



American Contact Dermatitis Society

21st Annual Meeting

Miami Beach Resort and Spa

4833 Collins Avenue

Miami Beach, Florida

March 4, 2010

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American Contact Dermatitis Society

21st Annual Meeting

Thursday, March 4, 2010

Miami Beach, Florida

Schedule of Events

7:00 **Registration Open** **Mediterranean East Foyer**

7:30 **Breakfast Symposium (tickets required)** **Starlight Room**

7:45 **Breakfast Symposium**
ACDS Core Allergen Series segment of the Breakfast Symposium / Erin Warshaw, MD and Core Allergen Team
European Allergen Series/ Marlene Isaksson, MD

General Session / Fisher Presentations **Mediterranean East Ballroom**

8:30 **Welcome / Suzanne Connolly, MD - ACDS President**
Annual Meeting Chair / Anita Pedvis-Leftick, MD

8:35 AM **Systemic Hypersensitivity to an Implantable Cardioverter Defibrillator wth Positive Patch Test Results Without Cutaneous Manifestations / Israel David Andrews, BS, MA**

8:45 **Allergic Contact Dermatitis Following Postsurgical Closure with Dermabond®**
Jeffrey J Bidinger, MD

8:55 **Patch Tests to Benzethonium Chloride and Benzalkonium Chloride, Preliminary Visual and Confocal Microscopy Findings / Benjamin Ryan Bohaty, BS, Medical Student**

9:05 **A 10 Year Review of PPD Allergy and related para amino compounds at the Ottawa PatchTesting Clinic / Lauren Fratesi, M.D., B.Sc.**

9:15 **Prevalence of Aluminum Allergy in Dermatitis Patients / Victoria Kuohung, MD**

9:25 **Development of photosensitivity after allergic contact dermatitis to epoxy resin / Tiffany Kwok, MD**

9:35 **Contact Allergy to Corticosteroids: What are the Ideal Patch-Test Standard Screening Allergens? / Jennifer Lipson, MD, BSCh**

9:45 **Formulation of contact allergens in ethosomes may increase their sensitizing capacity**
Jakob Torp Madsen, MD (Recipient Maibach Award)

9:55 **Break: Exhibits and Poster Presentations** **Grand Promenade**

General Session Moderator: Bryan Anderson, MD **Mediterranean East**

10:30 **Prevalence of Patch Test Reactivity to Metals in a Cohort of Veterans Exposed To Shrapnel Fragments During Iraqi Conflicts / Marianna Shvartsbeyn, MD**

- 10:40 **Case Report: Patch Testing a Patient with Eosinophilic Gastroenteritis Resulting in Dramatic Improvement** / David Smart
- 10:50 **Patch Testing To Metal Series: A Retrospective Study Of 2000-2008 Period At Mayo Clinic** / Zhaoyu Wang, BS
- 11:00 **Sofa Dermatitis** / Magus Bruze, MD
- 11:20 **Contact dermatitis from emulsifiers in topical products** / Klaus E. Andersen, MD, Ph.D
- 11:30 **Dimethyl fumarate an emerging source of Contact Skin Disease** / A Gimenez-Arnau, MD
- 11:40 **Dermatitis Journal Update / ECDRG & ACDS Joint Meeting Update** / Ponciano Cruz, MD
- 11:50 **Allergen of the Year Announcement** / Donald Belsito, MD
- 12:00 **Roundtable Luncheon** **Starlight Room**
- 1:15 PM **2010 Fisher Lecturer: I'm from the Government and I'm here to ...**
Boris Lushniak, MD, MPH
- 2:15 **ACDS Awards** / Suzanne Connolly, MD – ACDS President
General Session Moderator: Allison Ehrlich, MD
- 2:30 **Emergent and Unusual Allergens in Cosmetics: A Review of the Literature**
David Earl Pascoe, MD, MPH
- 2:40 **Explantation of Amplatzer Atrial Septal Occluder Devices in Four Patients with Nickel Allergy: a Case Series** / Douglas L Powell, M.D.
- 2:50 **Glove Allergy in Health Care Workers in the Latex-Safe Era** / James Selwyn Taylor, MD
- 3:00 **Hand Function in Workers with Hand Dermatitis** / D Linn Holness, MD, FRCPC
- 3:10 **Break:** Exhibits and Poster Presentations **Grand Promenade**
- General Session Moderator:** Anita Pedvis-Leftick, MD
- 3:40 **Lyral Stability in Petrolatum** / Carsten Hamann
- 3:50 **Patch testing with methyl dibromo glutaronitrile (MDBGN): Are positive reactions allergic?** / Donald Belsito, MD
- 4:00 **Contact Dermatitis from Hydrocortisone Creams Versus Ointments in Patients With Positive Tixocortol Pivalate Patch Tests** / Daniel W. Shaw, M.D.
- 4:10 **Inconsistencies in Sensitizer Notations for Common Occupational Contact Allergens in the 2001-06 North American Contact Dermatitis Group Canadian Data**
Linn D Holness, MD
- 4:20 **The influence of loss of function mutations in the filaggrin gene on the recovery rate and the job continuation in patients with occupational hand eczema** / Lilla Landeck, MD
- 4:30 **Healthy Skin @ Work : the 2010 European Campaign for the Prevention of Occupational Contact Dermatitis** / Swen Malte John, MD

4:40 **Increasing access to patch testing by implementing physician extenders**
Matt Zirwas, MD

Business Meeting

16:55 **Business Meeting / Suzanne Connolly, MD**

Reception

Poolside West

17:00 **Reception**

POSTER PRESENTATIONS

Posters are in the Grand Promenade Room.

Leena Marika Ackermann, M.D., Ph.D.

Contact Sensitization to 2-Methyl-4-Isothiazolin-3-One (Mi) in Finland - A Multicentre Study

Miriam Chavez Dumandan, MD

Henna Tattoo Flare from Systemic Para-Phenylenediamine Cross-Reaction Exposure

Kevin Gardner, BS

The Hazards of Moist Toilet Paper: Allergy to the Preservative MCI/MI

Sanjeev Gupta, MD DNB

Parthenium Dermatitis Presenting as Erythroderma.

Sanjeev Gupta, MD DNB

Patch Testing in Hand Eczema.

Chuan Ma, M.D.

Serum aeroallergens of allergic skin diseases in Beijing, China

Monica M. Madray, MD

Keeping up with the times: An old foe turned tech savvy

Catalina Matiz, M.D

Allergic Contact Dermatitis from Bisabolol in Aquaphor Healing Ointment in An Atopic Child with Compositae Allergy.

Nikolay V Matveev, MD, MPH, PhD

Publications on Contact Dermatitis in Russia: Decreasing Interest of Medical Community

Meltem Onder, MD

Allergy to Topical Antibiotics

Mario Cezar Pires, PhD

Eczematous Eruption after Endovascular Stent

Michele L Ramien, MDCM, MSc

Allergic Contact Dermatitis to Multiple (Meth)Acrylates in a Press Helper

Anita Rotter, MD

Frequency of Occupational Contact Dermatitis in An Ambulatory of Dermatologic Allergy

Maria Antonieta Scherrer, MD

Does Skin Colour Affect the Patch Test Readings?

Maria Antonieta Scherrer, MD

Photo Patch Test : A Case Series from Brazil

Vinod Kumar Sharma, MBBS,MD

Patch testing

Michael Sheehan, MD

Are Mattress Protectors the New Spandex???

Vermen M. Verallo-Rowell, MD

Clothing Contact Dermatitis in a Private Dermatology/Patch Testing Clinic in the Philippines

Zhaoyu Wang, BS

Contact Allergy to Hairdresser Series: Analysis Of 2000-2008 Period at Mayo Clinic

David Anthony Wetter, M.D.

Patch Testing to Personal Care Product Allergens in A Standard Series and a Supplemental Cosmetic Series: Results from the Mayo Clinic Contact Dermatitis Group

EXHIBITS

Exhibits and Posters are in the Regency Foyer

Allerderm Laboratories

3400 E McDowell Rd

Phoenix, AZ 85008-7899

Contact: Janet Peterson

Phone: (602) 225-0595

Fax: (602) 225-0599

Email: jcpeters@smarthealth.com

Web site: www.allerderm.com

Products: T.R.U.E. Test ® patch test system. Discover what is new with FINN Chambers ® applicatoins and learn about our new products Lubrex ® Cream and Lubrex ® Cleanser, Advance Treatment for damaged hands.

Chemotechnique/Dormer Laboratories

91 Kelfield Street, Unit 5

Toronto, ON M9W 5A3

Canada

Contact: George Davy

Phone: (416) 242-6167

Fax: (416) 242-9487

Email: info@dormer.com

Web site: www.dormer.com

Products: Chemotechnique is a world leader in patch testing providing over 500+ allergens and accessories through its North American distributor Dormer Laboratories.

Coria Laboratories _____

3909 Hulen Street

Fort Worth, TX 76107

Contact: Brenda Honeycutt

Phone: (866) 819-9007

Fax: (817) 302-3830

Email: brenda.honeycutt@corialabs.com

Web site: www.corialabs.com

Products: Coria Laboratories Ltd specializes in research, development, and marketing of branded prescription drugs and over-the-counter dermatology products.

Cottonique Inc. _____

1857 Lombard Street, 1st Floor

San Francisco, CA 94123

Contact: Vinesh Genomal

Phone: (415) 465-0381

Email: admin@cottonique.com

Web site: www.cottonique.com

Products: Hypo-allergenic, chemical-free, spandex-free, formaldehyde-free innerware, outerware, and loungewear for men, women, children and toddlers.

DMI Gloves _____

Contact: Neil Kitson, MD

Email: nkitson@gmail.com

Web site: www.dmigloves.com

Products: Cotton gloves for working hands. The use of gloves is essential in the treatment and repair of the skins natural barrier. Dermatologist Neil Kitson founded DMI to provide the only high quality cotton gloves suitable for this purpose.

Ferndale Laboratories Inc. _____

780 W Eight Mile Road

Ferndale, MI 48220

Contact: Del Bertollini

Phone: (248) 548-0900

Fax: (877) 548-7100

Email: csolti@ferndalelabs.com

Web site: www.ferndalelabs.com

Products: Ferndale Laboratories is dedicated to bringing unique, value-added therapies to heal, protect and beautify the skin. Our products include: Pramoxone Family of Products, Eleton Cream, Clinac BPO 7 (Benzoyl Peroxide Gel USP, 7%), L.M.X. 4 (lidocaine 4%) – Topical Anesthetic Cream and Nouriva Repair.

Galderma _____

14501 North Freeway

Fort Worth, TX 76177

Phone: (817) 961-5000

Fax: (817) 961-5507

Web site: www.galdermausa.com

Products: Galderma has a wide range of specialized products covering everything from skin care to topical treatments for major dermatological conditions including Oracea® (doxycycline, USP) is the first and only oral therapy approved by the FDA to treat rosacea*.

