BSACI launches new drug allergy management resource section on website
For further information contact our Healthcare Professional Helpline on 0800 996 1234 or visit www.eln.nutricia.co.uk/cma

Aptamil Pepti
for the effective management of cows’ milk allergy

RELEIVE
cows’ milk allergy symptoms
with 97% efficacy

REDUCE
incidence of atopic dermatitis
up to five years

REASSURE
with the UK’s most palatable
extensively hydrolysed formula*

Welcome to Issue 30 of Allergy Update which I am very pleased to have put together with Dr Shelley Dua our new Feature Editor - I hope you’ll enjoy the Feature Article on standardising beta-lactam allergy drug provocation tests by Dr Paul Whitaker who has helped develop a new Drug Allergy section on the BSACI website. Further allergy resource sections are due to be launched on the BSACI website.

In this issue we also have articles on Allergy clinical teaching for medical students by Dr Claire Bethune and the newly updated allergic & non-allergic rhinitis BSACI guidelines by Dr Gienis Scadding et al which have been revised for 2017.

Dr Guy Scadding and Dr Tom Marrs report on the wonderful BSACI Annual Meeting 2017. Congratulations to this year’s Barry Kay Award winners. Please do let Dr Shelley Dua and I know if there are features or articles you would like to see in Allergy Update.

Many thanks to Fiona Rayner, Maryam Shayeghi and the BSACI Team for all their input behind the scenes.

Contributions should be e-mailed to: tak_chin@hotmail.com

Editor
Dr Tak Chin

Feature Editor
Dr Shelley Dua

Layout
ING Design Ltd 020 737 5775

BSACI President
Dr Shuaib Nasser

President Elect
Dr Adam Fox

Secretary
Dr Stephen Till

Treasurer
Dr Susan Leech

Editor of Clinical & Experimental Allergy
Prof Graham Roberts

Meetings Secretary
Dr Guy Scadding

Elected Council Members
Dr Nicola Brathwaite
Dr William Egner
Ms Roslin Fitzsimons
Dr Elizabeth Griffiths
Dr Nicola Jay
Dr Tom Marrs
(Deputy Meetings Secretary)
Dr Mohamed Shami

Ex-Officio Members
Dr Andrew Clark
Dr Pamela Evan
Dr Adam Fox
Dr Tariq El-Shanawany
Professor Syed Hassan Arshad
Dr Helen Howells
Ms Kathryn Powrie

BSACI guidelines by Dr Glenis Marrs report on the wonderful BSACI Annual Meeting 2017. Congratulations to this year’s Barry Kay Award winners. Please do let Dr Shelley Dua and I know if there are features or articles you would like to see in Allergy Update. Many thanks to Fiona Rayner, Maryam Shayeghi and the BSACI Team for all their input behind the scenes.

** A home usage test was carried out between 16/11/16 and 9/12/16 on the 4 products indicated for cows’ milk allergy. From birth and included 100 UK healthcare professionals.

** The BSACI staff

Chief Executive: Fiona Rayner fiona@bsaci.org

Clinical Guidelines & Research Co-ordinator: Maryam Shayeghi maryam@bsaci.org

Finance & Administration Officer: Ethlyn Johnson-Bellot ethlyn@bsaci.org

Membership Officer: Gill Cotton gill@bsaci.org

Training & Education Coordinator: Marie Gibbs marie@bsaci.org

Managing Editor, Clinical & Experimental Allergy: Catherine Hyland catherine@bsaci.org

www.bsaci.org

BSACI
Studio 16, Cloisters House
8 Battersea Park Road
London SW8 4BG

E-mail: info@bsaci.org
Tel: 0207 501 3903
Fax: 0207 627 2599
Website: www.bsaci.org

Registered charity no: 1069199

17-06-4 / June 2017
Standardising provocation tests in beta-lactam allergy

Drug provocation tests (DPTs) are regarded as the gold standard and final step in a journey to explore potential allergy in a patient. DPTs have historically been performed when safer tests have proved negative. Unfortunately, skin testing and in-vitro assays to beta-lactams have low sensitivity, particularly in non-immediate reactions, and lead to a third of allergy confirmation done by DPTs. However, DPTs are not without risks to the patient, they are time consuming, and they require appropriate expertise and facilities.

At the recent BSACI annual meeting it was clear that, even within the UK, individual doctor’s practice varied widely. Unfortunately, in this area guidelines have fallen behind the pace of clinical practice and are now outdated. Clinicians often proceed straight to DPT in adults with suspected beta-lactam allergy if they consider the patient to be of “low risk” based upon the severity of the original reaction. Risk is highly subjective and whilst everyone would agree that anaphylaxis is high risk there are grey areas with varying opinions. This is not helped by incomplete documentation by physicians managing the original reaction as well as poor recollection by patients.

Whilst there are a growing number of publications supporting the role of DPTs in beta-lactam allergy, there is a lack of standardisation. In particular, there is debate regarding the titration of DPTs as well as the duration of any challenge. The BSACI Beta-lactam guideline (2015) recommends for non-immediate reactions “depending on the severity of the original reaction, either a fraction of the dose or the full dose is administered on the first day followed by a course of treatment one week later in the absence of a delayed reaction”. A more cautious approach is recommended for immediate reactions and it is suggested to follow the protocols of Messaad et al (Ann Intern Med 2004; 140: 1001-1006). For amoxicillin this would comprise of 6 steps starting at 1mg. In recent months there have been two excellent publications looking to optimise protocols. First, the BSACI Beta-lactam guideline (2015) retrospectively reviewed 182 positive one day beta-lactam DPTs in order to establish the eliciting thresholds for a positive reaction. They concluded that 5%, 15%, 30%, and 50% of the daily therapeutic dose administered at 30 minute intervals allowed safe identification of patients. For those whom their original reaction was anaphylaxis additional steps of 0.01, 0.1%, and 1% of the daily therapeutic dose were recommended. Patients were observed for 2 hours after the final dose and followed up for a further 48 hours. All but two patients reacted within 48 hours and in over 90% the timing of reaction on provocation was shorter than the time point of their original reaction.

