allergic disease.[1]

Allergy on the rise

Research continues to provide missing pieces of the jigsaw on what factors are contributing to this rise. The environment and modern lifestyle offer two of the biggest clues. Research studies carried out on infant feeding in UK-based studies include Learning Early about Peanut (LEAP) and Enquiring about Tolerance (EAT) have produced emerging evidence to suggest that the early introduction of foods into an infant's diet may help to achieve oral tolerance.

Patients commonly present to clinical practice with concerns over food allergy. These concerns often carry a great deal of anxiety for the individual or parent worried about a suspected food allergy in their infant or child. Adverse reactions to foods present in many forms, with food allergy and food intolerance being commonly confused. Not all adverse reactions to food have an allergic mechanism.

Diagnostic guidelines

Food allergy can be complicated to diagnose. The NICE quality standard for food allergy (QS118) provides guidance for health professionals who may be involved in the diagnosis, assessment and management of food allergy in young children.[2] Having clear guidance for managing patients presenting with symptoms suggestive of food allergy is important to ensure patients access the correct diagnostic pathway. An accurate and timely diagnosis will impact on patient outcomes and help reduce costs associated with multiple GP visits. Waiting times and demand for services mean creative ways of managing resources need to be adopted.

Symptom recognition

Identifying the signs and symptoms suggestive of a suspected food allergy can be challenging due to the variety of possible signs and symptoms which are commonly seen in other conditions. The onset of allergic symptoms can be divided into those seen within minutes of exposure to the suspected food allergen (IgE mediated) and those that are delayed (Non IgE mediated) observed several hours after exposure. Symptom timing offers key clues to whether the immune system was involved. Symptoms of IgE mediated allergy commonly affect the skin (erythema, hives and angioedema), whilst delayed reactions commonly affect the gastrointestinal system including symptoms of vomiting, abdominal pain, diarrhoea, constipation and excessive amounts of wind.

Allergy-focused clinical history

Taking an allergy-focused clinical history is the starting point on the pathway to a food allergy diagnosis. The allergy-focussed history should be tailored to the age of the individual and presenting symptoms. Questions that raise clinical suspicion for the increased risk of food allergy include a personal or family history of allergy and the presence of other allergic disease. In addition, questions on diet are also important. A large number of foods are known to have caused food allergy. However, the common culprits responsible for the majority of food-related allergic reactions are:

Establishing the links between food allergy

Atopy is the genetic predisposition to develop one or more allergic diseases (hay fever, asthma, eczema, and food allergies) and often runs in families. It has long been known that genetics is an important determining factor in who develops allergy. The progression of allergic disease from birth to late childhood has been historically described as 'the allergic march'. This simply means the natural order or sequence in which allergic disease develop over time. [3].

Recognising the link between food allergy and other allergic conditions is important

Patients with asthma already have sensitive airways and asthma is a risk factor when managing food allergy. Where food allergy and asthma co-exist there is an increased risk of having a severe allergic reaction, especially where nut allergy and asthma co-exist. Ensuring asthma is well-controlled is important and can be achieved through regular asthma reviews. All patients with asthma should receive a written management plan (PAAP - Personalised Asthma Action Plan). The relationship between food allergy and eczema is well documented. The link between early onset eczema developing in the first few months of life increases the risk of developing a food allergy. Exposure to certain foods, for example egg or cow's milk may also trigger or worsen eczema.

Testing times

The diagnostic test chosen should be guided by the information gained from the allergy-focussed history. The most appropriate test will depend on whether the allergy is thought to be IgE mediated or Non IgE mediated. The tests available for immediate (IgE) mediated allergy include skin prick testing and serum specific IgE blood tests, which measure the presence of IgE in the skin and blood. There are no clinical tests for the diagnosis of Non IgE mediated allergies. They are diagnosed using a trial of elimination and re-introduction diet to see if the symptoms improve when the suspected food is removed from the diet. NICE guidance on the diagnosis and assessment of allergy in under 19s can be found at https://www.nice.org.uk/guidance/cg116. (4)
Referral to secondary care for diagnostic testing may be required where blood testing or skin prick testing is not available in primary care. Long waits to access allergy services are not uncommon and should be a consideration when choosing which diagnostic test is most appropriate.