Graceway Pharmaceuticals

222 Valley Creek Blvd. Suite 300

Exton, PA 19341

Contact: Jan Donovan

Phone: (267) 948-0437

Email: jan.donovan@gracewaypharma.com

Products: Atopiclair® Nonsteroidal Cream is available by prescription for the millions of men, women, and children who suffer from the itching, burning, and pain caused by the skin disorder atopic dermatitis (also called "eczema").

Pharmaceutical Specialties

1620 Industrial Drive NW

Rochester, MN 55901

Contact: Brian Leary

Phone: (800) 325-8232

Fax: (507) 288-7603

Email: brianl@psico.com

Web site: www.psico.com

Products: Skin care products free of fragrance, masking fragrance, dyes, parabens, lanolin and formaldehyde. Line includes Vanicream and Free & Clear Skin and Hair Care.

Quinnova Pharmaceuticals

301 S State Street, Suite N001

Newtown, PA 18940

Contact: Jeff Day

Phone: (215) 860-6263

Fax: (215) 860-6265

Email: ataylor@quinnova.com

Web site: www.quinnova.com

Products: Tersi Foam is the first leave on foam treatment for seborrheic dermatitis combining the cosmetically elegant Proderm Technology with selenic sulfice.

SmartPractice Canada

2175 29th Street NE

Unit 90

Calgary, AB T1Y7H8

Canada

Contact: Janet Peterson

Phone: (602)225-0595

Fax: (602) 225-0599

Email: jcpeters@smarthealth.com

Web site: www.smarthealth.com

Products: The allergEAZE® patch test system includes over 400 epicutaneous contact allergens in 22 different series including the 2009-2010 North American series. The system features standardized allergen preparations delivered in an innovative tube design and the allergEAZE chambers that are easy

to pre-load and provide excellent adhesion. For more information about the art and science of patch testing contact SmartPractice@Canada at 866-903-2672

VMV Hypoallergenic

16 W 16th Street, Apt 5GN

New York, NY 10011

Contact: Cristina Verallo Rowell

Phone: (917) 916-6722

Fax: (212) 217-2762

Email: ccvrowell@vmvgroup.com

Products: VMV Hypoallergenic is a unique brand of hypoallergenic cosmeceuticals, skin/body/bath and cosmetics for adults and children that are part of CARD. Our hypoallergenicity is validated and most products are free of all allergens listed by the NACDG.

Faculty Disclosures

In accordance with the Accreditation Council for Continuing Medical Education (ACCME) anyone in a position to control or influence the content of an *AMA Category 1 Credit* CME activity must disclose all relevant financial relationships with any commercial interest. Any identified conflict of interest must also be resolved prior to the presentation. To comply with this policy, the ACDS Annual Meeting Review Committee reviews all disclosure information to determine if a conflict of interests exists. Any identified conflict of interest is resolved by the approved ACCME process as adopted by the Annual Review Meeting Committee.

No issues to resolve or commercial interests resolved.

Leena Marika Ackermann, M.D., Ph.D., Klaus E. Andersen, MD, PhD, Israel David Andrews, MD, Donald Belsito, MD, Donald Belsito, MD, Jeffrey J Bidinger, MD, Benjamin Ryan Bohaty, MD, Magnus Bruze, MD, Ponciano Cruz, MD, Miriam Chavez Dumandan, MD, Lauren Fratesi, MD, Kevin Gardner, BS, Sanjeev Gupta, MD DNB, Carsten Hamann, D Linn Holness, MD, FRCPC, Swen Malte John, MD, Victoria Kuohung, MD, Tiffany Kwok, MD, Lilla Landeck, MD, Jennifer Lipson, MD, Chuan Ma, M.D., Monica M. Madray, MD, Jakob Torp Madsen, MD, Catalina Matiz, M.D, Nikolay V Matveev, MD, MPH, PhD, Meltem Onder, MD, David Earl Pascoe, MD, MPH, Mario Cezar Pires, PhD, Douglas L Powell, MD, Michele L Ramien, MDCM, MSc, Anita Rotter, MD, Maria Antonieta Scherrer, MD, Maria Antonieta Scherrer, MD, Daniel W. Shaw, MD, Michael Sheehan, MD, Marianna Shvartsbeyn, MD, James Selwyn Taylor, MD, Vermen M. Verallo-Rowell, MD, Zhaoyu Wang, MD, David Anthony Wetter, M.D., Matthew Zirwas, MD.

Issues not yet received or not yet resolved at time of printing.

Ana M Gimenez-Arnau, MD, Boris Lushniak, MD, Vinod Kumar Sharma, MD, David Smart.

Any real or apparent conflicts of interest will be resolved by the committee prior to the presentation.

ABSTRACTS

Presentations listed in order of presentation

Breakfast Symposium: Allergen Series Discussion

Core ACDS Recommended Allergen Series

ACDS Core Allergen Task Force Members: Erin Warshaw, MD, Douglas Powell, MD, Melanie Pratt, MD, Pamela Scheinman, MD, Matthew Zirwas.

Core ACDS Recommended Allergen Series:

Core Allergen Panel I

1. Nickel sulfate 2.5% pet.*
2. Myroxylon pereirae 25% pet.*
3. Fragrance mix I 8% pet.* §
4. Quaternium 15 2% pet.*
5. Neomycin 20% pet.*
6. Budesonide 0.1% pet.*
7. Formaldehyde 1% aq.* §
8. Cobalt chloride 1% pet.* §
9. p-tert-Butylphenol formaldehyde resin 1% pet.*
10. P-Phenylenediamine 1% pet.*

Core Allergen Panel II

11. Potassium dichromate 0.25% pet.* §
12. Carba mix 3% pet.* §
13. Thiuram mix 1% pet.*
14. Diazolidinyl urea 1% pet.*
15. Paraben mix 12% pet.*

16. Black rubber mix 0.6% pet.*
17. Imidazolidinyl urea 2% pet.*
18. Mercapto mix 1% pet*
19. Methylchlorisothiazolinone/Methylisothiazolinone 100 ppm. aq.*
20. Tixocortol-21- pivalate 1% pet.*

Core Allergen Panel III

21. Mercaptobenzothiazole 1% pet.*
22. Colophony 20% pet.*
23. Epoxy resin 1% pet.*
24. Ethylenediamine 1% pet.*
25. Wool alcohol 30% pet.*
26. Benzocaine 5% pet.**
27. Bacitracin 20% pet.
28. Mixed dialkyl thioureas 1% pet.
29. Fragrance mix II 14% pet
30. Benzophenone-3 10% pet.

Core Allergen Panel IV

31. Disperse blue 106 1% pet.
32. Disperse blue 124 1% pet
33. Gold sodium thiosulfate 0.5% pet§
34. Ethyl acrylate 0.1% pet.
35. Compositae mix 6% pet.

36. Sesquiterpene lactone mix 0.1% pet.
37. DMDM hydantoin 1% pet.
38. Tosylamide formaldehyde resin 10% pet.
39. Methyl methacrylate 2% pet.
40. Cinnamic aldehyde 1% pet.

Core Allergen Panel V

41. Propylene glycol 30% aq.
42. Cetyl steryl alcohol 20% pet
43. 2-Bromo-2-nitropropane-1,3-diol 0.5% pet.
44. Sorbitan sesquioleate 20% pet
45. Cocamidopropylbetaine 1% aq. §
46. Glyceryl thioglycolate 1% pet.
47. Ethyleneurea melamine-formaldehyde 5% pet.
48. Iodopropynyl butylcarbamate 0.1% pet. §
49. Chloroxyleneol (PCMX) 1% pet.
50. Glutaraldehyde 1% pet.

Core Allergen Panel VI

51. Ethyl cyanoacrylate 10% pet
52. Benzyl alcohol 10%
53. Benzalkonium chloride 0.1% aq §
54. Methylidibromoglutaronitrile 0.5% pet
55. Propolis 10% pet §

56. n,n-Diphenylguanidine 1% pet
57. Lanolin alcohol (Amerchol 101) 50% pet
58. Triethanolamine 2% pet §
59. Amidoamine 0.1% aq.
60. Desoximethasone 1% pet

Core Allergen Panel VII

61. Triamcinolone 1% pet
62. Clobetasol-17- propionate 1% pet.
63. Hydrocortisone-17-butyrate 1% pet.
64. 4-Chloro-3-cresol (PCMC) 1% pet
65. Benzophenone-4 2% pet
66. Chlorhexidine digluconate 0.5% aq
67. Ylang ylang 2% pet
68. Phenoxyethanol 1% pet
69. Sorbic acid 2% pet
70. 2, 6-Ditert-butyl-4-cresol (BHT) 2% pet

Core Allergen Panel VIII

71. Disperse Orange 3 1% pet
72. 3-(Dimethylamino)propylamine (DMAPA) 1% aq
73. Oleamidopropyl dimethylamine 0.1% aq §
74. DI Alpha Tocopherol 100%
75. Cocamide DEA 0.5% pet.

76. Lidocaine 15% pet.
77. Dibucaine 2.5% pet.
78. Jasmine absolute 2% pet.
79. Tea tree oil 5% pet.
80. Triclosan 2% pet

* TRUE Test allergen

** Caine mix (containing benzocaine) is a TRUE Test allergen

§ Interpret reactions with caution, mild irritant and/or low clinical relevancy

General Session / Fisher Presentations

Systemic Hypersensitivity to an Implantable Cardioverter Defibrillator with Positive Patch Test Results Without Cutaneous Manifestations

Israel Andrews, Pamela Scheinman, Department of Dermatology, Tufts Medical Center, Boston MA

Objective: To present a case of systemic hypersensitivity to components of an implantable cardioverter defibrillator (ICD). Our patient showed relevant patch test reactions to materials in the ICD, without accompanying dermatitis.

Results: A 51-year-old woman status-post implantation of an ICD developed hypotension, vomiting, rigors and fever post operatively. Her symptoms persisted until the ICD was removed 3 weeks later. An extensive work-up for infection was negative. She had no dermatitis during this time.

Patch testing was performed to a Tufts Medical Center standard, metal, epoxy, isocyanate, and rubber series. Patches were removed and read after 48 and 72 hours. Among her relevant reactions included 3+ cobalt chloride, 1+ nickel sulfate, 3+methylenedianiline (MDA), 2+ p-phenylenediamine (PPD), and 1+ toluenediisocyanate (TDI). Cobalt and nickel were present in the ICD per the manufacturer. They would not confirm whether materials cross reacting with PPD, MDA or TDI were present in the coating of the ICD.