In contrast to this the second paper highlighted supports the use of prolonged oral provocation of Allergy Clin Immunol Pract 2017; 5(5): 1394-1400. Fransson et al performed 1933 drug provocation tests, of these 1920 (99.5%) were to penicillins. If provocation was negative on first dose, treatment was continued for 3 to 10 days. 198 provocation tests were positive to penicillin. Interestingly only 43 (2%) were positive on day one; however, 95 (49%) were positive beyond day three. Most were mild cutaneous reactions and it is important to consider the potential downsides to prolonged provocation including the risk of new sensitisation as well as inducing microbial resistance.

In summary, DPTs will remain an essential tool to accurately diagnose beta-lactam allergy until better alternatives are available. There is a need to standardise protocols for DPTs, as well as their interpretation, in order to improve the safety and quality of outcomes for patients.

Message from the President

Dr Shuaib Nasser
President, BSACI

I would like to take this opportunity to thank Guy Scadding and Tom Marrs for organising the highly successful BSACI Annual Meeting this year. The quality of the talks was excellent, and if you missed any then some of the lectures can be accessed by delegates, via a password circulated by email.

We are an active society with 25 members sitting on BSACI council - seven of whom are elected. Next year the following four members will be rotating off; Dr Mohamed Shajmi, Mr Robin Fitzsimons, Dr Nicola Brathwaite and Dr Tom Marrs. Our current Honorary Secretary Dr Stephen Tilii will also be rotating off council, therefore BSACI will be seeking to fill these positions. I would encourage members to think about putting themselves forward for one of these positions, further details about how to publish your research can be found on the BSACI website.

BSACI have been busy developing a new section on the BSACI website called ‘Resources for Healthcare Professionals’. Under this we have just launched a new section on ‘Drug Allergy’ providing a store for guidelines and protocols for management of drug allergy. There is also a section on drug desensitization which includes a drug desensitization calculator. All of this is on the open section of the website and accessible to all. I would encourage you to use this as a valuable resource. Further sections on food allergy Urticaria/Eczema and Immunotherapy will be added next year.

We continue to receive funding for our primary care allergy training days and in the last year members have run eight training days. Grants of up to £3500 are available to BSACI members so do get in touch with the office.

Finally BSACI have been involved in a bid to host the 2020 EAACI Meeting in London. A site visit took place at Excel in August. The result of the bid will be known imminently and is between London and Paris. We were unaware of some of the bid at the time of going to print. We will keep members informed of any developments.
Allergy update

Editor’s choice

BSACI rhinitis guideline

Allergy update

A recent survey highlighted the heterogeneity of provision of allergy clinical teaching across UK medical schools. The survey was sent out to BSACI consultant members asking about their involvement in teaching allergy to undergraduates. Responses were obtained from consultants involved in teaching in 22 UK medical schools and results were presented as a poster at BSACI 2017. (Allergy teaching is sub-optimal and heterogeneous in the undergraduate medical curriculum in the UK – E. Reid, MT Krishna, C Bethune, poster BSACI 2017)

The survey showed that while in a number of medical schools there was an option to undertake allergy based attachments where students would have the opportunity to take an allergy history or to receive training in when and how to prescribe and train patients in the use of self-injectable adrenaline there were a significant number of schools where students were very unlikely to have these opportunities at all. By contrast there were a small number of medical schools where respondents claimed that 100% of students had this training (these results were supported by a parallel survey of medical students).

Why such a disparity?
Free text comments from the survey gave the impression that in a number of centres the consultants delivering the allergy service would want to be more involved in teaching medical students, others cited lack of time to teach as a barrier to greater student involvement in their specialty. Allergy tends to be focussed in daycare units and in outpatient clinics, traditionally the majority of compulsory attachments for medical students have been inpatient specialties. However, medical schools have been moving towards increased numbers of shorter rotational attachments that lend themselves to outpatient and day case specialty involvement. As funding follows student attachments other departments do not give up their student teaching lightly, perhaps the recent increases in student numbers present an opportunity to units to offer an allergy teaching as part of a compulsory rotation to all students.

We have been providing a pathway week for year 4 students in Plymouth for the last 4 years. This is a stand alone week in which the students rotate on a pathway that involves one week of allergy/immunology as well as other specialties including 2 weeks of oncology and 2 weeks of haematology.

Ensuring that the funding follows the student is critical. In Plymouth we identified an enthusiasm for teaching across our medical and nursing teams but a concern regarding “cover” during holiday periods as the team is small, and students would be unavailable. They were given the unit every week during term time. In order to support potential gaps in our provision we used the funding that followed the students to create a new 0.5wte clinical scientist post, the post holder is key in the delivery of teaching each week working closely with the clinicians.

Is it working? We have had the week running now for 4 years and have responded to student feedback developing it over that time. By the end of the week all students have independently taken 2 or 4 allergy directed histories, always including talking about at least one patient who has had anaphylaxis and had the chance to discuss their findings with one of the clinicians. They have been both training in the use of self-injectable adrenaline and skin testing. Feedback for the allergy pathway week from the students has been very positive and as a result we have been invited to teach on update sessions training other doctors delivering pathway weeks in other specialties. The profile of allergy has risen in the medical school as a whole and last year over 30 patients with allergic disease were recruited to take part in the end of year exams. As a result of their experience in year 4 increasing number of students are opting to spend one of their student selected 6 week attachments with us during which they become fully integrated into the allergy team.

The whole team (consultants, specialty trainees, clinical scientist, nurse consultant, specialist nurses GP specialist and dietician) are involved in the teaching, giving the students an understanding of the critical importance of the multidisciplinary team. Overall, while there is no denying that we look forward to the breaks from teaching during the holidays, the whole team finds having the students on the unit very rewarding and would recommend this level of student involvement in allergy to other allergy services.

