

2007 Annual Meeting of the American Contact Dermatitis Society February 1, 2007 Washington DC

Abstracts in order of presentation

Schedule of Events

Morning Sessions

- 8:35 **AM Scientific Sessions**
Douglas Powell, MD – Chair, ACDS Annual Meeting Committee
- 8:40 **Allergic Contact Dermatitis to Medical Adhesive Bandages in Patients Who Report Having a Reaction to Medical Bandages***
Travis J Widman, MD
- 8:50 **An Analysis of Paraben Sensitivity in Patients Treated with Imiquimod: A Preliminary Report***
Jennifer Chwalek, MD
- 9:00 **Adalimumab Induced Dermatitis and Immediate Type I Hypersensitivity Reaction***
Michael Paltiel,
- 9:10 **Oral Mucositis: A Case Series and Review of the Literature from the Perspective Of A Referral Patch Test Clinic***
Leslie Castelo-Soccio, MD, PhD
- 9:20 **Skin Reactions Following Use of N95 Facial Masks***
Jeff C H Donovan, MD PhD
- 9:30 **Eyelid Dermatitis: A Case Report of Contact Allergy to 3-Dimethylaminopropylamine And Review Of The Literature***
Eleanor Knopp, MD
- 9:40 **Utility of the North American Contact Dermatitis Group Standard 65 Allergen Series Alone in the Evaluation of Allergic Contact Dermatitis: A Series of 794 Patients***
Shaline Rao, BA, MD(2007)
- 9:50 **Is Patch Testing Useful Before and After Implantation of Orthopedic Devices and Pacemakers? A Retrospective Review of Our Experience at Mayo Clinic***
Kurtis Bryon Reed, BS
- 10:00 **Chronic Actinic Dermatitis (CAD) at the Ottawa Clinic***
Renee Beach, MD

Epidemiology Sessions - Moderated by Howard I. Maibach, MD

- 10:40 **Pediatric Contact Dermatitis: Results from the Ottawa Hospital Patch Testing Clinic 1996-2006***
Marcia Hogeling, MD

- 10:47 **Pediatric Contact Dermatitis, The North American Contact Dermatitis Group (Nacdg) Experience 2001-2004***
Daniel Eric McGinley-Smith, MD
- 10:54 **Contact Dermatitis of the Hand: Cross-Sectional Analyses of NACDG Data, 1994-2004**
Rehana Ahmed, PhD
- 11:01 **Patch tests in patients without history of allergic contact dermatitis.**
Ida Duarte, MD
- 11:08 **Shoe Allergens: Review of the Literature and Retrospective Analysis of Cross-Sectional Data from the North American Contact Dermatitis Group 2001-2004**
Sarah Elizabeth Schram, MD

Occupational Dermatology Symposium

- 11:15 **Occupational Airborn Contact Dermatitis**
An Goossens, MD
- 1:40 **Occupational Dermatoses In Healthcare Workers Evaluated For Suspected Allergic Contact Dermatitis**
Tina Suneja, MD
- 11:50 **Occupational Allergic Contact Dermatitis to Platinum, Palladium, and Gold**
Kalman L. Watsky, MD
- 12:00 **Contact Dermatitis in The Working Child, an International Issue in North America.**
Mari Paz Castanedo, MD

Afternoon Scientific Sessions

- 2:30 **What ACDS Members Asked For...New Functionality of the Contact Allergen Replacement Database and More**
James A. Yiannias, MD
- 2:45 **Contact Allergy to Epoxy Resin**
Antoine Amado, MD
- 2:55 **15 Years Experience with a Contact Allergen Bank in Denmark**
Klaus Ejner Andersen, MD PhD
- 3:05 **Is There Any Point in Reading Patch Tests Beyond 5 Days?**
Ketaki Bhate, BSc (hons) Paediatrics
- 3:45 **Clinical-in Use Study to Evaluate the Skin Tolerance of T-Shirts Treated with Bounce-Free Dryer Added Fabric Conditioner (DAFC)***
Patricia G Engasser, MD
- 3:55 **Repeated Open Application Testing with Methylisothiazolinone: Multicentre Study within the EECDRG**
Birgitta Gruvberger, MSc PhD
- 4:05 **Governmental Regulations of Contact Allergens in the USA and European Union**
Daniel J Hogan, MD
- 4:15 **Patch Testing with Computerized Charting**
Christen M Mowad, MD