Conclusions: This is the first report of systemic hypersensitivity to proven contact allergens within an ICD. Our patient had no dermatitis but rather sepsis-like symptoms. Patch testing defined allergens within her ICD and guided the preparation of a custom-made ICD, which she tolerated without sequelae. Once infection is ruled out, patch testing should be considered in the work-up of unexplained symptoms after ICD placement, even in the absence of dermatitis.

Allergic Contact Dermatitis Following Postsurgical Closure with Dermabond®

Casey Bowen, M.D.¹
Jeffrey Bidinger, M.D.²
Chad Hivnor, M.D.²
J. Scott Henning, D.O.²
Aaron Hoover, M.D.²

¹Little Rock Air Force Base, Arkansas

²Wilford Hall Medical Center, San Antonio, Texas

We report three cases of surgical wounds complicated by allergic contact dermatitis (ACD) to Dermabond®. Allergic contact dermatitis was confirmed by use test in all three patients. 2-octylcyanoacrylate topical skin adhesive (Dermabond®; Ethicon Inc, Somerville, New Jersey) was FDA-approved for use as tissue adhesive in 1998. Despite extensive use, there have been relatively few reported cases of ACD associated with its use. The increased popularity of Dermabond® in emergency rooms, clinics, and operating rooms, could lead to an increased prevalence of associated ACD. Cyanoacrylates are widely employed as adhesives ranging from household products to nail and beauty salons, and even dentistry. We will discuss the recognition and management of ACD to Dermabond® with the goal of minimizing poor surgical outcome.

Patch Tests to Benzethonium Chloride and Benzalkonium Chloride, Preliminary Visual and Confocal Microscopy Findings

Benjamin Bohaty¹, Chris Fricker², Salvador Gonzalez³, Melissa Gill³ and Susan Nedorost¹

¹University Hospitals Case Medical Center (UHCMC), Cleveland, Ohio; ²GOJO Industries Inc, Akron, Ohio; ³Memorial Sloan-Kettering Cancer Center, New York, New York

Background: Quaternary ammonium compounds (Quats), such as benzalkonium chloride (BAC) and benzethonium chloride (BEC), are widely used in antibacterial personal care products, disinfectants and ophthalmic preparations. BAC is known to be a marginal irritant when patch tested at 0.15%aq. Data on BEC is limited.

Objective: Evaluate BEC and BAC for elicitation of allergic sensitization.

Methods: (approved by the UHCMC IRB). 10 subjects were recruited, of whom 8 were considered likely to react based on history of rash after exposure to disinfectants or a history of prior positive patch test to BAC. BAC(0.15%aq), BAC(0.15%pet), BEC(0.05%aq), BEC(0.15%pet), BEC(0.15%aq), BEC(0.5%aq), Sodium Lauryl Sulfate(2.0%) and Deionized Water were applied under Finn chambers for 48 hours. 4 days and 7 days after application the sites were examined visually and by in vivo Reflectance Confocal Microscopy (RCM) which was interpreted by a blinded expert.

Results: Two patients with definite allergic reactions were clinically relevant. Cross reaction between BEC and BAC was demonstrated in one patient. RCM imaging correlated well with clinical scoring and interpretation of patch test reactions in terms of irritancy vs. allergy.

Conclusion: RCM appears to be a useful tool in distinguishing between irritancy and sensitization during patch testing. Relevant allergic reactions to quats occur in humans; further study of prevalence and best test concentration and vehicle is needed.

A 10 Year Review of PPD Allergy and related para amino compounds at the Ottawa Patch Testing Clinic

Lauren Fratesi, M.D., B.Sc.

Background: p-Phenylenediamine (PPD) is an important allergen. 6.0% of patients tested positive to PPD when patch tested according to the The North American Contact Dermatitis group. Permanent hair dyes, azo-type dyes, and Henna temporary tattoos are the most common potential routes of exposure.

Objective: To assess the significance of PPD allergy in an Ottawa outpatient contact dermatitis clinic, assess the epidemiology of PPD allergies and their associated allergies. Charts of patients visiting the Ottawa outpatient contact dermatitis clinic from May 1997 to July 2009 were reviewed.

Results: 134 patients were found to have a contact allergy to PPD. 75.4% were female and 24.6% were male. 13.4% were hairdressers. 18.7% had a history of atopy. 90.3% were sensitized to hair dye, 2.2% to Henna tattoos, and 7.5% from other sources. 24.6% also had positive patch testing to textile dyes, 7.5% to benzocaine, 6.0% to Sulfa drugs, 1.5% to black rubber and 1.5% to PABA. A detailed analysis will be discussed.

Conclusions: PPD is an important source of contact allergy. Our results show a significant relationship of PPD with other related para amino compounds.

Prevalence of Aluminum Allergy in Dermatitis Patients

Victoria Kuohung, Pamela Scheinman, Department of Dermatology, Tufts Medical Center, Boston MA

Objective: To present eight out of 372 dermatitis patients who tested positive to aluminum chloride 2% petrolatum on patch testing.

Materials and Methods: A retrospective data analysis was performed on 372 consecutive dermatitis patients patch tested in an IRB-approved database from November 2008 to November 2009 at Tufts Medical Center. All patients were tested with aluminum chloride 2% petrolatum plus a modified North American Contact Dermatitis Group (NACDG) standard, fragrance and preservative series. Other series were tested if warranted by history and physical exam. Readings were performed after 48 and 72 hours, and graded according to the NACDG system.

Results: Out of 372 patients, eight (2.2%) had reactions to aluminum chloride. Three were male and five were female, with patient ages ranging from three to 79 years old. Of these eight patients, four were six years old or younger. Three of these four children demonstrated 3+ reactions. Five patients (62%) were atopic, five showed concomitant reactions to other metals, and two had generalized dermatitis. All were Caucasian.

Conclusions: This is the first examination of aluminum allergy prevalence in a United States database of dermatitis patients. Potential sources of exposure to aluminum include aluminum-containing vaccines, cookware, lotions and deodorants. A European study more than one decade ago found aluminum allergy prevalence at 0.2%. The tenfold increased prevalence reported here suggests that further studies are warranted.

Development of photosensitivity after allergic contact dermatitis to epoxy resin

Kwok T^{1,2}, DeKoven JG^{2,3}, Rosen CF^{3,4}

¹Schulich School of Medicine, University of Western Ontario, London, Ontario, Canada

²James R Nethercott Occupational Disease Specialty Program, St. Michael's Hospital, Toronto, Ontario, Canada

³University of Toronto, Toronto, Ontario, Canada

⁴Division of Dermatology, Toronto Western Hospital, Toronto, Ontario, Canada

Persistent photosensitivity with a decrease in the Minimal Erythema Dose to UVB and UVA following ACD has rarely been reported.

We describe a healthy 40-year-old female train car painter with longstanding ACD to epoxy. She avoided recurrence of her ACD for 8 years by becoming a welder and refraining from working with epoxy paints. Unfortunately, after inadvertent workplace airborne exposure to epoxy, a severe dermatitis developed on her face and torso. Repeat patch testing to the North American Standard Series revealed a 2+ reaction to epoxy resin. Following a flash burn while welding, a rash developed on photoexposed areas of the patient's head and neck. The eruption worsened while outdoors on days the sun reflected off the snow. Significant exacerbations were later noted in the spring and summer. Phototesting revealed a decreased MED to UVA and UVB, with 1+ reaction to 10 mJ/cm² UVB at 8 hours and 2+ reaction at 24 hours, and a 1+ reaction to 4 J/cm² UVA at 8 hours and a 2+ reaction at 24 hours persisting to 72 hours. Photopatch tests to the North American Standard Series were negative.

Our patient developed marked photosensitivity to UVB and UVA after experiencing a severe work-related allergic contact reaction to epoxy. We advised photoprotection with clothing, hats, sunscreen and sun avoidance, Mylar filter treatment of her car's windows, and work restrictions. The photosensitivity persists 3 years after diagnosis. Other cases of persistent photosensitivity after ACD to epoxy and possible mechanisms will be discussed in this presentation.

Contact Allergy to Corticosteroids: What are the Ideal Patch-Test Standard Screening Allergens?

Jennifer Lipson, MD and Melanie Pratt, MD.

Division of Dermatology, Department of Medicine, University of Ottawa, Canada.
North American Contact Dermatitis Group (NACDG)

Background: Corticosteroids are a cause of delayed hypersensitivity. Four groups of corticosteroids are recognized, A, B, C, and D (subdivided D1 and D2). Cross-reaction can occur within each group and between some groups.

Objectives: (1) Describe positive patch-test and cross-reaction patterns to corticosteroids. (2) Identify ideal screening allergens to detect contact allergy to corticosteroids from all four groups.

Methods: A retrospective analysis of 7548 patients patch-tested by the North American Contact Dermatitis Group (NACDG) between 2005 and 2008. A chi-square analysis was performed for all corticosteroid screeners and propylene glycol for concomitant allergy.

Results: Overall, 4.5% of patients tested had positive reactions to corticosteroids. Positive reactions to only one corticosteroid were seen in 3.4% and to more than one in 1.1%. Tixocortol-21-pivalate allergy was the most common with frequency 2.6%, followed by budesonide 0.1% (1.1%), clobetasol-17-propionate (0.8%), hydrocortisone-17-butyrate (0.5%), triamcinolone acetonide (0.3%) and desoximetasone (0.2%). The frequency of propylene glycol allergy was 2.5%. The frequency of concomitant propylene glycol allergy in steroid allergic individuals was low.

Conclusion: We will discuss and provide evidence for which are the best screening agents to identify contact allergy to corticosteroids from groups A-D2, the frequency of broad versus narrow allergy, whether alcohol or petrolatum is a better vehicle for hydrocortisone-17-butyrate and the relationship between propylene glycol and corticosteroid allergy.

Formulation of contact allergens in ethosomes may increase their sensitizing capacity

Jakob Torp Madsen¹, Stefan Vogel², Ann-Therese Karlberg³, Carl Simonsson³, Jeanne Duus Johansen¹ and Klaus Ejner Andersen¹.

¹National Allergy Research Centre, Dept. of Dermatology, Odense University Hospital and ²Department of Physics and Chemistry, University of Southern Denmark

³Dermatochemistry and Skin Allergy Department of Chemistry, Göteborg University

Background

Vesicular systems as liposomes, ethosomes and polymeric nanoparticles are used in cosmetic and pharmaceutical products to encapsulate ingredients thereby increasing bioavailability and clinical efficacy, protecting ingredients from degradation and to improve cosmetic performance. So far, few reports have suggested that formulation of cosmetic ingredients in vesicular carrier systems may increase contact allergy elicitation potential in man. However, sensitization studies have not been published.

Methods

We formulated two model contact allergens (isoeugenol and dinitrochlorobenzene) in ethosomes and investigated the sensitization response using a modified Local Lymph Node Assay and compared the response to the same allergens in similar concentrations and vehicles without the vesicular carrier system. Experiments were approved by the Danish Animal Experimentation Inspectorate.