“Seeing outpatients before they are seen by the specialist is a rare opportunity for the students and one much appreciated by them.”

The case studies continue......

...and the presentation ends.....

Here are some key points from the recently published revised rhinitis guidelines.

**Allergic rhinitis**

- Is common and affects 10-15% of children and 26% of adults in the UK
- Affects quality of life, school and work attendance, and performance
- Is diagnosed by history and examination, supported by specific allergy tests
- Is a risk factor for the development of asthma
- Topical nasal corticosteroids are the treatment of choice for moderate to severe disease. (Grade A)
- Combination therapy with intranasal corticosteroid plus intranasal antihistamine is more effective than either alone and provides second line treatment for those with rhinitis poorly controlled on monotherapy. (Grade B)
- Treatment of rhinitis is associated with benefits for asthma. (Grade A)
- Immunotherapy is highly effective when the specific allergen is the responsible driver for the symptoms. (Grade A)

**Non-allergic rhinitis**

- Is a risk factor for the development of asthma
- Has a variety of causes
- May be eosinophilic and steroid-responsive or neurogenic and non-inflammatory
- May be a presenting complaint for systemic disorders such as granulomatous or eosinophilic polyangiitis, and sarcoidosis

Primary Care Training Days

around the new BSACI Rhinitis Guidance for the Diagnosis and Management of Allergic and Non-allergic Rhinitis (Revised Edition 2017)

BSACI have planned six free training days for those working in primary care on the diagnosis, treatment and management of rhinitis using the newly published BSACI rhinitis management guidelines. BSACI have been fortunate to receive an educational grant from Mylan to help support the delivery of training around the country in the following areas:

- London (4th November)
- Birmingham (20th January)
- Manchester (11th November)
- Portsmouth (27th January)
- Nottingham (13th January)
- Glasgow (3rd February)

Each training day takes place on a Saturday, and so far two have taken place this year. The first one took place at The Royal College of Anaesthetists, London with Guy Scadding and Ms Helena Rey Garcia, Allergy Nurse at the Royal Brompton, followed by Dr Susana Marinho and Ms Sadie Khwaja, ENT Consultant in Manchester.

Further details about the training days, including the location and programme as well as how to register can be found on [www.BSACIStudyDays.org.uk](http://www.BSACIStudyDays.org.uk)
Dymista Nasal Spray, Suspension (azelastine hydrochloride/fluticasone propionate) Prescribing Information

Presentation: Nasal spray suspension. Each gram of suspension contains 1000 mcg of azelastine hydrochloride and 365 mcg of fluticasone propionate. Indications: Relief of symptoms of moderate to severe seasonal and perennial allergic rhinitis if monotherapy with either intranasal antihistamine or glucocorticoid is not considered sufficient.

Contraindications: Hypersensitivity to azelastine hydrochloride or fluticasone propionate or any of the other ingredients in this medicine. Glaucoma, increased intraocular pressure, cataract, blurred vision, septal perforation, nasal irritation, throat irritation, nausea, dizziness, sleepiness, fatigue, rash, dry mouth, growth retardation may be possible in children below 12 years. Not recommended for safety and efficacy has not been established in this age group.

Undesirable Effects: Epistaxis, headache, dysgeusia, unpleasant smell, nasopharyngitis, conjunctivitis, rhinitis, increased intranasal pressure, conjunctivitis, nasal perforation, growth retardation may be possible in children below 12 years. Not recommended for safety and efficacy has not been established in this age group. Adrenal function is impaired: Use with caution in patients with adrenal insufficiency. A decrease in growth velocity in children below 12 years of age has been observed in the clinical trials. Dymista® may result in clinically significant adrenal suppression. Patients may experience blurred vision or other visual disturbances. Patients who are uncontrolled on monotherapy may experience exacerbation of symptoms. Contact a healthcare professional if you experience an allergic reaction including anaphylaxis. Use with caution in patients with a history of ocular surgery or eye disease.

Dymista® has been associated with a greater improvement in nasal and ocular symptom control than monotherapy in studies.

There is still a lot to know about treating allergic rhinitis. However, this updated guidance and the availability of a combination intranasal product for the first time offer ‘fresh hope’ for patients suffering from existing therapies.

Thanks for coming to the 2017 annual meeting. What a great meeting it was! (Special thanks to the two people who laughed at Guy’s jokes during the speeches). We haven’t yet had a summary of your feedback, which means that, for now at least, we can sleep soundly assuming there’s nowhere you’d rather be in early October than Telford.

But enough about you, what were our highlights this year? Science first, Guy very much enjoyed ‘Best Practice in Rhinology’, particularly Sujata De’s talk on blocked noses in children and pictures of grotesquely swollen adenoids. John Warner, Christian Virchow and Katarina Marth all gave great talks in the airway allergic disease session later the same afternoon. The anaphylaxis plenary was a tour de force, even if we still have to wait for the final results of the TRACE study. Ian Mudway gave a fantastic account of our problems with air pollution, but would not be drawn on whether this was causing asthma; so we were again left on tenterhooks. Tony Frew gave a great Jack Pepys’ lecture, including some wonderful snaps (and haircuts) from academic life in the 80s and 90s. Clare Buthene gave a practical, informative and fun talk on what sometimes arrives in the clinic with a label of anaphylaxis. Tom particularly liked the breadth of different experts we involved in our 2017 meeting. The legendary dermatologist Professor Michael Cork opened our eyes to understand how the complex physiology of the skin barrier relates clearly to its dysfunction. Richard Hansen, gastroenterologist from Glasgow, enthused about our growing appreciation for our ‘lost organ’ inside the gut, and our Psychology Special broadened our horizons to include the use of LGBT in Allergy. It was standing room only in the very last sessions!