Multi-disciplinary working

Collaborative working with health professionals from different disciplines is instrumental in the expertise and contribution that speciality has on providing high quality care for the allergy patient, and should be high on the agenda. Dieticians have a vital role to play in supporting the food allergic individual to ensure nutritional needs are met and alternative products choices are made. Pharmacists are also an important but underutilised resource who often have access to patients and are well placed to give advice on product and medication choice, as well as the supply of allergy medications and education on device management.

1) Mintel (2010) statistics on allergy prevalence in the UK sourced from allergyuk.org (last accessed 16 May 2018)
2) NICE (2016) Food Allergy www.nice.org.uk/guidance/qs118 (last accessed 16 May 2018)
3) Spergel JM (2010) Epidemiology of atopic dermatitis and atopic march in children. Immunology and Allergy Clinics of North America.30,3,269-80
4) NICE (2011) Food Allergy in the under 19s: Assessment and Diagnosis. Nice.org.uk/guidance /cg116)last accessed 16 May 2018)

FEATURE:

Coping with Food Allergy in Children and Adolescents

Jenny Hammond is due to submit her PhD, which she has been completing at Aston University, Birmingham. She is currently working as a research associate for a health care charity in Oxford.

There is limited research which specifically examines how children and adolescents cope with their food allergy (Sampson et al, 2006). As children and adolescents are at a high risk of fatalities following an allergic reaction, (Pumphrey & Gowland, 2007), it is important to understand why this is the case, and how children and adolescents cope. This PhD, funded by Allergy UK and Aston University, aimed to explore how children and adolescents aged 8-16 years old coped with their food allergy, and developed a coping scale for this population – the Coping Scale for Food Allergy.

Five studies were conducted to explore coping: a systematic review of literature of coping behaviours of children and adolescents with food allergy, semi-structured interviews with children and adolescents, followed by in-depth thematic analysis of the data, and development and validation of the Coping Scale for Food Allergy. The definition of coping used throughout this PhD was given by Compas et al (2001) which is voluntary efforts to regulate one's cognitive, behavioural, emotional, or physiological responses to a stressor or toward the stressor itself. (Compas et al, 2001). A control-based model of coping underpinned the research, which is made up of three factors: primary-control coping, secondary-control coping and disengagement coping. Primary-control coping involves strategies to change a stressor, secondary-control coping involves strategies to adapt to the stressor, and disengagement coping strategies are those that steer one away from the stressor.

The systematic review identified 13 papers that described coping behaviours in children and adolescents. However, the majority of paper were predominantly on adolescents, and children were underrepresented. Using thematic analysis, four themes were identified that explore how children and adolescents cope with food allergy, and barriers or facilitators to effective coping. These were: negotiating and coping with risk; coping with emotions; support from others; carrying and using Adrenaline Auto-Injectors (AAI). Primary-

control coping strategies, such as carrying an AAI, were used by children and adolescents to help keep them safe, whilst secondary-control coping such as making comparisons against others were used to help manage their emotions. Disengagement coping strategies such as not carrying an AAI, or hiding their food allergy from others was used and this could lead to increased risk of an allergic reaction. Coping strategies could be influenced by location, knowledge, age, risk perception and social support.

The thematic analyses of child and adolescent interviews showed that both age groups cope with their food allergy in a variety of ways, similar to finding of the systematic review. Children often sought the support of others, such as their parents, which is not an unusual finding. However, they were also able to independently manage their food allergy when not in the company of their parents. Adolescents are typically associated with risk-taking behaviour, and whilst this was identified to an extent (such as trying foods that contain an allergen), some adolescents were found to moderate the amount of risk they were taking reducing it to a level they felt they could control, such as minimising the amount of allergen in a food.

Adolescents also have additional factors to manage associated with the transition to independence. They spoke about socialising more without parents and so having to learn to use coping strategies that parents may have used in order to stay safe. When food allergy appeared difficult to control both children and adolescents used 'disengagement' coping strategies, such as not eating out. They also used strategies such as not telling their friends as a way to stop feeling or looking different. Secondary control coping strategies, such as making comparisons against others that had more serious conditions than themselves or positively reinterpreting their food allergy also helped both children and adolescents when feeling distressed.