Results

Both isoeugenol and DNCB encapsulated in 200-300 nm ethosomes gave significantly increased sensitization response in the modified local lymph node assay compared to the model allergens in solution without ethosomes.

Conclusion

For the first time it is shown in animal experiments that encapsulation of contact allergens in vesicular carrier systems may enhance the sensitization response. The clinical implications of this finding are unclear.

Prevalence of Patch Test Reactivity to Metals in a Cohort of Veterans Exposed To Shrapnel Fragments During Iraqi Conflicts

Marianna Shvartsbeyn,¹ Papapit Tuchinda,² Katherine S. Squibb,^{3,4} Melissa A. McDiarmid,^{3,5} and Anthony A. Gaspari⁶

¹ Department of Pathology, New York University, New York, USA

² Department of Dermatology, Faculty of Medicine, Siriraj Hospital, Mahidol University, Bangkok, Thailand

³ Veterans Affairs Medical Center, Baltimore, Maryland, USA

⁴ Department of Epidemiology and Preventive Medicine, University of Maryland School of Medicine, Baltimore, Maryland, USA

⁵ Department of Medicine, University of Maryland School of Medicine, Baltimore, Maryland, USA

⁶ Department of Dermatology, University of Maryland School of Medicine, Baltimore, Maryland, USA

U.S. Gulf War I veterans participating in the Baltimore VA Depleted Uranium Program Follow-Up surveillance in Spring 2009 were screened for skin reactivity to metals utilizing patch testing (PT). Forty veterans were tested with the extended metal series and soluble uranyl nitrate (0.25%, 2.5%, and 25%). Seventeen of them were also tested for sensitivity to nickel, cobalt and chromium. Elevated urine uranium was found in some veterans with retained DU fragments, yet none of them had significant PT reactions. The highest prevalence of reactivity was observed with zinc, gold and manganese (25%, 15% and 12.5%, respectively). Both zinc and manganese were found in metal fragments extracted from combat wounds. The prevalence of PT reactivity to these metals in the general population is not well known. Prolonged exposure to metals released from embedded fragments may induce immunologic reactivity in some individuals and requires further study.

These studies were approved by the VA and University of Maryland IRBs.

Case Report: Patch Testing a Patient with Eosinophilic Gastroenteritis Resulting in Dramatic Improvement

David Smart, MS (1), and Douglas L Powell, MD (2)

1- Medical College of Wisconsin, Milwaukee, Wisconsin

2- University of Utah, Department of Dermatology, Salt Lake City, Utah

Eosinophilic gastroenteritis is a member of a heterogenous group of eosinophilic gastroenteropathies that have in common an eosinophilic inflammation of the gut. These conditions commonly start in childhood and can present with many manifestations including: nausea, dysphagia, abdominal pain, vomiting, diarrhea, bowel obstruction, weight loss, or failure to thrive. A large portion of these cases are felt to be caused by allergies to food both IgE mediated allergies as well as delayed-type allergies. Prick tests and patch tests (usually described as atopic patch testing) have been utilized to determine the food allergies. All of the reports regarding these cases and studies are found in the allergy/immunology or gastroenterology literature.

We report a 18 month old Down Syndrome patient with Eosinophilic Gastroenteritis who had severe diarrhea (18 bowel movements/day) and failure to thrive, referred to our clinic for patch testing for food allergies. We report the results of our testing as well as subsequent food removal and subsequent dramatic clinical results.

The concept that delayed-type allergies to foods can be a principle factor in some very difficult to control diseases is an emerging concept. We will review our case and review the literature on these conditions with the mindset of how they could apply to our patch test clinics in dermatology.

Patch Testing To Metal Series: A Retrospective Study Of 2000-2008 Period At Mayo Clinic

Zhaoyu Wang, BS¹, Donna Richardson, RN², Mark Davis, MD²
University of Minnesota Medical School, Minneapolis, MN¹, Department of Dermatology, Mayo Clinic, Rochester, Minnesota²

Background: Metal induced allergic contact dermatitis (ACD) is encountered in common environmental and occupational skin diseases. As a detection and diagnosis tool, metal series provides a broader spectrum of metal allergens used for patch testing comparing to standard series.

Objective: This study seeks to review the Mayo experience of patch testing to a custom- built metal series, including 34 metal compounds.

Methods: This study was conducted after approval by the Institutional Review Board of Mayo Clinic. A retrospective study was conducted on patch testing to the metal series spanning a period of 9 years (January 1, 2000-December 31, 2008) at Mayo Clinic.

Results: A total of 781 patients were tested. Of these, 448 (57.36%) had at least one positive reaction. The most prevalent metal allergens were nickel, gold, palladium, cobalt, chromium, mercury, and beryllium. Higher prevalence of nickel, palladium, gold, cobalt, and beryllium allergies was observed in females ($P < 0.05$). Allergies to nickel, palladium and cobalt were found with higher frequencies in younger age groups.

Conclusion: A high proportion of patients suspected to be allergic to metals have a positive patch test reaction to metals.

Contact dermatitis from emulsifiers in topical products

Klaus .E. Andersen, Department of Dermatology, Odense University Hospital, University of Southern Denmark. DK-5000 Odense C, Denmark.

An emulsifier is a substance which stabilizes an emulsion. Emulsifiers are usually amphipathic organic compounds containing both hydrophobic and hydrophilic groups making them miscible in both organic solvents and water.

Most skin care products, cosmetics and topical drugs are emulsions. Emulsifiers are technical products of varying degrees of purity. They are rare contact allergens and difficult to test with due to their inherent skin irritation potential, with a narrow range of concentration from the allergy eliciting concentration to the irritancy level.

Those who develop emulsifier allergy are often patients with multiple contact allergies and chronic dermatitis and frequent exposure to topical products. Only few emulsifiers are tested on a more routine basis, such as cocamidopropylbetaine, sorbitan sesquioleate, stearyl alcohol and cetyl alcohol. Frequent false positive test reactions are possible.

It is mandatory to confirm an alleged allergic patch test reaction by detailed history, retesting, use-tests and tests in control subjects. If the allergic reaction is caused by an impurity or the complete emulsifier molecule is often not known. Collaboration with chemists, product manufactureres and raw material suppliers are needed to evaluate suspected allergic reactions to emulsifiers, which most often are ingredients in complex products. Such collaboration has lead to documentation of allergic contact dermatitis caused by decyl glucoside, oleyl alcohol, sodium stearyl lactylate, sodium dihydroxycetyl phosphate among others.

Dimethyl fumarate an emerging source of Contact Skin Disease

Giménez-Arnau A1,4, Silvestre JF 3,4, Mercader P 4, Borrego L4, De la Cuadra J 4, Fernandez-Redondo V 4, Gomez de la Fuente E 4, Miranda A 4, Serra E 4, Zimerson E 2, Bruze M 2
Department of Dermatology. Hospital del Mar IMAS. Universitat Autònoma, Barcelona. Spain 1
Department of Occupational and Environmental Dermatology. Malmö University Hospital, Malmö. Sweden 2
Department of Dermatology. Hospital General Universitario, Alicante 3 and GEIDAC Dimethyl fumarate register 4

Background: The methyl ester form of fumaric acid named dimethylfumarate (DMF) is an effective mold and bacteria growth inhibitor. Its irritating and sensitizing properties were demonstrated in animal models. Maculopapular reactions induced by non occupational and occupational exposure were described late 80th from the XX century. DMF has been involved as responsible of contact dermatitis in Europe since the 2008

Objective: To show Spanish 2008-2009 experience on DMF induced shoe contact dermatitis. Patients, Material and Methods: Patients with shoe contact dermatitis were assessed and registered by the GEIDAC. Patch tests results obtained with the own shoe and the European baseline series, acrylates and fumaric acid esters series were recorded according to ICDRG guidelines. If available the content of DMF in shoes was analyzed.

Results: At least 72 suspected cases of shoe contact dermatitis from dimethyl fumarate were officially registered, March 2009. Thirty three women and four children were studied. Twenty eight adult patients developed a delayed sensitization demonstrated by a positive patch testing to DMF = 0, 1% in petrolatum, 12 showed initially irritant contact dermatitis. Five adult patients and 4 children suffered as unique manifestation acute immediate irritant contact dermatitis and non immunological contact urticaria. Cross reactivity with other fumaric acid esters and acrylates was observed. At least twenty different shoe brands were involved. The chemical analysis from the available shoes showed the presence of DMF.

Conclusion: DMF in shoes cause severe contact dermatitis. Although European preventive measures have been recently developed global preventive measures are necessary.

Emergent and Unusual Allergens in Cosmetics: A Review of the Literature

David Pascoe, Department of Dermatology, University of North Carolina-Chapel Hill, Chapel Hill, NC, U.S.A., Linda Moreau, Division of Dermatology, McGill University Health Centre, Royal Victoria Hospital, Montréal, Québec, Canada, Denis Sasseville, Division of Dermatology, McGill University Health Centre, Royal Victoria Hospital, Montréal, Québec, Canada

Allergic contact dermatitis to cosmetics is a common problem that is occasionally caused by new or rare allergens. When a patient has a positive patch test to a cosmetic product but to none of the common or commercially available allergens, it is important to further patch test this patient to the ingredients of the product. Thorough testing with the breakdown of ingredients, usually obtained through cooperation with the manufacturer, often allows identification of the culprit allergen in the cosmetic product. In this presentation, we discuss emerging or rare allergens discovered by this method, including nail lacquer and lipstick allergens, copolymers, shellac, alkylglucosides, glycols, protein derivatives, idebenone and octocrylene.

The authors would like to thank the American Contact Dermatitis Society for the support of this research through a Mentorship Award.

Explantation of Amplatzer Atrial Septal Occluder Devices in Four Patients with Nickel Allergy: a Case Series

Douglas L Powell, M.D.(1), Craig Selzman, M.D.(2), Andrew Michaels, M.D.(3)
University of Utah, Salt Lake City, Utah, USA

(1) Department of Dermatology, (2) Department of Cardiology, (3) Department of Cardiothoracic Surgery

Amplatzer atrial septal occluder devices are commonly utilized in patients to percutaneously occlude atrial septal defects and patent foramen ovals. The composition of the device's nitinol backbone is 55% nickel and 45% titanium. Scattered case reports are arising in which patients are developing symptoms from these internal implants suggestive of an allergic response.

We present a series of four patients with apparent allergic reactions to their implanted Amplatzer device, thus requiring removal of them. While the devices are originally placed via percutaneous techniques, surgical explantation is required to have them removed. We present the symptoms of our four cases prior to removal as well as the improvement of symptoms after explantation. One of the patients was presented previously at the ACDS meeting in 2008. We also present a review of the literature.

Nickel is not a new allergen; however, reactions to such devices place it as an emerging presentation.