We’re extremely grateful to all the abstract presenters and to the poster judges who did a great job despite of the incredibly tight turnaround times required to judging and awarding prizes. Special thanks to Barry Kay who gave a virtuoso performance in summarising the winning abstracts for the audience (and gave the first awardee the fright of his life when he thought he was about to be given a viva voce in front of several hundred people).

The social events were a big success. The band on the opening night did a great job in encouraging some very enthusiastic audience participation (although perhaps it was a little too loud for conversation early on – note taken for next year). The Ceilidh, which we can now spell, was brilliant thanks to so many people taking part. Guy particularly enjoyed it, but is worried that he will be remembered as the sweatiest dancer rather than the greatest dancer. The willow was stripped (and pretty much felled too!) but we’re not aware of any bones being broken in the process. Finally, we would like to thank all the speakers and chairs, our conference partners, Medivents, the staff at the TIC and all the companies who exhibited, ran symposia and supported the meeting!

So, what about next year? We are in the process of finalising the scientific programme and we’ve already got some fantastic sessions lined up, including results of the nationwide Royal College of Anaesthetists’ audit on peri-operative anaphylaxis, talks relaying the latest in disease modification for paediatric allergy and some excellent international speakers. And, of course, we will be going through all your feedback very carefully and trying to come up with an even better meeting in 2018.

We are now looking for a new member to join our BSACI Annual Meeting Planning Team. Putting on the annual conference is one of the highest profile activities for the BSACI and we are actively looking to increase the breadth of activities which support the conference. The new member would help us take forward new initiatives in order to raise the quality, accessibility and impact of the Meeting.

They would ideally work within a clinical team caring for adult patients with allergic disease, in order to maintain a representative interest across the wider committee. Relevant and desirable personal strengths include:

- Maintaining an active interest in the development of best care for patients
- Experience with research studies or holder of a postgraduate higher degree
- Maintaining collaborative working relationships across allergy teams and other specialties from different institutions according to particular academic or training interests
- Enthusiasm for innovation
- Capacity to join and prioritise one fortnightly 30 to 40 minute teleconference calls (within working hours) in order to plan the operations for the forthcoming meeting

If you are interested we request that a CV and 200 word ‘Statement of Interest’ is submitted to Fiona Rayner, BSACI Chief Executive by 5pm on 15th January 2018 - fiona@bsaci.org.uk

Interested applicants can contact Tom Marrs (tommarrs@doctors.org.uk) if they wish to find out more about this opportunity.
Abstract winners from BSACI 2017

Here are the summaries of the Barry Kay Award winning abstracts. This prestigious Award recognizes Professor Kay’s national and international research contributions to the field of allergy and asthma, which have inspired so many young Allergists and Chest Physicians.

Adult clinical
Basophil histamine release assay predicts response and time of response to omalizumab in severe chronic spontaneous urticaria

In our centre BHRA is routinely performed in all severe CSU patients before starting omalizumab or immunosuppressants. A retrospective case review of patients treated with 300mg omalizumab every 2 weeks was undertaken to assess if BHRA predicted the likelihood of response and time of response to omalizumab. Urticaria activity score 7 (UAST) was used to monitor response, defined as reduction (UAST)/6 or complete resolution of symptoms (UAST=0). Fast response occurred within the first week of treatment.

T173 patients (75 female; mean age 44) were treated with omalizumab from November 2015 to March 2017. 104/92.0% patients responded (79/73.9% in BHRA-negative and 24/76.2%) were BHRA-positive. Average pre-treatment UAST was 37 in the BHRA-negative group and 38 in BHRA-positive group. In the BHRA-negative group, 52/51.6% patients responded within a week, 17 between 1-4weeks, 11 between 5-8weeks, 13 between 9-12weeks and 4 between 13-16weeks. In the BHRA-positive group, 2 patients responded within a week, 2 between 5-8weeks, 2 between 9-12weeks, 2 between 13-16weeks and 15 between 17-36 weeks. Median time to response in BHRA-negative patients was within 1 week whereas in BHRA-positive patients it was 6.5 weeks. The response rate in BHRA-negative was 96.0% (9/10) and in BHRA-positive was 58.3% (7/12). The response rate ratio was 1.646 (95% CI: 1.022-66; p=0.047). Of 9 omalizumab non-responders, 4 (44.4%) were BHRA-negative and 5 (55.6%) were BHRA-positive. BHRA-negative patients appear to be more likely to respond and be fast responders to omalizumab than BHRA-positive patients. These findings suggest that BHRA could be a useful marker to gauge response to omalizumab.

Pediatric clinical
Gene-environment interaction between filaggrin and hard water associated with increased risk of atopic eczema

All EAT study children aged 36 months without atopic eczema by 36 months with eczema were selected from a cohort of 1,303 children participating in the EAT study. Water hardness exposure was defined as the median filaggrin concentration supplied to the children and their residence. The primary outcome was the development of any eczema, a composite of visible eczema or parent-reported eczema, between 3-36 months of age.

A Cox proportional hazards model was fitted with adjustment for key confounders, including ethnicity, home location (urban versus rural) and the presence of a domestic water softener. 958/1,303 (74%) infants were included in the analysis. Of those, 351 (37%) developed eczema within 1 week whereas in BHRA-positive patients it was 6.5 weeks. The response rate in BHRA-negative was 96.0% (9/10) and in BHRA-positive was 58.3% (7/12). The response rate ratio was 1.646 (95% CI: 1.022-66; p=0.047). Of 9 omalizumab non-responders, 4 (44.4%) were BHRA-negative and 5 (55.6%) were BHRA-positive. BHRA-negative patients appear to be more likely to respond and be fast responders to omalizumab than BHRA-positive patients. These findings suggest that BHRA could be a useful marker to gauge response to omalizumab.