- 4:25 **Acute Papulovesicular Contact Dermatitis Simulating a Drug Eruption Requiring Prednisone for Patch Testing**
Titilayo Olupona, MD
- 4:35 **Chemical Investigation of Disperse Dyes in Patch Test Preparations**
Kristina Morgardt Ryberg, Consultant
- 4:45 **Unexpected Patch Test Reactions**
Maria Antonieta Scherrer, MD

Oral Presentations

ALLERGIC CONTACT DERMATITIS TO MEDICAL ADHESIVE BANDAGES IN PATIENTS WHO REPORT HAVING A REACTION TO MEDICAL BANDAGES

Travis J. Widman, MD, Holly Oostman, BS, Frances J. Storrs, MD; Oregon Health and Science University, Portland, Oregon

Medical adhesive bandages are extensively used in both inpatient and outpatient medicine in the US. However, few reports exist in the literature describing allergic contact dermatitis (ACD) to medical adhesive bandages. These reports do not adequately correspond to the frequency that patients report having an "allergy" to medical adhesive bandages. Therefore our objective was to determine if there is a chemical present in medical adhesive bandages that causes ACD in people who identify themselves as having an "allergy" to medical adhesive bandages. 24 patients were enrolled in the study, which was approved by the University's investigational review board. They underwent patch testing to our standard trays (104 chemicals) and a customized adhesive tray (54 chemicals and 10 tape/bandage pieces). The latter tray was based on previously reported chemicals that have caused ACD in adhesive bandages, information obtained from adhesive bandage manufacturers, and the US Patent Office. We were able to definitively identify a causative allergen in four patients: two to mastisol and two to neomycin, however there were no positive reactions from the adhesive chemicals or tape/bandage pieces that corresponded to a product that the patients reported reacting to. Therefore we feel that the perceived reactions are not secondary to ACD, but instead to an irritant contact dermatitis.

AN ANALYSIS OF PARABEN SENSITIVITY IN PATIENTS TREATED WITH IMIQUIMOD: A PRELIMINARY REPORT

Jennifer Chwalek MD^a, Valerie Harvey MD^b, Anne Rothman MD^a, Regina Anderson MD^a, Anthony Gaspari MD^a (^a Department of Dermatology, University of Maryland, Baltimore, Maryland, ^b Department of Dermatology, Eastern Virginia Medical School)

Parabens are the most commonly used preservatives in cosmetic products and topical medications. They are considered to be ideal preservatives because they are inexpensive, non-irritating, non-toxic, have a long-shelf life, and a broad spectrum of anti-microbial activity. Allergic reactions to parabens develop

infrequently. The North American Contact Dermatitis Group has reported an incidence of paraben allergy to be 1.7% of 4,096 tested patients.

Methylparaben and propylparaben are the major preservatives in imiquimod cream. Imiquimod cream is an immune response modifier with anti-viral and anti-tumor activity. It is currently approved for the treatment of human papilloma virus infections, actinic keratoses, and superficial basal cell carcinomas. Local adverse reactions to imiquimod include erythema, edema, erosions, crusting and tenderness, which are believed to arise from local irritation.

We sought to determine whether patients treated with imiquimod cream have an increased sensitivity to parabens compared to the reported rate of paraben sensitivity of 1-4%. Our research protocol was approved by the Institutional Review Board for Human Subject Research at the University of Maryland Baltimore. Patients recruited from the university clinic, VA medical center, and community dermatology practices were patch tested to imiquimod vehicle, parabens mix, paraben containing products (Keri lotion, Eucerin lotion), and petrolatum (control). The patches were removed at 48 hours and read and when possible a delayed reading was done between 72-96 hours. The results of our study to date show no increased risk of sensitivity to parabens in patients treated with imiquimod.

This study is supported by a grant from the American Contact Dermatitis Society.

ADALIMUMAB INDUCED DERMATITIS AND IMMEDIATE TYPE I HYPERSENSITIVITY REACTION

Michael Paltiel M.D.¹, Laura M. Gober M.D.*, Sarbjit S. Saini M.D.*, April Deng M.D. PhD,¹ and Anthony A. Gaspari M.D.¹

University of Maryland Department of Dermatology,¹ Johns Hopkins Asthma and Allergy Center,* Baltimore MD.