Glove Allergy in Health Care Workers in the Latex-Safe Era

James S. Taylor MD, Lauren Cao, MS and Apra Sood MD, Cleveland Clinic, Cleveland, OH

BACKGROUND: Rubber gloves are one of the most frequent causes of occupational contact dermatitis (ACD) in health care workers.

OBSERVATIONS: We describe 23 patients seen over 2 years with ACD to rubber glove accelerators some with disseminated dermatitis. Three had concomitant Ig-E mediated natural rubber latex (NRL) allergy. Sixteen were health care workers from the Cleveland Clinic whose dermatitis was temporally related to switching to latex-safe gloves, mainly from one supplier. Each had positive patch tests to 1 or more rubber accelerators- primarily carbamates, thiurams and diphenylguanidine (DPG). Chemical analysis of 6 glove samples by the National Institute for Occupational Safety and Health identified mercaptobenzothiazole (MBT) in 4 samples and zinc diethyldithiocarbamate (ZDEC) in 1. There were discordances between patch test results to glove chemicals vs. glove swatches vs. published information on glove chemical composition used during production vs. that detected on chemical analysis. Although these factors may complicate the search for culprit and alternative gloves, and two classes of alternative gloves are no longer available (polyurethane and block polymers), dermatitis cleared in each of the 9

patients with follow-up data and for whom alternative gloves were provided based on published information of glove composition.

CONCLUSIONS: ACD to synthetic rubber gloves still occurs even with latex-safe products. More knowledge on glove chemicals present to which the skin is exposed during use, is necessary to prevent and treat ACD.

Hand Function in Workers with Hand Dermatitis

D Linn Holness, Elaine Harniman, Joel DeKoven, Sandy Skotnicki Grant, Dorcas Beaton, Rosemary Nixon, Sharon Switzer McIntyre, University of Toronto and St Michael's Hospital, Toronto, Canada, Skin and Cancer Foundation, Melbourne, Australia.

Work-related hand dermatitis may result in functional impairment. The purpose of this study was to describe the impairment and functional limitations associated with hand dermatitis using a variety of survey tools and objective measurements.

The study was approved by the hospital Research Ethics Board. Sixty-three workers with hand dermatitis were enrolled and assessed. Assessment included completion of the Dermatology Life Quality Index, Quick Disabilities of the Arm, Shoulder and Hand, Work Instability Sore, Work Limitations Questionnaire and SF-36. Physical examination included fist, tuck and abduction of the fingers, opposition of the thumb, grip strength and sensation.

Mean age was 42, 44% were female and mean duration of dermatitis was 4 years. Thirty-five per cent had lost time off work in the past year. Seventy-two per cent experienced a moderately to extremely large impact on dermatitis-related quality of life. Forty-eight per cent had moderate to high risk of work instability and work productivity was decreased in 31%. On physical examination of the hand, less than 5 subjects had limitation of fist and/or finger abduction, 50% had limitation of tuck and 23% had limitation of thumb opposition. Eighty-two per cent had impairment in grip strength. Forty nine percent reported numbness.

The results of this initial descriptive study suggest that a broader range of assessment methods may be appropriate for workers with hand dermatitis. Some combination of these measures may provide an alternate way of assessing impairment than those currently used such as the AMA Guide to Impairment and Disability.

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Lyral Stability in Petrolatum

Carsten Hamann¹, Dathan Hamann¹, Erik Zlmeron², Maguns Bruze²

¹Calvin College, Grand Rapids, Michigan

²Lund University, Malmö University Hospital, Malmö, Sweden

Lyral is a common additive in perfumes, lotions, and other beauty products; it is one of the primary allergens in Fragrance Mix II of the European Standard Series. Because some dermatologists prepare their patch tests up to a week in advance or order custom patch tests prepared by outside labs, patch tests may experience prolonged exposure to temperatures above storage recommendations, and contact to open air. Beginning in January of 2009 we analyzed the volatility of Lyral suspended in petrolatum and

applied to a patch test chamber, mimicking possible conditions a patch test could be subjected to before testing. Our lab prepared standardized 5% Lyrall in petrolatum. This standard was applied to both IQ Chambers, and Finn Chambers, with Finn Chamber covers. Patch tests preparations were stored at 5, 25, and 35 °C. The concentration of Lyrall was measured using HPLC every hour for 8 hours and at intervals up to 9 days. After 9 days, results showed that the concentration of Lyrall fell 30% when stored at 35 °C, 10% when stored at 25 °C and less than 5% when stored at 5 °C. There was no significant difference between the IQ chamber and Finn Chamber with covers. This suggests high temperatures may compromise the original concentration of Lyrall in petrolatum; however, Lyrall is more stable than other fragrance compounds previously studied in our labs.

Patch testing with methyl dibromo glutaronitrile (MDBGN): Are positive reactions allergic?

Srimanasi Javvaji and Donald V. Belsito, MD, U Missouri, Kansas City, Kansas City, MO

Methods: Retrospective analysis of 1753 patients tested to MDBGN and compared to published data from the NACDG.

Results: Between 1998 and 2002, the NACDG tested 10,694 patients with 2.0% MDBGN/ phenoxyethanol (PE) [0.4% MDBGN] and 0.4% MDBGN. 631 (5.9%) had positive reactions to 2.0% MDBGN/PE and 335 (3.1%) had positive reactions to 0.4% MDGN. The NACDG tested 1% PE to assess whether differences in reactivity were due to allergy to PE. Reactions to PE did not account for the differences seen. A significant difference exists between 2.0% MDBGN/PE and 0.4% MDBGN with respect to number of positive reactions ($P < 0.0001$), which cannot be accounted for by allergic reactions to PE. Similar results were seen among our patients when comparing responses to 2% MDBGN/PE and 0.4% MDBGN.

Of the 1753 patients we tested to any concentration of MDBGN, 4.0% had positive reactions, of which 1.2% were 2+/3+ and 2.8% were 1+ reactions. Among patients with 2+/3+ reactions, 9.5% had definite relevance and 28.6% had probable relevance. Among patients with 1+ reactions, only 2% had definite relevance and 6.1% had probable relevance ($p < 0.001$ vs 2+/3+ reactions).

Conclusions: Our analyses lead us to suspect that a number of reactions to 2% MDBGN/PE are falsely positive, underscoring the importance of careful interpretation of $\leq 1+$ reactions and use testing to determine true allergy to products containing MDBGN.

Contact Dermatitis from Hydrocortisone Creams Versus Ointments in Patients With Positive Tixocortol Pivalate Patch Tests

Daniel W. Shaw¹ and Howard I. Maibach²

¹Division of Dermatology, University of California, San Diego

²Department of Dermatology, University of California, San Francisco

Background: Tixocortol pivalate is used to screen for contact dermatitis from hydrocortisone.

Objective: To determine clinical relevance of positive tixocortol pivalate patch tests (1% or 0.1% in petrolatum) in patients without a history of worsening dermatitis from topical hydrocortisone.

Method: Antecubital right-versus-left repeat open application testing / provocative use testing (ROAT/PUT) of variable duration was performed with several brands of hydrocortisone 1% creams and

ointments. In some patients, retroauricular or preauricular testing was performed. The creams and ointments did not contain vehicle ingredients to which the patient was known to be allergic. In some patients, patch testing with hydrocortisone 1% creams and ointments was also performed.

Results: ROAT/PUT was positive in 14 of 18 patients (78%) with hydrocortisone cream and in 5 of 15 (33%) with hydrocortisone ointment. In each case, the reaction occurred more quickly from the cream. Certain brands of hydrocortisone creams usually gave positive patch test results while others did not. The hydrocortisone ointments always gave negative patch test results.

Conclusions: Clinical relevance was demonstrated in most patients with a positive tixocortol pivalate patch test, even in the absence of a positive history. Contact dermatitis developed more quickly from the tested hydrocortisone creams than from the ointments.

Inconsistencies in Sensitizer Notations for Common Occupational Contact Allergens in the 2001-06 North American Contact Dermatitis Group Canadian Data

V.H.Arrandale¹, G.M. Liss¹, S.M.Tarlo^{1,2}, M.Pratt⁴, D.Sasseville⁵, I.Kudla³ and D.L.Holness^{1,3}

¹University of Toronto, Canada; ²Toronto Western Hospital, Toronto, Canada; ³St Michael's Hospital, Toronto, Canada; ⁴University of Ottawa, Ottawa, Canada and ⁵McGill University, Montreal, Canada.

Introduction: Occupational hygienists rely on available reference material when making decisions on workplace exposures. Previous research has highlighted issues in the assignment of skin notations. This study reports on the inconsistent assignment of sensitizer notations for common occupational contact allergens (OCAs).

Methods: Common OCAs were identified from Canadian North American Contact Dermatitis Group data (2001-06) using allergen specific response and work-related variables. Common OCAs were cross-referenced with three sources of occupational hygiene (OH) information: ACGIH TLV Handbook, NIOSH Pocketbook and NLM Haz-Map database and the presence or absence of a skin sensitizer notation was recorded.

Results: The ten most common OCAs were identified from the data: epoxy resin, thiuram, carba mix, nickel sulphate, cobalt chloride, potassium dichromate, glyceryl thioglycolate, p-phenylenediamine, formaldehyde and glutaraldehyde. For epoxy resin both the resin and the hardeners were cross referenced in the OH materials. All three sources agreed that epoxy hardeners and glutaraldehyde were sensitizers; in all other cases there was disagreement. The NLM Haz-Map database was the only source to identify all of the OCAs as skin sensitizers. The NIOSH Pocket Guide listed three as skin sensitizers. The ACGIH TLV Handbook does not differentiate between skin and respiratory sensitizers and listed three OCAs as sensitizers.

Conclusions: Agents that are contact sensitizers are not necessarily recognized as sensitizers in the context of workplace exposures. The information available to the practicing occupational hygienist is contradictory and may lead to uncontrolled and potentially hazardous workplace exposures. Efforts to improve the consistency in these notations is needed.

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The influence of loss of function mutations in the filaggrin gene on the recovery rate and the job continuation in patients with occupational hand eczema

L. Landeck¹, L. Khrenova¹, S. Kezic², S.M. John¹

¹Department of Dermatology, Environmental Medicine and Health Theory, University of Osnabrueck, Germany

²Coronel Institute of Occupational Health, Academic Medical Centre, University of Amsterdam, Netherlands

The goal of our prospective cohort study was to investigate the influence of *FLG null alleles* with special regard to the percentage of those who recovered and were able to return to their same occupation in patients who were hospitalized at our clinic for treatment of occupational CID of the hands. After obtaining approval by the ethics committee, a cohort of 197 patients was genotyped for *FLG* null alleles R501X and 2282del4 and followed-up for one year after discharge.