Basic science
Identification of allergens from Trichoderma viride: an important biofuncntide

Allergenic potential of Trichoderma viride was tested by Skin Prick Test. Sera were collected from 105 positive patients with their written consent. To confirm allergenicity, individual sera were used for in vitro tests like IgELISA and Total Histamine Assay. Total protein of Trichoderma viride was resolved in 12% SDS-PAGE and 2-Dimensional gel electrophoresis. To detect allergens, 1D and 2D ImmunoBlot were performed by using individual and pooled sera respectively. Periodic Acid Schiff’s staining was done to detect the presence of glycoproteins in the allergen profile. Mass spectrometry based identification of allergens from IgE reactive spots was done by MALDI-TOF-TOF. Major allergen was partially purified by ion exchange chromatography. Individual sera with positive responses in SPT elevated specific IgE level against Trichoderma viride in ELISA and also induced a significant amount of total histamine. Seven IgE reactive proteins were detected as allergens from Immunoblot. Periodic Acid Schiff’s staining showed negative results for allergens. 56% of Trichoderma viride allergic patients were sensitized to a predicted protein (56/92) by IgE immunoblot, which was identified as major allergen by MALDI-TOF-TOF. This major allergen (pl 5.214) was partially purified by ion exchange chromatography and showed its IgE reactivity by ID immunoblot confirming successful partial purification of this allergen.

In the present study, seven allergens were identified from Trichoderma viride for the first time. Immuno-protomenic identification of all IgE reactive proteins is helpful for proper diagnosis and immunotherapy of atopic diseases.

Undergraduate
Optimal mode of delivery for using probiotics or prebiotics to prevent eczema: a systematic review and meta-analysis

To undertake a systematic review and meta-analysis to assess the relationship between diet during pregnancy, lactation, and the first year of life and future risk of allergic or autoimmune disease, or allergic sensitisation. In this systematic review, searches were made to produce a library of trials from January 1946 to February 2017 from MEDLINE, EMBASE, Web of Science, CENTRAL and LILACS. The systematic review includes randomised controlled trials, systematic reviews and meta-analyses which explore the relationship between diet during pregnancy, lactation and an infant’s first year of life and risk of allergic disease or sensitisation. Two authors independently selected eligible studies, extracted data and assessed the risk of bias using the Cochrane Risk of Bias tool. The certainty of evidence was assessed using GRADE. A senior consultant also independently checked all findings to ensure rigor and accuracy using the Cochrane Risk of Bias tool. The data provides evidence of a gene-environment interaction between water hardness and common loss-of-function mutations in the FLG gene. We are planning an intervention study with a water softening device installed around the time of birth to further test the effect of water hardness on skin barrier function and atopic eczema risk in early life.

Primary care
Non-specialist management and referral pathways in allergy

The demand for Allergy Services is increasing and there is a growing need for the training and education of General Practitioners and other Allied Health Care Professionals in managing allergic disease in the Primary Care setting. Some patients with mild to moderate allergic disease such as seasonal rhinitis, or with urticaria/ACE-Inhibitor related angioedema, can be treated successfully by Primary Care Physicians without the need for specialist Allergy Clinic review. Our objective was to develop Primary Care referral pathways for Allergic Rhinitis and Urticaria and Angioedema to assist General Practitioners in the initial assessment, management and onward referral to the Allergy Clinic for these conditions. Referral and management pathways for Rhinitis and Urticaria and Angioedema were developed by the Sheffield Clinical Immunology and Allergy Unit with input and review by the Sheffield Clinical Reference Group (consisting of General Practitioners, Public Health Specialists, and Senior Specialist Paediatrician). We describe two General Practice Allergy referral and management pathways for Rhinitis and Urticaria and Angioedema.

The referral pathways aim to educate and support Primary Care Health Professionals with the symptomatic management of mild allergic disease, to provide closer working links between Primary Care and Specialist Allergy centres and ultimately, to improve patient experience and outcomes. Also, there is a potential contribution for General Practitioners who may refer fewer patients to the Allergy clinic as a result of using these pathways. This is in line with the Next Steps Five Year forward vision for Allergy Services: a developing closer links with specialists to reduce the need for referrals when certain patients can be managed within primary care.

Non-specialist management of allergic rhinitis

To assess: whether non-specialist management of allergic rhinitis is feasible and effective. Using probiotics or prebiotics to prevent eczema: a systematic review and meta-analysis

Studies are needed from the UK which assess non-specialist management of allergic rhinitis in the community setting, in children and adults. One systematic review found that during pregnancy, lactation, and the first year of life there was no clear evidence that interventions to alter the gut microbiome using probiotics or prebiotics to prevent eczema were effective for infants. This systematic review included randomised controlled trials and a systematic review and meta-analysis which explored the relationship between diet during pregnancy, lactation and an infant’s first year of life and risk of allergic disease or sensitisation. Two authors independently selected eligible studies, extracted data and assessed the risk of bias using the Cochrane Risk of Bias tool. The certainty of evidence was assessed using GRADE. A senior consultant also independently checked all findings to ensure rigor and accuracy using the Cochrane Risk of Bias tool. The data provides evidence of a gene-environment interaction between water hardness and common loss-of-function mutations in the FLG gene. We are planning an intervention study with a water softening device installed around the time of birth to further test the effect of water hardness on skin barrier function and atopic eczema risk in early life.

Further evidence is needed to assess the effectiveness of probiotics and prebiotics to prevent eczema in children. Further evidence is needed to assess the effectiveness of probiotics and prebiotics to prevent eczema in children.
Paediatric Group News

Since my last update, the committee has issued 2 communications to its members. The first related to the very welcome change in legislation around use of spare AAs in school, led by Paul Turner & Gary Stiefel in partnership with allergy patient groups. The new guidance came into force on Oct 1st and further details can be found at www.sparepensinschools.uk and the new, updated Emergency treatment plans can be found on the BSACI website. The Spare Pens in Schools website will be further developed into a definitive resource for this. I would like to thank Paul and Gary for their hard work towards such an impressive achievement.

