Special Meeting Proceedings:

On March 1st, 2017 the American Contact Dermatitis Society (ACDS) held an afternoon meeting in Orlando Florida “***Defining Gaps in Dermatitis Care***”. This included an ***Open Spaces***® session.

This meeting the day prior to the Society’s annual scientific session was new and was publicized in ACDS news announcements. The planning committee also reached out to non-societal members with expertise in skin barrier, microbiome and cutaneous hypersensitivity to present data and participate in the interactive session. The Society also sponsored a patient and her mother to attend the session. Overall approximately 50 members attended in addition to the non-members already described.

The purpose of this meeting was to bring together a diversified group of physicians, researchers, and caregivers to take a global look at the issues surrounding dermatitis care. Amber Reck Atwater MD opened the meeting by introducing the faculty and the format. Better definition of dermatitis was a gap that prompted the creation of this meeting. Susan Nedorost MD gave the first presentation and discussed the interplay of skin barrier, microbiome, and allergic sensitization to create various phenotypes of dermatitis. The most chronic and severe forms of atopic and stasis dermatitis are most likely to require treatment aimed at all three factors. If all three factors are not addressed, then systemic immunosuppression is sometimes required to decrease the inflammation and itch.

Peter Elias MD then spoke about barrier defects and the effect of pH on the skin barrier. Pranab Mukherjee MSc, PhD spoke about the microbiome and mycobiome in dermatitis. Michael Ardern-Jones MBBS, DPhil explained his work in understanding the role of dendritic cells in adaptive immunity and cytokine responses as well as how microbes drive cutaneous immune response.

The meeting transitioned to a patient-centered discussion led by Golara Honari MD in which she interviewed a mother of a child with life-long eczema about her perspective on what she had heard from the scientific consortium. The mother highlighted key concepts which she thought patients and their families would benefit from understanding: the brick and mortar model of skin barrier, that atopic dermatitis is a group of disorders with lipid based defects, and that defects in the barrier affected by microorganisms provide the set-up for allergy development. She highlighted the significant need to educate PROVIDERS on these concepts, relating to having spent years of frustration and a near fortune searching for a provider who understood her daughter’s condition. She noted that she had accessed her daughter’s medical records and saw notations implicating her as a challenge to caregivers for requesting information, and she said this made her even more determined to learn what she could about the treatment of dermatitis. She stated, “[As an English professor], I have access to far more resources than other parents; I don't even know how they begin to cope”. Her daughter then told her story and explained how, after years of challenging treatments, her skin improved with a combination of avoidance of allergens identified by patch testing, systemic antibiotics, topical antimicrobials, and acidic emollients.

The group then identified gaps in dermatitis care for discussion using an Open Spaces® format, which allows participants to engage each other in discussion of participant-identified topics. The small groups further identified gaps and suggested action plans for the ACDS to consider. The groups reported out at the end of the session. Consensus was not a requirement for action plans to be put forth. The chart below includes the topics and comments generated by the participants; those who contributed notes for this summary are listed as authors, but about 50 attendees contributed. The third column for potential action includes some information from American Contact Dermatitis Society meetings over the subsequent two days that was added after the meeting by the authors.

Many of the participants identified themselves as potential leaders for ACDS task force and committee work to further the proposed initiatives. Feedback from the meeting evaluations indicated that participants found inclusion of patients very helpful to better understand their perspective.