Our study was comprised of 93 (47.2%) atopic individuals (AI) and 104 non atopic individuals (NAI). Overall, 24 patients showed a mutation in the *FLG* alleles R501X or 2284del4 (14 AI and 10 NAI). Results revealed that 25.4% of all discharged patients could not return to their occupations. In carriers of the *FLG* null allele, the risk of abandoning their profession was significantly increased (OR 2.9, $p=.014$). The prevalence of moderate and severe skin symptoms was higher in patients with *FLG* null allele 2282del4 compared to non carriers (47.1% vs. 21.4%, $p=.032$). In contrast, no significant difference was observed with regard to the recovery rate and job continuation when comparing AI and NAI ($p=.43$), nor when contrasting the combination of atopy and filaggrin mutations with the differences of *FLG* alone ($p=.69$).

In conclusion, patients suffering from hand eczema and having *FLG* mutations are more resistant to therapeutic approaches. Thus, early stage identification of those may result in increased emphasis to these patients of the importance of adherence to specific therapeutic interventions.

Healthy Skin @ Work : the 2010 European Campaign for the Prevention of Occupational Contact Dermatitis

Swen Malte John

Dept. of Dermatology; Osnabrueck University, Germany

Occupational contact dermatitis (OCD) is the leading cause of work related health problems, representing up to 25% of all occupational diseases in some countries. OCD account for 90 % of all work related health problems in the age group of 15-25 in Germany. It is estimated that OCD cause financial losses exceeding 5 billion – p.a. in the EU and 1 billion dollars in the US due to medical treatment, sick leave and loss of productivity, particularly among small and medium sized enterprises (SME). For affected individuals, the chronic course of OCD may result in job loss and unemployment. For SME there is increasing pressure, in this time of recession, to improve their competitiveness by reducing such costs.

Established scientific data demonstrate the outstanding effectiveness of OCD-prevention in some countries. Dermatologists by their specific knowledge and competence - in cooperation with other disciplines - can save patients health and jobs, and thus reduce costs for tax-payers and insurance systems. Thus, the EADV-euro-prevention campaign healthy skin @work starts a co-ordinated scientific effort for the benefit of the individual and society as a whole in 2010. The campaign seeks to raise public and political awareness to OCD and its prevention. The scientific progress achieved in this field, including workers education, should be made available to every citizen and be disseminated to all high risk work places.

Increasing access to patch testing by implementing physician extenders

Matthew J. Zirwas, MD, and Sarah G. Otto, CNP

The Ohio State University Contact and Occupational Dermatitis Center, Columbus, OH

Background

A survey of ACDS members conducted in 2008 revealed that on average patients waited 6.3 months for an appointment to be patch tested by an ACDS member.

Objective

Determining if adding a physician extender improved access to patch testing without compromising patient satisfaction.

Methods

A nurse practitioner was added to the Ohio State Contact and Occupational Dermatitis Center in mid-2009. Comparison of wait time and number of patients seen prior to and after adding a nurse practitioner at The Ohio State University Contact and Occupational Dermatitis Center. Also, an analysis of patient satisfaction surveys completed by patients seen in the contact dermatitis center after implementing a nurse practitioner.

Results

Increased access to patch testing was achieved by decreasing the wait time to 3 months from 6 months and increasing the number of patients able to be patch tested from 12 to 20 each week. Data on patient satisfaction is still being collected and will be reported at the ACDS meeting.

Conclusion

Adding a physician extender to a patch testing practice can increase access to patch testing. We will discuss approaches to identifying, educating, and integrating physician extenders into a patch testing clinic. We will also discuss patient satisfaction with the physician extender.

POSTER ABSTRACTS

Contact Sensitization to 2-Methyl-4-Isothiazolin-3-One (MI) in Finland - A Multicentre Study

Leena Ackermann¹, Kristiina Aalto-Korte², Kristiina Alanko², Riitta Jolanki², Antti Lauerma², Kaija Lammentausta³, Jussi Liippo³, Taina Hasan⁴, Riitta Riekkilä⁵, Arja Laukkanen⁶, Anna-Maija Vuorela⁷, Tapio Rantanen⁸.

¹ Helsinki University Central Hospital, Skin and Allergy Hospital, Helsinki, ² Finnish Institute of Occupational Health, Helsinki, Department of Dermatology, ³ Turku University Hospital, Turku, Department of Dermatology, ⁴ Tampere University Hospital, Tampere, Department of Dermatology, ⁵ Oulu University Hospital, Oulu, Department of Dermatology, ⁶ Kuopio University Hospital, Kuopio, Department of Dermatology, ⁷ Mehiläinen Ympyrätalo Medical Centre, Helsinki, ⁸ Päijät-Häme Central Hospital, Lahti, Department of Dermatology, Finland.

Background: Preservatives are the second most common cause of contact allergy from cosmetics. A new preservative containing only methylisothiazolinone (MI) and not methylchloroisothiazolinone (MCI) has recently been approved in the European Union for use in cosmetics and also products such as paint and glue. MCI has been classified as a strong and MI as a weak sensitizer.

Objective: The frequency of positive reactions to MI in patch tests was studied at 8 Finnish dermatological clinics over a period of 3 years (2006-2008).

Methods: MI was added to the Finnish baseline series in two concentrations; 0.1 % (1000 ppm) and 0.03 % (300 ppm). During 2008, patients with positive reactions to MI were asked to enter a repeated open application test (ROAT).

Results: 1.4 % of the patients tested had allergic reactions to 0.1 % and 0.6 % to the lower concentration 0.03%. 66 % of the MI positive were also positive for MCI/MI. 35 patients agreed to perform the use test and 12 of these were positive (35 %).

Conclusions: Our data show that also MI used alone holds a potential for inducing contact allergy in patients already sensitized to MCI/MI. Whether this preservative is safe to use in cosmetics needs careful monitoring.

Henna Tattoo Flare from Systemic Para-Phenylenediamine Cross-Reaction Exposure

Authors: Miriam Dumandan, MD & Lillian Lopez- Villafuerte, MD, FPDS
Jose R. Reyes Memorial Medical Center, Manila, Philippines

Objective: To determine possible cross-reactions in a patient with a positive patch test result to para-phenylenediamine.

We are presented with a case of a 27-year old male orthopedic surgeon who, 8 weeks prior to consult, had a temporary henna tattoo applied on his upper back. This is the 4th time that he had henna tattoo applied. The first was on 2002, followed by 2006 and 2008 with no adverse reactions noted during henna applications. Two weeks after application of henna tattoo, he developed multiple erythematous papules

coalescing into plaques overlying the henna tattoo on his upper back. Patch test to para-phenylenediamine revealed a strong positive reaction.

Further investigation revealed that the patient had exposure to sunscreens containing PABA, lozenges and thermoplastic hardeners two weeks prior to flare-up. He also experiences occasional mild, non-specific pruritus especially when he perspires. Additional patch test with para-phenylenediamine cross-reactants revealed positive results with azo dyes. It is important to do a thorough history to help us in detecting possible cross-reactants that may cause contact dermatitis.

We would like to acknowledge Dr. Magnus Bruze, University of Malmo, Sweden for his insights into the case and for some of the allergens tested.

The Hazards of Moist Toilet Paper: Allergy to the Preservative MCI/MI

Kevin Gardner, BS- visiting medical student, Mayo Clinic College of Medicine, Rochester, Minnesota; fourth year medical student of Arizona College of Osteopathic Medicine
Mark Davis, MD- Department of Dermatology, Mayo Clinic, Rochester, Minnesota
Donna Richardson, RN- Department of Dermatology, Mayo Clinic, Rochester, Minnesota
Mark Pittelkow, MD- Department of Dermatology, Mayo Clinic, Rochester, Minnesota

Methylchloroisothiazolinone/methylisothiazolinone (MCI/MI), a common preservative that is an ingredient in some brands of moist toilet paper (baby wipes, moist towelettes), has been reported to be a cause of allergic contact dermatitis (ACD). However, few cases have been reported in the United States. Here, we report the cases of 4 adult patients seen at our institution during a 6-month period with severe perianal and perineal ACD. With patch testing, allergy to MCI/MI was identified; all patients had been using moist toilet paper. With avoidance of the moist toilet paper, the dermatitis resolved. This study highlights that MCI/MI in moist toilet paper can be a cause of perianal and perineal ACD.

Parthenium Dermatitis Presenting as Erythroderma.

Gupta S. Walia RLS.

Department of Dermatology, MM Medical College Mullana Ambala India.

Objectives- Patch testing in patients presenting with erythroderma and history of parthenium exposure.

Material and Methods- Patients presenting with erythroderma without known preexisting cause except ACD and had history of parthenium exposure were patch tested. Patch testing was done with Indian Standard series of Patch test which was approved by Contact and Occupational dermatoses forum of India, marketed by Systopic pharma India, containing 29 allergens including parthenium. Patch test was done after control of erythrodermic phase and withdrawal of systemic steroids. Consent from patients and approval from ethical Committee of the institute was taken.

Results- Total Patients-8(all males, age 44-62years).

Occupation- all farmers.

History of atopy-none.

Duration of erythroderma-1-4 months.

Skin biopsy- changes of chronic dermatitis in all patients.

Patch test positivity- 7/8(87%).

Six were strongly positive for parthenium and one for potassium dichromate and cobalt chloride. Patient showing positive for potassium dichromate and cobalt chloride had exposure to cement work off and on. Clinical relevance of positivity was seen in 6/8(75%).Patch test reaction as per ICDRG criteria varied from 2+ to 3+ on day 4.

Conclusions- Parthenium dermatitis in India is on the rise, especially in farmers because of frequent exposure. However, erythrodermic presentation in the same population is not so common. To conclude, remission in such cases is possible provided there is high suspicion and confirmation by patch test and exposure to same is avoided in future.

Patch Testing in Hand Eczema.

Gupta Sanjeev, Walia RLS.

Department of Dermatology, MM Medical College Mullana Ambala India

Objectives- To study clinical profile and patch test results in cases of Hand Eczema.

Material and Methods- Seventy one adult patients presenting with Hand eczema with/without feet involvement who had a suspicion of ACD were patch tested with Indian Standard series of Patch test containing 29 allergens (approved by Contact and Occupational dermatoses of India marketed by Systopic pharma India). Project was approved by ethical Committee of the institute.

Results- Total Patients- 71(53 males, 18 females).

Age- 26-53 years (mean 35).

Eczema type- Hyperkeratotic 36.6%, fissured 24%, pompholyx 17%, vesicular and acral type 11.2% each.

There were Masons 24%, farmers 12.6%, students 11.2%, housewives 11.2%, painters 11.2%, electricians 11.2%, plumbers 8.4%, clerks 7% and tailors 2.8%.

History of atopy-26%.

Patch test positivity-62%.