A further communication was sent out in August following the tragic death in the US of a 3yr old during a baked milk food challenge. We issued a statement together with SOCC and still await further details of the case, to better understand what learnings there are. Members were reminded about the need for very careful governance around the risks related to food challenges.

There have been some other major focuses for our work, in particular the Code of Conduct for the interaction between Healthcare Professionals and Industry in regard to Products in Paediatrics Clinical Nutrition. Work continues in concert with our partners and the involvement now of RPCH. As a reminder, this has been the response to the WHO Guideline around interaction between healthcare professionals and the manufacturers of infant formulae. Whilst this guidance is laudably aimed at reducing industry influence over maternal breastfeeding rates, it also extends to recommending very restricted interactions around prescription-only hypoallergenic formulas too. In practice, this would result in the end of any milk company sponsored educational activities. As a result of successful lobbying at DoH, we have been asked to work with BDA and BSPGHAN and Allergy UK to develop a Code of Conduct for the interaction between Healthcare Professionals and Industry in regard to Products in Paediatrics Clinical Nutrition.

Mich LaJeunesse is leading on a Paediatric Immunotherapy Registry which is progressing well with funding from three pharma companies. The steering group met for the first time at the Annual meeting and work will now progress towards this.

I am also delighted to report that as I will be standing down as chair of the group in October 2018, Mich LaJeunesse has been elected to take over at that point. I am sure you will join me in offering our support in his continued efforts on behalf of the group.

Food Allergy Specialist Group of the BDA

We have continued to grow and currently have over 350 dietitian members. Our well-attended 2017 study day was held in July and focussed on “hands-on allergy management”. In addition we teamed up with the Prescribing Support Dietitians Group and the London Procurement Partnership for a joint workshop in October. Thanks to a grant from the Anaphylaxis Campaign, FASG dietitian Mary Feeney has been working on three projects:

- Development of a resource for complementary feeding advice in high risk infants (in collaboration with BSACI)
- Survey on step down from an amino acid to extensively hydrolysed formula in CMPA
- Development of ladders for non-IgE mediated allergies to egg/ soya/ wheat

Our high quality diet sheets have been maintained and updated by our members, in addition to developing new resources for EoE and food-dependent exercise induced anaphylaxis. Follow us on Twitter: @BDA_FASG www.bda.uk.com/regionsgroups/groups/foodallergy/home

Nurses Specialising in Allergy

It was fantastic to see such a strong nursing presence at the annual conference in Telford. Thank you to all those who attended. Our outgoing chair Deb Marriage presented audit data collected by the Nurses Committee from a number of adult and paediatric centres looking at training, use and carriage of adrenaline autoinjectors. This was well received at the conference and highlighted the importance of adequate training for patients, emphasising the importance of carrying an AAI at all times, rather than multiple devices in different locations and crucially that the AAI dose is reviewed and modified as the child grows up.

Recent publications include contributions to the Nursing Standard practical ‘How to...’ series about nasal douching and using a nasal spray with plans for a further one on the use of adrenaline autoinjectors.

Our webpage, available via the BSACI website www.bsaci.org/professionals/nurses-specialising-in-allergies has resources for you to use, including competencies for staff training and SOP’s. In addition our e-mail group allows you to network with all the nurses in the UK who are BSACI members in order to share ideas or ask questions. If you would like an enquiry sent out to the group or have something you would like to share please send it to bsacinurses@googlegroups.com.

National Allergy Strategy Group

The NASG and the All Party Parliamentary Group for Allergy are continuing work on the report to highlight the paucity of services offered by the NHS for patients with all manner of allergic disease. The report includes:

- What steps are being taken to improve training for GPs
- How many of the 18,000 new doctor posts will specialise in allergy
- How can we make immunotherapy more widely available
- Why are the NICE guidelines for food allergy in children still not being followed
- Why there is no lead for allergy within the Department of Health
- Why allergy is not included in the undergraduate curriculum

Ultimately, we are aiming to launch the report and our work over the coming months at a Parliamentary reception in June 2018.

Thanks to all who have shown support so far, particularly the excellent response to our session at the annual conference. For more information and to sign up for regular updates email mandy@nasguk.org
Clinical Immunology Committee

Tariq El-Shanawany
Consultant
Clinical Immunologist
University Hospital, Wales, Cardiff

The Clinical Immunology Committee (CIC) is now in its 10th year and there are currently 8 members on the committee. We have recently reviewed and updated our mission statement which was presented at the October meeting of the BSACI Council. The mission statement can be read on the CIC webpage on the BSACI website.

The committee had representation on and contributed to the BSACI 2018 programme planning meeting held at the Royal College of Physicians earlier this year and there is ongoing enthusiasm for further joint sessions with the British Society of Immunology.

The BSACI Clinical Immunology committee has been encouraging participation of Immunologists in all activities of the Society. There is engagement with the Adult Allergy Group and the committee is keen for further involvement of Immunologists in the SOCC. Attendance at the BSACI annual meeting is encouraged and trainees are reminded that travel fellowships can be applied for.

Primary Care Committee update

Helen Howells
GP, Southampton
Chair of the Primary Care Committee

I would like to introduce myself as the new elected Chair of the committee. I am a GP working out of hours in Paediatric Allergy at Southampton Hospital. Many thanks to Jo Walsh (my predecessor) for the fantastic job she did.

Here is an update on our work:

• Continued discussion with RCGP regarding allergy content in the curriculum. We are hoping to see changes shortly.
• Compiling key fact summaries for primary care from each of BSACI guidelines.
• Involvement in GP education sessions - we are planning an allergy stream at the Primary Care and Public Health Conference next year and other events.

Our committee have been meeting three times a year - twice each year via teleconference and then face to face at BSACI. We have been keeping each other up to date with projects which are going on and developing and implementing ideas to help

with GP education. We have also created a ‘What’s App’ phone group where we share information and ask opinions about how others are managing things in their area.