To develop the Coping Scale for Food Allergy, items were formulated from the data obtained from the systematic review and the thematic analysis of the interviews. As there were minimal differences identified between the ways children and adolescents coped, only one scale was developed for ages 8-16 years old. The initial prototype scale consisted of 43 core items, and six optional items. Optional questions concern socialising without parents. These were originally intended for adolescents only but were added as an option for all children following feedback from some children who felt they too could answer the questions. A total of 113 children and adolescents completed the Coping Scale and validation scales, which measured things such as general coping strategies, anxiety and depression, and illness beliefs. A principal components analysis was conducted on the prototype scale to identify a structure and to reduce the number of items. This resulted in a final scale with 29 items, consisting of four factors. These were named 'social support', 'self-management', 'avoidance and minimisation' and 'positive beliefs'. The scale was found to have good internal reliability and validity.

To assess the stability of the scale over time, children and adolescents who initially completed the prototype scale were invited to complete the 29-item scale twice over a two week period. 43 participants completed the scale at time one, however only 14 completed the scale at time two. Results from the analysis of participants who completed the scale at two time points indicated good stability over time.

Overall, this study has uncovered that children and adolescents use a wide range of coping strategies. However, coping is dynamic and depends on the individual and the circumstances they are in. The Coping Scale for Food Allergy is a useful tool to identify the types of coping strategies used and could be applied in a clinical setting. Further work will need to be done to ensure stability with a larger population and a 29-item may not be feasible to complete in clinical settings where time is limited. In future work it would be useful to develop a shortened version of the scale that may be more appropriate for use within a clinical setting.

This research was completed by Jenny Hammond, supervised by Dr Rebecca Knibb and Dr Richard Cooke. We would like to thank both Allergy UK and Aston University for funding this research.

FEATURE:

Atopic Eczema – An Overview

Amena Warner is Head of Clinical Services at Allergy UK. She took up this appointment after working as a Clinical Nurse Specialist in Immunology and Allergy at an NHS Hospital Trust. She trained at University College Hospital, followed by paediatric training at Great Ormond Street Hospital in London. She also holds a Public Health and Specialist Practice in School Nursing qualification gained in 1994. Visiting schools and carrying out health assessments made Amena very aware of the rising incidence of allergy in the UK and was instrumental in developing her interest in the field.

Amena is a member of the College of Nursing Immunology and Allergy Nurses group and is the first nurse to sit on the British Society of Allergy and Clinical Immunology (BSACI) council where she started the National Nurses in Allergy Group.

Atopic dermatitis (AD), also known as atopic eczema, is a chronic, immune mediated disease. It can be mild, moderate or severe and have a profound effect on quality of life if not well managed.

The epidermal skin barrier is the largest organ in the body and is the first line defence barrier of the immune system against invading organisms such as bacteria and other microbes. There is much evidence now about the importance of some of this 'friendly bacteria' that form part of a microbiome, living on the skin, which also serves as a protective function to the human body. Hence why it is termed 'friendly'.

Skin conditions are very common and patients will present in all care settings[1]. Skin conditions can be extremely uncomfortable, cause distress, anxiety, embarrassment and have an impact on quality of life[1]. If the skin barrier is broken, there are opportunities for external environmental and pathogenic (i.e. bacteria) particles to cross the skin barrier and have a direct access into the human body.