Allergens- chromate 44%, cobalt chloride 35%, nickel 26%, formaldehyde 17%, colophony 17%, mercaptomix 17%, formaldehyde 16%, black rubber 16%, thiuram mix 8%, mercaptobenzothiazole 8%, PPD 6% and parthenium 2.8%.

Clinical relevance of Patch test positivity- 44%.

Conclusions- Hand eczema is descriptive diagnosis of varied etiology. Contact sensitives may present as different types of hand eczema pattern. Endogenous types of hand eczema may be flared up by contact allergens. So, it becomes necessary to know the offending allergen by patch test as contact sensitivities are on rise because of different additives added in day to day objects. Avoidance of offending allergen may provide long lasting remission.

Serum aeroallergens of allergic skin diseases in Beijing, China

Chuan Ma, Xue-rong Chen, Lin-feng Li

Department of Dermatology, Peking University Third Hospital, Beijing, China

Background: House dust, mite mix, mold mix, ragweed, mugwort and tree pollen mix are regular invisible aeroallergens. It has been reported that these aeroallergens could induce the exanthema or aggravate the eczematoid lesion. In China, it is very difficult to determine the causes of the most allergic skin diseases.

Aims of the study: We investigated the role of serum aeroallergen-specific IgE in the pathogenesis of allergic skin diseases in the city of Beijing, China.

Methods: The serum specific IgE of house dust, mite mix, mold mix, ragweed, mugwort and tree pollen mix were detected by the IVT ELISA in 148 cases of urticaria, 138 cases of eczema and 49 cases of

atopic dermatitis (AD). It was found that 70.9% patients with urticaria, 79.0% patients with eczema and 77.6% patients with AD had positive reaction to at least one of the aeroallergens which were significantly higher than the positive rate of 13.0% in healthy controls ($P<0.01$). In AD, the patients with atopic diathesis had a higher incidence of positive reaction to aeroallergens than the patients without atopic diathesis (90.3% vs 58.3%, $P<0.05$).

Conclusion: It suggests that the type I allergic reaction to the aeroallergens may play an important role in the pathogenesis of urticaria, eczema and AD. Patients with atopic diathesis in AD are more sensitive to aeroallergens.

Keeping up with the times: An old foe turned tech savvy

Monica Madray MD, Ronald Grimwood MD.

Scott and White Hospital, Texas A&M University Health Science Center, Temple, TX

Nickel is known as one of the most common culprits in allergic contact dermatitis. The usual presentation is one of an abdominal dermatitis from direct contact with belt buckles or metal on clothing. We present an interesting case of allergic contact dermatitis of the bilateral cheeks of a young woman. Ultimately, this proved to be due to nickel from a cell phone. This case illustrates the need for physicians to realize the important role that technology plays in the lives of our young patients and how that will increasingly influence their dermatologic diagnoses.

Allergic Contact Dermatitis from Bisabolol in Aquaphor Healing Ointment in An Atopic Child with Compositae Allergy.

Catalina Matiz, MD* and Sharon E. Jacob, MD

Division of Pediatric and Adolescent Dermatology, Rady Children's Hospital, University of California, San Diego

*Contact Dermatitis Fellow, Rady Children's Hospital San Diego, University of California, San Diego.

In our pediatric contact dermatitis clinic we identified three atopic patients with a history of intolerance to Aquaphor® healing ointment (AHO). Patch testing revealed contact allergy to compositae and sesquiterpene lactones (SQL), and two with negative patch testing to lanolin. Bisabolol was suspected as a potential culprit and subsequent patients with reported intolerance to AHO were tested to investigate this suspicion. Contact allergy to bisabolol was detected.

Publications on Contact Dermatitis in Russia: Decreasing Interest of Medical Community

Matveev NV, Russian State Medical University, Moscow, Russia

Contact dermatitis (CD) is a very common condition which generally can be easily diagnosed. It explains a large number of publications on CD in many countries (29630 citations were found in PubMed by keyword contact dermatitis). Though Russia is a very large country with a large number of dermatologists, we could not find many publications on CD originated from Russia. Search expression

contact dermatitis + Russia provided only 102 PubMed citations. Only 16 articles listed in PubMed were published in post-Soviet period, other were published before 1992.

The search system of Central Scientific Medical Library in Moscow listed only 51 publications on CD, including 3 foreign books and 9 texts of dissertations. About a half of the found articles were also published in Soviet times (before 1992). No publications were found on the use of Allertest, the only patch-test system commercially available in Russia nowadays.

Our findings demonstrated low interest of medical community in Russia toward the problems of CD during last two decades. Therefore, one may expect that a large number of Russian patients with CD is not properly diagnosed and cannot receive proper help.

Allergy to Topical Antibiotics

Meltem ONDER,MD; Esra ADISEN ,MD
Gazi University Medical Faculty Dermatology Ankara-TURKIYE

Topical antibiotics are the most common causes of allergic contact dermatitis (ACD). Herein we report patients presenting with ACD to topical antimicrobials. Patient 1 underwent reduction mammoplasty followed by prophylactic application of Terramycin ointment® that contains 30 mg oxytetracycline, 10,000 units of polymyxin B sulfate, white petrolatum, and liquid petrolatum. After the surgery, she developed an eczematous reaction on the application areas. Patient 2 and 3 applied Furacin® %0.2 (nitrofurazone and as a vehicle polyethylene glycol) to their feet for a localized skin infection and presented with a severe eczematous reaction on the exposed areas.

There is another important point, topical antibiotics are also used lubrication of suture material, which was possibly the source of first antibiotic contact in our patient 1 since the eczematous lesions were present along the sutures raising the question of this possibility. The prevalence of hypersensitivity reactions due to nitrofurazone has been shown to decrease in the last years, possibly due to a decline of the prescription rate because of its sensitizing capacity. Actually, nitrofurazone is nearly abandoned in European countries and in the United States. Nevertheless, since it is inexpensive and has a broad-spectrum antibacterial activity, it is one of the most preferred topical antibiotic among surgeons in some countries as well as in Turkey. Because of the frequency of ACD, topical use of antibiotics should be restricted to real indications and avoided in immediate postoperative wound care.

Eczematous Eruption after Endovascular Stent

Pires MC, Xavier TTA, Ventura LP
Dermatology Department, Padre Bento Hospital, Guarulhos, São Paulo, Brazil

Here we report on a 68 years old female patient with an eczematous generalized eruption on month after implantation of an endovascular stent in her right leg (tibial artery). The patient presented with disseminated excoriated lesions, erythema and crusts over the trunk, arms, thighs and legs. The reaction was treated with oral prednisone with partial remission. The patch test was positive (++) to chromium dichromate. The stent composition includes titanium and nickel, but we asked to the producer about others components and they informed that the material also had chromium 100 ppm. Then, the stent was removed and replaced for a vein graft. The lesions disappeared totally and the prednisone was stopped. Comments the allergic reactions to endoprosthesis are uncommon and reported in association with orthopaedic, dental, endovascular and other implanted devices. Hypersensitivity reactions to the biomaterials used in endovascular prosthesis are among the infrequent reactions that may lead to local or systemic complications following cardiovascular therapeutic interventions. Nickel, titanium and gold are

the most common allergens. Here we described a generalized reaction after stent implantation probably caused by chromium.

Allergic Contact Dermatitis to Multiple (Meth)Acrylates in a Press Helper

Michele Ramien, Joel G. DeKoven

Division of Dermatology, Sunnybrook Health Sciences Centre, Department of Medicine, University of Toronto, Ontario, Canada.

Ultraviolet light-cured acrylates were introduced into the printing industry over thirty years ago. Since that time, many cases of contact allergy to the component acrylate monomers used in this process have been reported. Most reports describe patients who patch-tested positive to between 2 and 4 acrylates.

We present a case of a press helper with persistent hand/forearm dermatitis who developed positive reactions to 11 (meth)acrylates on patch-testing and review the existing case reports and case series of allergic contact dermatitis to (meth)acrylates in the printing industry. In addition, relevant aspects of cross-reactivity between (meth)acrylates is discussed.

Though contact allergy to multiple printing acrylates has been reported in the past, our patient exhibited a far greater number of concomitant positive reactions to (meth)acrylate monomers. The co-occurrence of these numerous positive reactions may be an example of new cross-reactivity patterns or may portend a shift in use patterns of UV acrylates in the printing industry. Our case highlights the need for a methodology to assess cross-sensitization between acrylates.

Frequency of Occupational Contact Dermatitis in An Ambulatory of Dermatologic Allergy

Ida Duarte, Anita Rotter, Rosana Lazzarini

Clinic of Dermatology, Santa Casa de Misericórdia de São Paulo Brazil.

BACKGROUND-Occupational contact dermatitis(OCD) corresponds to 80% of cases of skin diseases related to work.

OBJECTIVES-To determine: the frequency of OCD in patients of an ambulatory of allergy not specific for occupational disease; the profile of these patients according to age, gender, color, occupational activity, atopic history, duration and localization of dermatosis; the types of contact dermatitis diagnosed; the main allergens and to compare the frequency of the main allergens in patients with and without OCD.

METHODS-During the period of 2003 to 2006, 630 patients were submitted to the patch test in the allergy sector of an assistencial service. The patients who were diagnosed with OCD were selected.RESULTS Sixty-nine of 630 patients were diagnosed with OCD. The mean age was 44.5 years. Forty-eight (70%) have hand involvement. The most prevalent jobs were: 27 (39%) of cleaning and 23 (33%) of construction industry. The allergic contact dermatitis (ACD) corresponded to 48 (70%) cases, followed by irritant contact dermatitis in 21 (30%). The main allergens were potassium dichromate 28 (41%), nickel sulfate 16 (23%) and carba-mix 16 (23%).

CONCLUSION OCD was present in 10.9% patients of an ambulatory of allergy not specific for occupational disease.The most affected age group was the most productive of the population. ACD corresponded to 48 cases, probably influenced by the long duration of dermatosis. Metal and rubber chemicals were the commonest allergens.

Does Skin Colour Affect the Patch Test Readings?

Maria Scherrer, Carla Viotti
Hospital das Clinicas UFMG Brazil

Background: The patch test reading score is based on visual assessment. As it is more difficult to observe erythema in dark colored skin, we may ask if doubtful and + reaction would be less detectable in these patients.

Objectives: 1:Determine the number of patch test reactions according to its scoring

2:Compare the results between the 2 groups.

Methods: 181 patients patch tested to the Brazilian standard tray were separated in 2 groups (Group 1 with Fitzpatrick's skin phototype - FSP I to IV and Group 2 with FSP V and VI).The reactions, detected at 96 hour(+, ++, +++, doubtful and negative) were included in analysis as variables. The qui-square test was performed to verify if there was association with the variables within the groups and the Fisher's exact test to compare the two groups in relation to them.