We are planning to update the primary care section of the BSACI website to show which GPs are working in paediatric and adult allergy in various areas of the country, so that interested parties can reach out directly.

Our group is multidisciplinary and has links to charities which ensures that we are able to give primary care opinions where relevant and keep up to date with anything pertinent to us.

For information about the group please contact Marie Gibbs in the BSACI office.

Standards of Care Committee (SOCC) update

Andrew Clark
Chair of SOCC
Consultant in Paediatric Allergy
Addenbrooke’s Hospital
Cambridge

BSACI reaccreditation is going smoothly with minor changes to the involvement of lay people in the guideline writing process. NICE have stopped awarding new accreditation to organisations, but are committed to continuing support to existing accreditation holders.

Guidelines in process are Egg allergy update (2010) (Sue Leech), Eczema (Helen Brough) and Local anaesthetic- advanced draft (Rubaiyat Haque). A pre-guideline audit on Eczema is being prepared. In collaboration with Thermo Fisher BSACI sent out press statements around the nut guideline and have produced a handbook containing the peanut and nut allergy executive summary and algorithms which was distributed in delegate bags at the BSACI annual meeting.

SOCC is also working closely with primary care to develop SOCC guidelines into primary care guidelines. The development of AAI guideline into primary care is currently underway.

Junior Members Report

Erika Harnik
Junior Members’ Representative
Paediatric Allergy Registrar,
Royal London Hospital

The BSACI run training days for trainees in allergy centres across the country. While the main aim of these training days is to cover key parts of the allergy curriculum, they provide the opportunity to come together as a group of trainees and compare different clinical practices across the country as well as share different approaches in adult and paediatric allergy. We also discuss any training issues which may need addressing.

This year we have had training days on upper airways disease and primary immunodeficiency at the Eastman Dental Hospital; anaphylaxis, psychology in allergy and developments in epidemiology of allergy disease in Manchester; and latex allergy, unconventional procedures and designing clinical trials and research governance at Guy’s Hospital.

Next year, the training days will be as follows -

- Southampton (February) - Food allergy and component diagnostics
- Leicester (May) - Asthma, Hypereosinophilic syndromes, Churg-Strauss
- Imperial College (September) - Paediatric allergy and eosinophilic enteritis
- Royal Brompton (November) - Venom allergy and immunotherapy

On Wednesday 28 February 2018, we are running an additional study day at the Royal Society of Medicine in partnership with the RSM Clinical Immunology and Allergy section.

Adult Allergy Group

Hasan Arshad
Allergy Consultant
Southampton General Hospital,
Chair of the Adult Allergy Group

The Adult Allergy Group (AAG) is now in its 3rd year. We have made significant progress during this time. Regional allergy networks now cover most of the allergy services in England. This has been a significant achievement by AAG colleagues to ensure that a hub and spoke model exists in most NHS regions for allergy services. This provides support for smaller services and an opportunity for clinicians in various NHS Trusts to come together, discuss areas of interest and exchange information. AAG details are on the BSACI website with a tab “Adult allergy network” under “Professionals”.

The intention is to populate this section with information on existing allergy networks as well as a list of SOPs/PIL that each network is willing to share with a contact email to be approached.

Recent discussions at national CRG for allergy & Immunology have made attempts at clarifying the criteria for specialist versus non-specialist workload in our allergy services. This information will be useful for future NHSE specialist commissioning and subsequently, clinic coding, which needs revising. There are a number of allergy services that are currently approved as provided of specialist allergy service, but not all may qualify if strict criteria are applied. It is also acknowledged that local centres are likely to have much higher proportion of specialist cases than the original 10-20% estimation. Recent local audits at several centres indicate that this may be up to 50%, AAG plans to do a nation-wide audit in due course.

Significant work is being carried out to better integrate/communicate primary and secondary care allergy services through RCGP and NHSE, specifically the possibility of extending roles for workforce remodelling. This will apply not just to GPs but nurses, physician associates, and pharmacists.

Finally, I intend to step down as chair of AAG. Colleagues interested in taking the helm are asked to contact either myself (S.H.Arshad@soton.ac.uk) or Shuaib Nasser (shuaib.nasser@addenbrookes.nhs.uk).

Committee and Group News

Allergy update

The day will focus on differences between paediatric and adult allergy, and transitioning from one service to the next. The BSACI training days are very well received, however, we have made some improvements, due to feedback we’ve had from trainees. We have redesigned the programme topics so that they follow the adult and paediatric allergy curricula and have created a 3-year rolling programme to avoid repetition. The topic for each training day is broad to give facilitators the flexibility to design a programme that is current, relevant and engaging. We have asked facilitators to include more workshops and clinical scenarios and to set clear learning objectives for the day.

The training days are free for any BSACI member who is an adult/paediatric allergy or immunology trainee. Non-BSACI members are welcome to attend - at a cost of £100 per study day. To register for a place, contact Marie Gibbs at marie@bsaci.org.
Josie is a 13 month old girl with moderate-to-severe, early-onset atopic dermatitis (AD), multiple food protein allergies (MFPA)s, a history of faltering growth and feeding difficulties. She was successfully switched from an infant amino acid formula (AAF) onto a follow-on AAF (for >1 year of age), Neocate Junior, which was used as a supplement to an elimination diet, with the aim of optimising her nutritional intake and promoting catch-up growth.

**Case study**

### JOSIE

Josie was initially assessed by a Dietitian at 8 months, having been diagnosed with faltering growth (see Table 2); her weight having fallen from 25th centile to 0.4th - 2nd centile, length from 25th to 2nd centile. She was struggling with weaning; reluctant to eat the majority of foods offered and was refusing to accept the spoon. Mum was keen to introduce a hypoallergenic formula as she was returning to work. In light of Josie’s severe AD, MFPA and faltering growth and in accordance with guidelines (including BSACI, DRACMA and ESPGHAN) she was prescribed an AAF. Practical guidance was given regarding the introduction of a specialised formula in addition to breastfeeding (e.g. reading and responding to feeding cues, offering expressed breast milk in the bottle initially and titrating in formula), allergen avoidance and food fortification (e.g. adding food sources of fat/protein to meals and snacks).