Abstract

Adalimumab is a monoclonal human IgG1 antibody to tumor necrosis factor alpha (TNF- α) that is currently approved for the treatment of rheumatoid and psoriatic arthritis. An adverse reaction, a development of dermatitis at the site other than the injection site, has been reported in a number of patients receiving anti-TNF therapy. We report two patients who developed spongiotic dermatitis after initiating adalimumab therapy for arthritis. Skin patch testing with adalimumab was negative in both patients. However, one of the two patients developed an immediate type I hypersensitivity reaction at the injection site. Basophil histamine release, performed on peripheral blood leukocytes isolated from both patients, showed significant release of histamine after stimulation with adalimumab in one

patient. Next, histamine release was induced when basophils from a nonatopic donor with negative basophil histamine release on prior challenge with adalimumab underwent lactic acid stripping and sensitization with serum from the patient with significant basophil histamine release to adalimumab. This study suggests that an IgE-mediated process may play a role in the development of dermatitis in patients receiving adalimumab therapy.

ORAL MUCOSITIS: A CASE SERIES AND REVIEW OF THE LITERATURE FROM THE PERSPECTIVE OF A REFERRAL PATCH TEST CLINIC

Castelo-Soccio, Leslie¹, Militello, Giuseppe², Crawford, Glen³, Brod, Bruce⁴, Sollecito, Thomas⁵ Depts of Dermatology^{1,2,3,4} and Oral Medicine⁵, University of Pennsylvania, Philadelphia, PA

The utility of patch testing patients with lip and intraoral disorders is not well established. While some literature supports an association with certain allergens such as flavoring agents and dental metals, robust evidence concerning the relationship to other allergens is lacking. To begin to understand allergic manifestations around and in the mouth, we conducted a chart review of patients referred for evaluation of intraoral and lip reactions in the Departments of Dermatology and Oral Medicine at the University of Pennsylvania over a period of 5 years (2001-2006). Sixty-one patients meeting criteria were patch tested. Overall, 51% of patients tested positive on extended patch testing. Among patients with positive reactions, 80% had relevant reactions based on exposure history, clinician evaluation and, when possible, histopathology or assessment of clinical improvement after avoidance. Dental material was attributed as a cause in 71% of patients, while lip balm and cosmetics accounted for another 25%. The most common final diagnoses were allergic contact dermatitis, cheilitis and oral lichen planus. In patients diagnosed with contact dermatitis, 81% had a positive reaction and the most common allergens were metal, acrylates and fragrance. In patients diagnosed with cheilitis, 14% had a positive reaction and fragrance was the most common allergen. An in depth discussion of the above results and a review of the pertinent literature will be presented.

SKIN REACTIONS FOLLOWING USE OF N95 FACIAL MASKS

Jeff Donovan, Irena Kudla, D Linn Holness, Sandy Skotnicki-Grant
James R. Nethercott Occupational Health Clinic, University of Toronto

Background: The Severe Acute Respiratory Syndrome (SARS) epidemic in Toronto 2002 required prolonged use of N95 face masks by many health care workers.

Objective: We reviewed all clinic referrals regarding possible N95 mask allergy during and following the SARS epidemic.

Results: The vast majority of the 13 referrals worked in intensive care settings. The average number of years employed was 16.8, and no patient had experienced prior mask reaction. The facial eruption was described as urticarial in 3 patients, and dermatitic in 5 patients. In 2 patients, mask use led to acute respiratory complaints without skin manifestations. Prick testing to the mask in 3 patients and patch testing in 6 patients was negative. Patch testing using the North American Contact Dermatitis Series was performed in 8 patients. Two patients shared in common positive patch test reactions to quaternium-15 and ethylene urea melamine formaldehyde, one of whom also tested positive to formaldehyde. The N95 mask from the latter patient was analyzed for free formaldehyde and found to be positive.

Conclusion: Although majority of N95 mask reactions represented irritant contact dermatitis, 3 mask reactions fit clinically with contact urticaria and 2 reactions represented allergic contact dermatitis. The liberation of free formaldehyde during the manufacturing of non-woven polypropylene N95 masks may contribute to allergic contact dermatitis in formaldehyde sensitive patients.