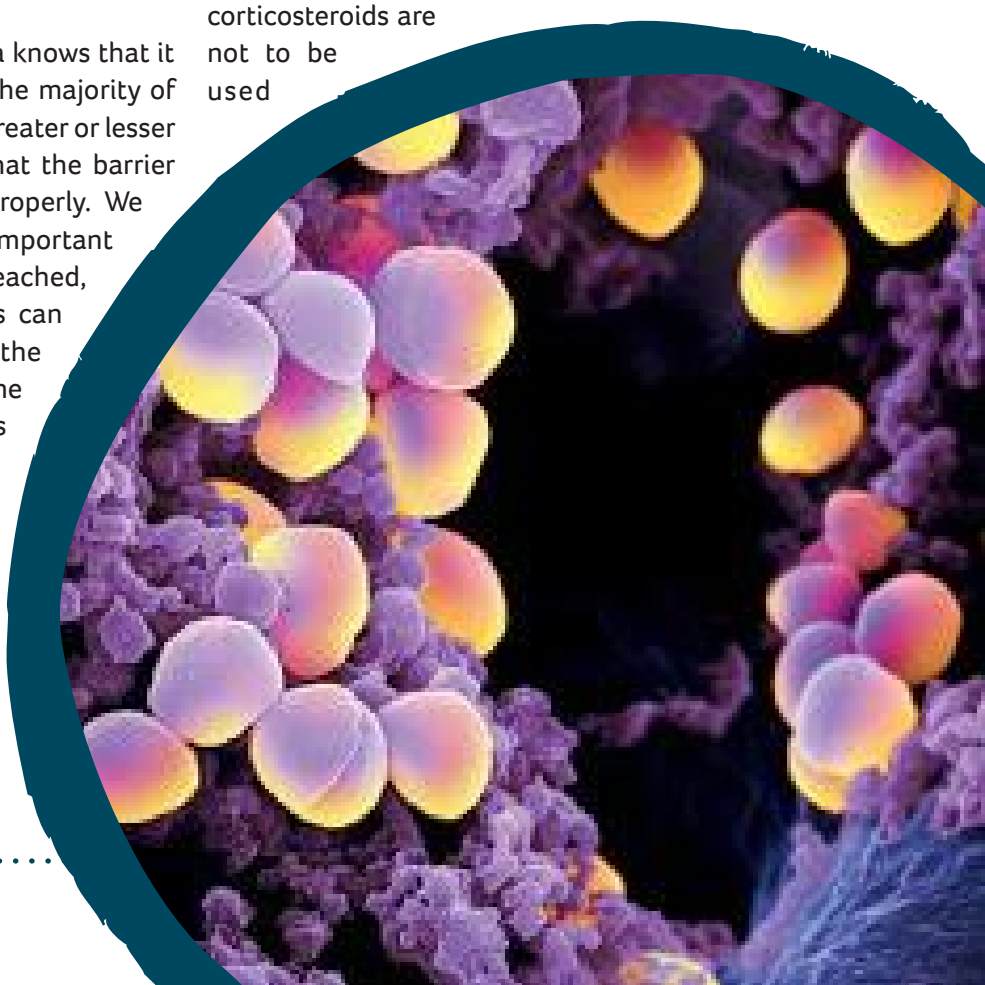
Lack of a protein named filaggrin in the skin can cause an inherited dry skin condition that is strongly linked to the development of atopic eczema. Filaggrin deficiency and impaired barrier function has also been linked to more severe atopic eczema and its persistence into adult life[2]. At least 20 loss-of-function mutations (changes in a gene that prevent it working properly) causing filaggrin deficiency have been discovered in many different racial groups[2]. As well as inherited genetic factors there are also environmental factors that may impact, such as water hardness.

Everyone who has experience of eczema knows that it often starts as dry, scaly patches and the majority of sufferers have a generally dry skin to a greater or lesser degree. The dryness is an indication that the barrier function of the skin is not working properly. We now realise that this is tremendously important because, once the skin barrier is breached, irritants such as soaps and detergents can dry the skin and cause deterioration of the already weakened barrier and worsen the eczema. It also means that allergens such as foods (e.g. peanut protein) and inhalant allergens (e.g. house dust mite) are then able to penetrate into the upper layers of the skin. The allergens are then picked up by cells from our immune system that carry them into our circulation and cause sensitisation (the development of antibodies to an allergen). This does not necessarily lead to any clinical symptoms, but in some cases it can lead to allergic reactions when the individual is next in contact with that allergen. It is, therefore, extremely important to try to repair the barrier function of the skin with the long term use of emollients and to avoid the use of irritants.

The average GP in the UK will have approximately 600 patients who have atopic dermatitis, across both adult and child age ranges. Prevention and control is the cost-efficient way to decrease the disease burden. Keeping the skin soft and supple is a very important way of preventing dry, flaky, cracked skin. This is skin barrier enhancement. Where eczema exists, very frequent amounts of emollient should be used, avoiding SLS containing products, such as aqueous cream (National Eczema Society advice).

Professor Michael Cork, an academic dermatologist from the University of Sheffield, said despite advice from the National Institute of Health and Clinical Excellence in England and Wales (NICE) not to prescribe or recommend aqueous cream in this way, it was still widespread practice. He recommended that people with eczema use a formulation without the detergent SLS instead.