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| **Topic** | **Comments** | **Action Plan** |
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| New allergen identification | * Thin layer chromatography (TLC) can be performed by dissolving an item suspected of causing allergy, and using the concentrated extract for TLC, then scraping away the silica gel and patch testing to the paper strip. Mass spectrometry is then needed to identify the allergenic band
 | * At the March 2nd 2017 ACDS meeting, Andy Scheman MD (Chicago, IL) talked about his use of this technique as learned from Magnus Bruze MD (Malmo University, Sweden)
* An ACDS grant to create a core laboratory could support these services (TLC and mass spectrometry)
* Requires a needs analysis – a leader for this initiative should be identified
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| Education of non-specialist providers | * Target groups for additional education include dermatology residents, allergy fellows, practicing dermatologists and allergists and patients
* ACDS mentorship and more career development options help dermatologists specialize
* Detailed letters to referring physicians help to educate.
* There is a need to improve access to patient education resources, including diets
 | * At a board meeting subsequent to the March 1st meeting, Dianne Silvestri MD (U Mass) agreed to oversee updating the Contact Allergen Management Program (CAMP) narratives and perhaps publishing patient education pages on the ACDS pages in Dermatitis
* Lippincott Wolters Kluwer will enable free access for one month to articles identified for a resident journal club curriculum.This initiative requires a leader
* Consider increasing education opportunities via multiple platforms
* Organize ACDS website (for physicians) for easy access to patient education resources (diets, alternatives)
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| Education of peers for children with dermatitis | * This was suggested by our patient participant. Create an app showing photographs of skin with and without skin disease that can swipe over to stories written by kids on what is like to have the disease. Can explain not contagious, etc.
 | * National Eczema Association might support.
* Camp Discovery participants might help with content including other skin disease like alopecia areata, vitiligo, psoriasis, vascular malformations, sunburn, acne
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| How to use antibiotics without increasing the risk of MRSA | * Treat with systemic antibiotic for 10-14 days and then use topical anti-microbial e.g. chlorhexidine or bleach baths followed by low pH emollient ([J Drugs Dermatol.](https://www.ncbi.nlm.nih.gov/pubmed/?term=A+comparison+of+physicochemical+properties+of+a+selection+of+modern+moisturizers%3A+hydrophilic+index+and+pH.+J+Drugs+Dermatol+2012%3B+11%3A+633%E2%80%93636.) 2012 May;11(5):633-6) or alternating with vinegar baths titrated to a pH of about 4.5 to reduce bacteria and yeast on the skin
 | * Need more studies investigating the role of mupirocin, which was suggested for patients and families. However, Hammond et al presented data at the March 2nd ACDS meeting that the absence of filaggrin in the nasal mucosae results in no particular predisposition to *Staphylococcus* nasal carriage in childhood onset dermatitis (aka “atopic dermatitis”)
* Need to investigate the role of microbial biofilms (esp. fungal biofilms) in modulating skin colonization by MRSA
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| Role of Bugs (Microbiome/Mycobiome) in Dermatitis | * Fungus may create a scaffolding for bacterial biofilms (e.g. *Staphylococcus*)
* Changes in micro/mycobiome may influence the pH and barrier functions of skin
* Micro/mycobiome interact with host immune system by inducing/attenuating targeted changes in immune pathways
 | * Investigations into the role of biofilms as a source of antigen concentration (by promoting commensal organisms, and attenuating harmful organisms) is needed
* Use of organotypic and animal models of dermatitis is likely to elucidate these mechanisms in greater details
* Further study of antimicrobials that will impact the biofilm is needed
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| Improve understanding of occupational glove intolerance  |  | * Further attention to irritant dermatitis and occlusion is needed. Dermatitis might try to publish more on this topic
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| Atopy patch tests | * This topic was identified as a gap but withdrawn due to competing topics of interest
* Recent introduction of commercially available antigens should help standardize reports in the literature
 | * We do not know the risks of active sensitization in young children who have not had mucosal exposure to allow tolerance to develop. We do not know how often to repeat testing to determine if the Th1 response has been lost.
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| Better understanding of systemic contact dermatitis (SCD) | * All patch test positive patients should avoid contact with allergens topically, and when this does not help then patients need to avoid systemic exposure. Need to define best practice on how to explain this and share decision making with patients.
* Need to define phenotypes of systemic contact dermatitis (often symmetrical, generalized, occasionally eyelid, perioral dermatitis-like, anogenital, (nummular is rare)).
* After the Th1 (positive patch test) resolves, there is often persistent immediate type I or hive-like symptoms (probably Th2 driven) with positive prick test. Dr. Ardern-Jone’s work published in JID 2013 may explain this.
 | * Invite a gastroenterologist to attend the next ACDS meeting to discuss eosinophilic esophagitis and atopy patch testing as well as patch testing to fragrance including balsam of Peru, cinnamates, carmine, propylene glycol, metals (nickel, cobalt, chromium), sesquiterpene lactone/compositae, formaldehyde (aspartame), gallates
* Create a registry – this initiative requires the identification of a leader
* Create questions on CAMP regarding possible Systemic Contact Dermatitis (SCD)
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| How do we engage patients? | * Request funding for patient stories, either by attending meetings or video
* ACDS to create a Patient Advisory Council to advise the Education and Information Technologycommittees e.g. create an index for CAMP
* ACDS to share best practices for patient education to increase efficiency of the complex office visits that dermatitis care entails
 | * Research planning committee to consider grants for patient engagement e.g. Patient Centered Outcomes Research Institute (PCORI), industry, Agency for Healthcare Research and Quality (AHRQ)
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| Options for Acidification | * Vinegar was most often the agent of choice (white, rice wine and apple cider vinegar).
* Participants noted patients with atopic and stasis dermatitis improve with this regimen.
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