EYELID DERMATITIS: A CASE REPORT OF CONTACT ALLERGY TO 3-DIMETHYLAMINOPROPYLAMINE AND REVIEW OF THE LITERATURE

Eleanor Knopp, MD and Kalman Watsky, MD. Yale University, Dept. of Dermatology, New Haven, CT, USA

We report the case of a 42 year-old woman who presented with severe, intractable eyelid dermatitis despite discontinuation of makeup, treatment with topical steroids, calcineurin inhibitors, and three courses of systemic steroids. Patch testing revealed allergy to 3-dimethylaminopropylamine (DMAPA). DMAPA is an important etiology of allergic contact dermatitis of the eyelids and face, but one that is easy to miss even with expanded-series patch testing. We also review the most common causative allergens in eyelid dermatitis cited in the literature over the past decade.

DMAPA is a reagent used in the formation of cocamidopropyl betaine (CAPB), a ubiquitous additive to liquid soaps, shampoos, makeup removers, and contact lens solutions given its utility as a viscosity builder and surfactant. Beginning in the 1980s there are reports of allergy to CAPB in the literature. Ultimately, a majority of patch testing studies have shown that clinical allergy to CAPB-containing products actually reflects allergy to contaminant DMAPA in most cases. Amidoamine, another intermediate in the formation of CAPB, may also be implicated through a proposed mechanism of conversion of amidoamine to DMAPA in the skin.

In patch testing for eyelid and facial dermatitis it is crucial to test with DMAPA directly, not just with CAPB: unlike commercial-grade CAPB, the CAPB

available in patch testing kits is ultrapure and does not contain contaminant DMAPA.

UTILITY OF A STANDARD ALLERGEN SERIES ALONE IN THE EVALUATION OF ALLERGIC CONTACT DERMATITIS: A CONTINUING PROSPECTIVE SERIES OF 1916 PATIENTS

David E. Cohen, MD, MPH¹, Shaline Rao¹, Louisa M. Tift¹, and Ronald R. Brancaccio¹, MD

¹Ronald O. Perelman Department of Dermatology
New York University School of Medicine

Abstract

Background: Patch testing is the gold standard for diagnosing allergic contact dermatitis. Past studies have not completely addressed the validity and usefulness of the allergens of the T.R.U.E. Test.

Objective: The purpose of this study is to independently examine the utility of using the allergens of the T.R.U.E. Test as exclusive screening methods in the diagnosis of contact allergy.

Methods: The charts of 1122 patients and a supplemental series of 794 patients recommended for patch testing using North American Contact Dermatitis Group screening series with or without additional supplemental allergens were reviewed for positive patch tests results. The study groups were analyzed to determine whether positive reactions were to allergens of the T.R.U.E. Test or the supplementary group. Positive reactors were distinguished on the basis of the clinical relevance of their reactions for the first series of patients only. This relevance analysis was discontinued in the second series of patients.

Results: Part I (1994-1998) Of 1122 patients patch tested between July 1, 1994 and December 31, 1998, 818 (72.9%) had a positive result, and 563 (50.2%) had clinically relevant reactions. Only 226 (27.6%) patients with positive patch tests reacted to allergens exclusively present in the T.R.U.E. Test, and only 125 (15.3%) patients with positive results had clinically relevant reactions detected using allergens tested in the T.R.U.E. Test alone.

Part II (2004-2006) Of the 794 patients patch tested between July 1, 2004 and July 1, 2006, 590 (74.31%) had a positive result. Only 129 (21.86%) patients tested were positive to a T.R.U.E. Test allergen only, and 322 (54.58%) of the total positive reactors were positive to at least one T.R.U.E. Test allergen.

Conclusion: The allergens of the T.R.U.E. Test are of limited utility as a screening method when used exclusively in the evaluation of patients with allergic contact dermatitis. The pooled data reveals that the overall rate of positive responses to patch testing is 73.5%, 25.21% of the 1912 patients were positive to T.R.U.E. Test allergens only, 19.9% were positive to supplementary allergens only, 54.7%

of the total patients were positive to at least one supplemental and one T.R.U.E. Test allergen, and 79.97%

IS PATCH TESTING USEFUL BEFORE AND AFTER IMPLANTATION OF ORTHOPEDIC DEVICES AND PACEMAKERS? A RETROSPECTIVE REVIEW OF OUR EXPERIENCE AT MAYO CLINIC

Mark Davis MD, Kurtis Reed BS, Donna Richardson RN, Krystal Nakamura MD.
Mayo Clinic, Rochester, Minnesota

Background. Patch testing may be requested prior to or following implantation of metal devices such as orthopedic prostheses or pacemakers. However, there is limited data demonstrating that this is predictive or reflective of device failure.