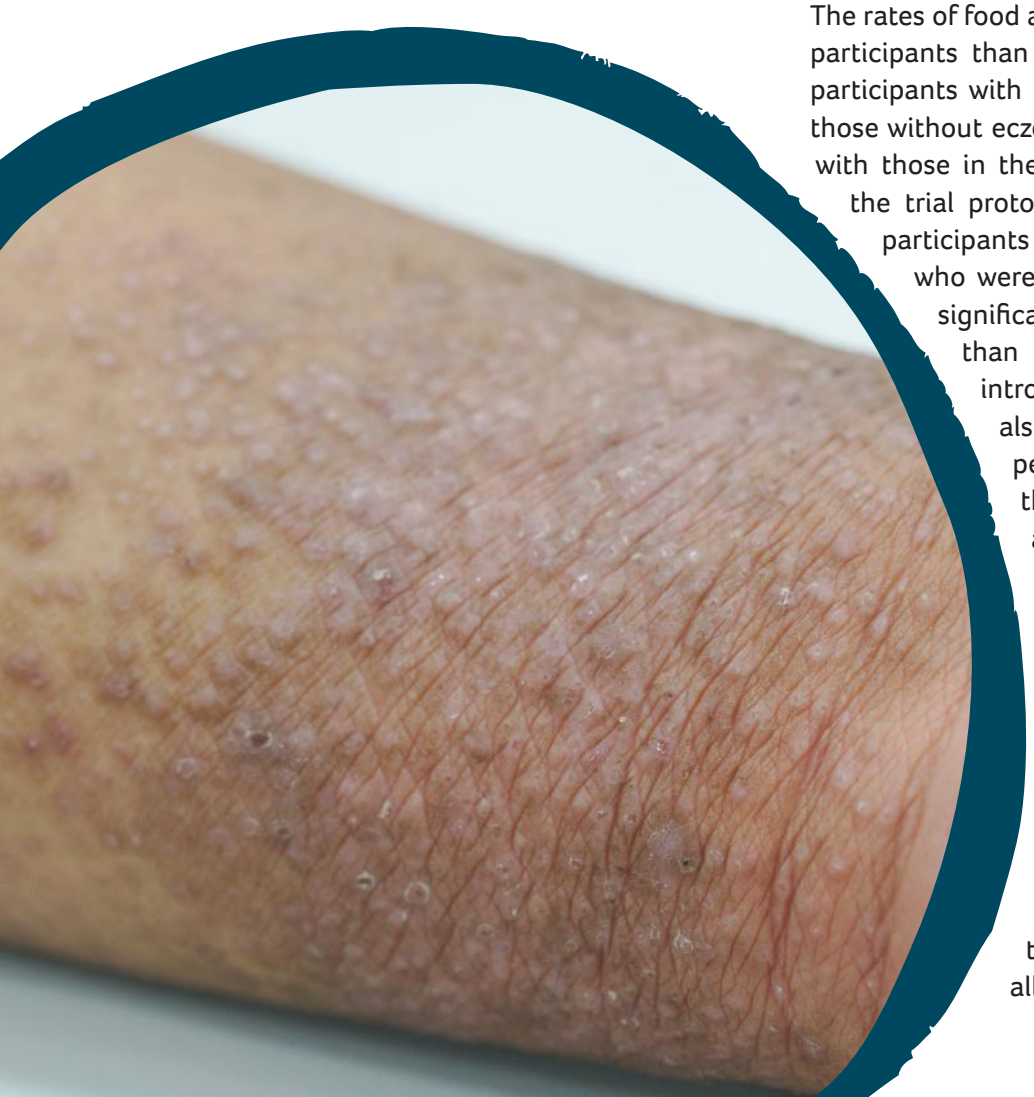
80% of patients with eczema carry staph aureus on their skin. Severity, response and control, all overlap. Topical corticosteroids reduce flares and increase flare-free periods, but these have side effects, and corticosteroids are not to be used



on a sensitive skin area (such as the eye area), so non-steroid alternatives are needed.