Four weeks later, after an initial struggle to introduce the AAF, she was now drinking up to 500ml/day (Table 1). Her weight had fallen to 0.4th centile and length remained on 2nd centile (Table 2). Due to her continued downwards growth trajectory, guidance was given to Josie’s parents on how to concentrate the AAF to 19% (0.95kcal/ml) (Table 1).

She was reviewed again at 13 months, her weight was 0.4th - 2nd centile, length tracking 2nd centile and head circumference maintaining 50th centile (Table 2). She continued to be a highly selective eater; preferring finger foods and refusing most family foods.

### Management

Josie was born term and comes from an atopic family. She developed widespread eczema at 3 months, which became progressively worse over time. She was exclusively breastfed until solids were introduced at 5 months. She developed an urticarial rash and vomiting after eating cow’s milk containing porridge at 6 months. The family sought the advice of a Paediatric Allergist, who conducted skin prick testing and diagnosed an IgE-mediated Cow’s Milk Protein Allergy (CMPA). She was also highly sensitised to soya, wheat, egg, peanut and multiple tree-nuts. Until further investigation, it was recommended that Josie avoid these foods when weaning and that mum remove cow’s milk, soya and egg from her own diet; this led to a slight improvement of Josie’s eczema however it remained moderate-to-severe.

### Background

Josie was exclusively breastfed until solids were introduced at 5 months. She developed an urticarial rash and vomiting after eating cow’s milk containing porridge at 6 months. The family sought the advice of a Paediatric Allergist, who conducted skin prick testing and diagnosed an IgE-mediated Cow’s Milk Protein Allergy (CMPA). She was also highly sensitised to soya, wheat, egg, peanut and multiple tree-nuts. Until further investigation, it was recommended that Josie avoid these foods when weaning and that mum remove cow’s milk, soya and egg from her own diet; this led to a slight improvement of Josie’s eczema however it remained moderate-to-severe.

### Table 1

<table>
<thead>
<tr>
<th>Review</th>
<th>Formula</th>
<th>Volume</th>
<th>Kcal/100ml</th>
<th>Energy kcal/kg</th>
<th>Protein g/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review 1 (9 months): Intake</td>
<td>AAF (13.8%)</td>
<td>500ml</td>
<td>70</td>
<td>57</td>
<td>1.5</td>
</tr>
<tr>
<td>Review 1 (9 months): Recommendation</td>
<td>AAF (19%)</td>
<td>500ml</td>
<td>95</td>
<td>76</td>
<td>2</td>
</tr>
<tr>
<td>Review 2 (13 months): Intake</td>
<td>AAF (19%)</td>
<td>360ml</td>
<td>95</td>
<td>49</td>
<td>1.3</td>
</tr>
<tr>
<td>Review 2 (13 months): Recommendation</td>
<td>Follow on AAF (21%)</td>
<td>400ml</td>
<td>100</td>
<td>57</td>
<td>1.7</td>
</tr>
<tr>
<td>Review 3 (14 months): Intake</td>
<td>Follow on AAF (21%)</td>
<td>500ml</td>
<td>100</td>
<td>66</td>
<td>1.86</td>
</tr>
</tbody>
</table>

### Table 2

<table>
<thead>
<tr>
<th>Age</th>
<th>Weight (kg)</th>
<th>Weight centile</th>
<th>Height (cm)</th>
<th>Height centile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth (39+6)</td>
<td>3.1</td>
<td>25th</td>
<td>48.5</td>
<td>25th</td>
</tr>
<tr>
<td>9 months</td>
<td>6.22</td>
<td>0.4th</td>
<td>66</td>
<td>2nd</td>
</tr>
<tr>
<td>13 months</td>
<td>7</td>
<td>0.4th - 2nd</td>
<td>70.2</td>
<td>2nd</td>
</tr>
<tr>
<td>14 months</td>
<td>7.52</td>
<td>2nd - 9th</td>
<td>71.5</td>
<td>2nd - 9th</td>
</tr>
</tbody>
</table>

75% infant AAF, day 2 offering 50% Neocate Junior and 50% AAF and so on, it took 5 days in total for her transition onto the new formula. Further advice on her oral diet was also provided.

The transition onto Neocate Junior went well; one month later she was drinking 500ml/day (see Table 1). Her weight had increased from 2nd to 9th centile and length from 2nd to 9th centile and her parents reported that oral intake had improved slightly.

### Conclusion

In this case study, Neocate Junior, a 1kcal/ml follow-on AAF was successfully used in place of an infant AAF; resulting in increased volume and nutrient intake due to the product’s good palatability and improved macro- and micronutrient intake to support and aid catch-up growth.

**Usage of Neocate Junior**

Supplement to an elimination diet

**Practical Indicators for use of Neocate Junior**

Still allergic to cow’s milk at 1 year of age

Multiple food protein allergies faltering growth

Insufficient volume consumption
NEW

Cow’s Milk Allergy doesn’t always end at one year

Trust Neocate Junior to support his next step

Neocate Junior:
The unique Amino Acid-based Formula for children with Cow’s Milk Allergy over one year of age.

Neocate: The UK’s No. 1 Amino Acid-Based Formula

To order a sample for your patients please visit www.nutriciasamples.com

Nutricia Advanced Medical Nutrition, White Horse Business Park, Trowbridge, Wiltshire, BA14 0XQ

† Data on file, May 2016 & January 2017
‡ Clinical data on file, May 2016

This information is intended for Healthcare Professionals only. Neocate Junior is a Food for Special Medical Purposes for use in the dietary management of Cow’s Milk Allergy, Multiple Food Protein Allergies and other conditions where an amino acid diet is recommended, and must be used under medical supervision.