Results: 75 patients were Group 1, and 106 Group 2, 55% female and 45% male.The mean age was 45 and the standard deviation 14,65. 29 results were negative which meant, 84% of positive tests and 16% of negative. 665 reactions were detected, being 99 doubtful, 389 +, 155 ++, 22 +++. No associations among these variables in Group 1 or 2 were observed (p-value >.0,05) No significant differences between the 2 groups were detected (p-value> 0,05). 8 cases of excited skin syndrome (ESS) were observed in 6 patients of Group 1 and 2 in Group 2.

Conclusions: Based on this study the skin colour does not affect the perception of the patch test readings, which is supported by literature data.Further studies are warranted to examine a possible linking of the ESS to skin phototype due to the number of cases.

Photo Patch Test : A Case Series from Brazil

Maria Scherrer, Sergio Valabas
Hospital das Clinicas UFMG Brazil

Objectives: To study a case series of suspected photo allergic contact dermatitis (PACD) patients who underwent photo patch testing and detect the following aspects:

- demographic data,
- site of involvement,
- the photo allergens identified
- the final diagnosis
- other associated conditions

Method: A retrospective study of 19 patients photo patch tested from 2007 to 2009.All patients were also patch tested to the Brazilian standard tray.

Results: 9 patients were male and 10 female; 12 had Fitzpatrick's phototype (FPT) I to IV and 7 FPT V and VI, their mean age was 52 years. The evolution time of the eruption varied from 2 months to 20

years.(mean time of 4,2 years). Atopy was present in 5 patients (26,3%). Face was the most affected site (17 patients), followed by neck (11 patients), dorsal forearms (10 patients), v of the neck (9 patients).The photo patch test allergens detected were perfume mix 1 (4 cases- 21%), Myroxylon Pereira (4 cases- 21%), potassium dichromate (3 cases- 15,8%), promethazine (3 cases-15,8%), oxibenzone (2 cases-10,5%), chlorpromazine, chlorhexidine, butylmetoxybenzoylactane (1 case each- 5,3%).and Anthelios(patient's sunscreen which contains mexoryl-1 case) The PACD final diagnosis was made in 12 patients (63%) Associated and concomitant conditions were allergic contact dermatitis (ACD) (1 case) and atopic dermatitis (1 case) .One patient presented ACD to sesquiterpene lactone, diagnosed by the photo patch test and the other patients without PACD had the following: polymorphic light eruption (PMLE) (2 cases), PMLE associated with ACD , with photoirritant contact dermatitis and with chronic actinic dermatitis (1 case each). One patient had other condition.

Conclusion: Although small this study showed that fragrances are important source in PACD in Brazil.

Patch testing: Common Contact Sensitizers in New Delhi, India : A Study of 620 Patients

Vinod Kumar Sharma and Gomathy Sethuraman

Department of Dermatology, All India Institute of Medical Sciences, New Delhi, India
aiimsvks@yahoo.com

Objective : To study common sensitizers in patients attending contact dermatitis clinic in a tertiary care setting at New Delhi, India

Material and Methods : Patch testing was carried out in years 2005-9 with Indian standard series on upper back and patches were removed after 48 hours and readings were carried out on day 2 and day 4 and patients that were positive at 96 hours were considered patch test positive.

Results : 620 patients (388 male, 232 female) aged between 13 and 80 years with suspected allergic contact dermatitis (ACD) were patch tested with the Indian standard series. The study group included housewives (25%), farmers (21%), office workers (10%), factory workers (7.5%), construction workers (7.4%), teachers (4.5%) and students (4%). The different clinical diagnoses / patterns of contact dermatitis were airborne contact dermatitis in 224 (36.12%), chronic actinic dermatitis in 62 (10%), cement dermatitis in 42 (6.8%) and hair dye dermatitis in 26 (4.1%). 393 (63.4%) patients were positive to one or more allergen. The most frequent sensitizers were Parthenium hysterophorus in 216 (34.8%) patients, potassium dichromate 56 (9%), nickel sulphate 53 (8.5%), p-phenylenediamine 47 (7.6%) and fragrance mix in 36 (5.9%) patients.

Conclusion : Parthenium hysterophorus is still the commonest contact sensitizer followed by potassium dichromate and nickel sulphate.

Are Mattress Protectors the New Spandex???

Michael Sheehan, MD; Nico Mousdicas, MD
Indiana University Department of Dermatology

In the 1960s reports of contact dermatitis resulting from a new synthetic polyurethane fiber (Spandex) emerged. Controversy surrounded these reports with respect to both the exact nature of the dermatitis and the precise allergens within the material. We present a case in which we wrestle with these same problems nearly half a century later this time the synthetic polymer being a polyurethane mattress protector.

A 62 yo male presented to our patch test clinic with a 3 year history of pruritic dermatitis on the back, lateral upper, and lower extremities. Expanded patch testing revealed only macular erythema to mercaptobenzothiazole and carba mix. The patient had purchased a mattress protector (ProtectABed) around the time his rash started. Empiric removal of the mattress protector resulted in complete resolution of the dermatitis.

Mattresses and bedding products are rapidly evolving to improve the consumer's quality of sleep. With this expanding utilization of technology comes the inevitable nightly exposure to new chemicals. It is our experience that it is very difficult to determine the exact materials utilized in production of these products. The manufacturer of our patient's product could only provide us with the fact that it is a synthetic polyurethane material.

To our knowledge there are no reports on contact dermatitis relating to mattresses and bedding. As was the case with Spandex, time and thorough investigation will decipher the exact role bedding plays in cutaneous disease.

Clothing Contact Dermatitis in a Private Dermatology/Patch Testing Clinic in the Philippines

Pamela Joanne M. Huang MD¹, Vermén M. Verallo-Rowell MD²,
1.Skin and Cancer Foundation, Inc.; 2. VMV Skin Research Center, Philippines

Background: Data is needed on contact dermatitis to clothing in the tropics.

Objectives: With positive patch test results, characterize clinical presentations, and determine prevalence of allergens.

Methods: Fifty suspected clothing contact dermatitis patients, were patch tested with Chemotechnique's 65-allergen NACDG Extended Series and 33-allergen Textile Colors and Finish Series, using NACDG guidelines, with macular erythema (+/-) considered as possibly relevant.

Results: All suspect cases had relevant positive patch tests. Previous, concomitant diagnoses; morphology, extent of lesions varied, but hyperpigmentation at clothing sites was seen in all. Most reactions were weak (1+), few strong (2+) or extreme (3+). Highest 27/50 (54%) were to dyes: 13 (26%) to Disperse Blue Mix 106/124; 9 (18%) to Basic Red 46; 6(12%) to Reactive Red 238. Only 2(5%) reacted to formaldehyde resins. Thirty-five (70%) had questionable reactions to allergens in the textile series. Allergens in the extended series related to clothing, components, laundry materials were: fragrance mix (8) balsam of peru (5); nickel sulfate (7), cobalt chloride (8), potassium dichromate (6); ethylenediamine (4); black rubber mix (4); imidazolidinyl urea (4); and at least 3 to: colophony, formaldehyde, 4-tert-butylphenol, diazolidinyl urea, DMDM hydantoin, 2-bromo-2-nitropropane, chloroxyleneol, and ylang ylang.

Conclusion: Hyperpigmentation at clothing sites is a strong indicator of clothing contact dermatitis. The most common allergen in this study is Disperse Blue Mix 106/124

Contact Allergy to Hairdresser Series: Analysis Of 2000-2008 Period at Mayo Clinic

Zhaoyu Wang, BS¹, Donna Richardson, RN², Mark Davis, MD²
University of Minnesota Medical School, Minneapolis, MN¹, Department of Dermatology, Mayo Clinic, Rochester, Minnesota²

Background: Contact dermatitis caused by hairdresser chemicals is common.

Objective: We sought to identify the current spectrum of hairdresser allergens for allergic contact dermatitis (ACD).

Patients/Methods: 210 patients who underwent patch testing for suspected hairdresser allergen induced ACD at Mayo Clinic from January 1, 2000 to December 31, 2008 were studied. A custom-built hairdresser allergen series, including 34 metal compounds were analyzed.

Results: Higher incidences of sensitization to nickel sulfate (23.8%), p-phenylenediamine (23.8%), cobalt chloride (14.6%), ammonium persulfate (14.4%), 4-aminoazobenzene (13.4%), balsam of Peru (10.2%), glyceryl thioglycolate (10.0%), quaternium 15 (9.7%), pyrogallol (9.1%), and disperse orange #3 (8.1%) were observed. The most common sites for hairdresser chemical induced ACD were scalp, face, and hand. Younger population (less than 30 years old) had significant higher allergic prevalence for nickel sulfate, ammonium persulfate, glyceryl thioglycolate 1%, disperse orange #3, and 2, 5-diaminotoluene sulfate when compared with patients over 60 years old. The overall allergic rate observed in elder population was decreased; whereas balsam of Peru induced ACD in elderly was increased.

Conclusion: Testing with our hairdresser series yielded more positive outcomes that otherwise may be missed by standard series since some ingredients of hairdressing products are not contained in standard series. Patch testing is an efficient tool in evaluating patients suspected of hairdresser chemical induced ACD.

Patch Testing to Personal Care Product Allergens in a Standard Series and a Supplemental Cosmetic Series: Results from the Mayo Clinic Contact Dermatitis Group

David A. Wetter, MD¹, James A. Yiannias, MD³, Amy V. Prakash, MD¹, Mark D. P. Davis, MD¹, Sara A. Farmer, BA², Rokea A. el-Azhary, MD¹
Department of Dermatology¹ and the Division of Biomedical Informatics and Biostatistics², Mayo Clinic, Rochester, and the Department of Dermatology³, Mayo Clinic, Scottsdale, Arizona.

Objective: Report results of patch testing to skin care product allergens contained in a standard series and a supplemental cosmetic series and compare efficacy of this combined series in detecting positive reactions to personal care product allergens with the efficacy of various standard screening series.

Methods: Positive reaction rates were tabulated for patients who underwent patch testing to both standard and cosmetic series allergens at Mayo Clinic between 2000 and 2007. Data were compared

with skin care allergens detected on standard screening series, including the thin-layer rapid use epicutaneous (TRUE) test.

Results: Of 945 patch-tested patients, 68.4% had at least 1 positive reaction and 47.3% had at least 2 positive reactions. 49.4% of patients reacted to at least 1 preservative; 31.2% reacted to at least 1 fragrance/botanical additive. Compared with use of our standard series and cosmetic series, use of the TRUE test would have missed 22.5% of patients with preservative allergy, 11.3% with fragrance/botanical allergy, and 17.3% with vehicle allergy.

Conclusion: Standard patch test screening series miss a substantial number of patients with personal care product allergy.

Mark Your Calendar!

**American Contact Dermatitis Society
22nd Annual Meeting**

February 3, 2011
New Orleans