The most constructive way to spare steroids is use them proactively, only during a flare, and spare it during flare-free periods. It is in these flare-free periods that it is important for the patient to remember to continue to apply emollient, even though the inflammation and redness of the skin has resolved. It is also important to inform the patient or parent/carer of a child, that if prescribing or recommending a paraffin-based treatment, they should keep away from open fires, barbecues, gas cookers, naked flames, smokers, lighters or matches. These can all be a source of ignition, lighting the paraffin from these types of creams/ointments, which can get onto clothes.

Allergy UK conducted a survey of adult patients with severe eczema in 2016. 305 people responded and over 70% reported feeling depressed as a result of their condition. One in ten reported consuming more alcohol when their eczema was at its worst; 86% said that management of the condition impeded their day to day activities. So getting the management of this condition right in childhood or at first presentation is crucial.



Emerging evidence also shows that food allergy in babies and young children (such as cow's milk allergy) can drive eczema, and that where eczema already exists and the skin barrier damaged, other proteins (such as peanut protein) can cross this damaged skin barrier, cause sensitisation to the peanut protein, and may lead to peanut allergy. This is especially the case where the infant has not developed oral tolerance through the weaning diet[3]. Recently published UK studies have supported the early introduction of allergenic foods into the early weaning diet to try and prevent and reduce the incidence of children developing food allergy, such as the LEAP study (Learn Early About Peanut[4]) and EAT study (Enquiring about Tolerance[5]). This trial came after the LEAP study, which only looked at peanut, so therefore conceived to determine whether the early introduction of common dietary allergens (peanut, cooked hen's egg, cow's milk, sesame, whitefish, and wheat) from three months of age in exclusively breastfed infants in the general population would prevent food allergies, as compared with infants who were exclusively breastfed for approximately six months.

Discussion from the published EAT study stated:

The rates of food allergy were higher among nonwhite participants than among whites and higher among participants with eczema at enrollment than among those without eczema — findings that are consistent with those in the literature; however, adherence to the trial protocol was significantly lower among participants in the early-introduction group who were nonwhite and was lower (but not significantly) among those who had eczema than among the rest of the standard-introduction group. Adherence was also lower in cases in which parents perceived symptoms in their child with the early introduction of the foods and in cases in which mothers had a lower psychological quality of life at enrollment. These results raise the question of whether targeted clinical and dietetic support to these families at the earliest stages of food introduction could possibly augment adherence, and this concept requires further consideration if early introduction is to be considered as a policy to reduce the prevalence of food allergies.

At Allergy UK, we recognise and value the support dietitians who specialise in allergy, contribute to the nutritional well-being of babies and children with symptoms suggestive of food allergy. This means parents/carers can safely wean and continue to feed their infants, avoiding the culprit food and giving safe alternative suggestions that parents/carers can easily source. Allergy UK provide Masterclasses for GPs and primary care nurses, that many attending GPs, health visitors and practice nurses have evaluated highly. The Masterclasses feature expert speakers, many of whom have authored the publication of this groundbreaking research. These are free to attend and often include 'hands on' practical workshops.

1) Assessing a patient with a common dermatological problem. S. Lawton. Primary Care Health. 26,10,42-48. September 2016.

2) Eczema genetics: current state of knowledge and future goals. Brown SJ & McLean WH. J Invest Dermatol. 2009 Mar;129(3):543-52.

3) Peanut allergy: Effect of environmental peanut exposure in children with filaggrin loss-of-function mutations. H. Brough et al. Journal of Allergy & Clinical immunology. 2014.

4) Randomized Trial of Peanut Consumption in Infants at Risk for Peanut Allergy
G. Du Toit, G. Roberts, P.Sayre, H. Bahnson, S Radulovic, A Santos., H Brough,D Phippard, M.Basting, M Feeney, V Turcanu, M Sever, M Lorenzo, M.Plaut,and G.Lack, for the LEAP Study Team*. N Engl J Med 2015; 372:803-813.

5) Randomized Trial of Introduction of Allergenic Foods in Breast-Fed Infants. M.R. Perkin, K. Logan, A. Tseng, B.Raji, S.Ayis, J Peacock, H.Brough, T. Marrs, S. Radulovic, J.Craven, C. Flohr, G.Lack,for the EAT Study Team. New England Journal of Medicine. May 2016; 374:1733-1743.

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