Methods. A retrospective chart review of patients who underwent patch testing to the components of their device.

Results. 22 patients had patch testing prior to implantation. The indication in all cases was a history of metal allergy. 5 (22.7%) were positive to a component of the proposed device; this influenced the choice of implanted device in all cases.

22 patients were referred for patch testing after implantation of the device. Indications were as follows: unexplained rash at device site (13), chronic joint pain (8), and joint loosening (1). 1 (4.5%) with dermatitis was positive to components of the device- this did not improve after joint replacement.

Conclusion. When patch testing was performed before implantation of a metal device, the results influenced the choice of device to be used; whether or not this is necessary is not possible to determine from this study.

Patch testing performed after implantation of a device is of unclear value: when performed for unexplained rash the yield is low (1/13); when performed in the setting of chronic joint pain and joint loosening, none were positive.

CHRONIC ACTINIC DERMATITIS (CAD) AT THE OTTAWA CLINIC

Renée Beach, BSc, Marcia Hogeling, Melanie Pratt
Division of Dermatology, University of Ottawa, Ottawa, Canada

BACKGROUND

Chronic actinic dermatitis (CAD) is an unusual entity consisting of pruritic, photo-distributed eczematous papules and plaques, photosensitivity, contact allergy, and specific histopathology. It is a chronic condition more prevalent during spring and summer months following sun-exposure. We present 5 cases of CAD seen in the Ottawa patch-test clinic in the past 5 years.

OBJECTIVE

1. Examine the clinical and histological features and types of photosensitivity consistent with a diagnosis of CAD.

2. Determine airborne sources of photoallergy and how it relates to CAD.
3. Identify the occupational groups associated with development of CAD.
4. Discuss plant allergen contact and its role in CAD.
5. Discuss management options for patients with CAD.

METHODS

Phototesting was done on all patients and their minimal erythema dose (MED) to UVA and UVB was determined. Subsequently, all patients were tested to the North American Contact Dermatitis Group (NACDG) Standard Screening Series, the NACDG Plant Series, and photopatch tested to the NACDG photoseries. Readings occurred at 48 and 96 hours.

RESULTS

All patients were found to have a marked photo allergy to either UVA radiation, UVB radiation, or both. In addition, they had a spectrum of reactivity to various allergens in the NACDG standard series, the NACDG Plant Series, and the NACDG photoseries. Biopsy results were consistent with an eczematous pathology.

PEDIATRIC CONTACT DERMATITIS: RESULTS FROM THE OTTAWA HOSPITAL PATCH TESTING CLINIC 1996-2006

Marcia Hogeling MD, Melanie Pratt MD

Division of Dermatology, University of Ottawa, Ottawa, Ontario, Canada

Objectives: To determine the frequency and relevance of positive patch testing in children. To identify the most common allergens in children at our clinic.

Methods:

Retrospective chart review of 97 children ages 4 -18 years who were patch tested at the Ottawa Hospital patch testing clinic between 1996-2006. The children were patch tested to the North American Contact Dermatitis Group standard series, special series if indicated, and to their own products.

Results:

68% of children had at least one positive patch test. The female to male ratio was 61%:31%, consistent with other pediatric studies. The most common allergens were nickel sulfate 37%, cobalt 19%, fragrance mix 10%, colophony 9%, neomycin 9%, lanolin 6%, formaldehyde 6% and quaternium 15, 6%. Positive patch tests to both cobalt and nickel occurred in 69% of patients. Out of the patients tested with atopic dermatitis (AD), 73% had at least one positive patch test, compared to 65% of children without AD.

Conclusions:

The frequency of positive allergens in children differs from the NACDG data. Nickel sulfate was the most common allergen, frequently co reacting with cobalt chloride but not with potassium dichromate. Relevant allergens were detected when special extra series were utilized.

Children with atopic dermatitis had a higher incidence of positive patch tests than those without AD.

PEDIATRIC CONTACT DERMATITIS, THE NORTH AMERICAN CONTACT DERMATITIS GROUP (NACDG) EXPERIENCE 2001-2004

Kathryn A. Zug MD*, Daniel E. McGinley-Smith MD, Donald V. Belsito MD, Vincent A. DeLeo MD, Joseph F. Fowler Jr. MD, C.G. Howard I. Maibach MD, James G. Marks MD Jr. MD, Toby Mathias MD, Melanie Pratt MD, Robert L. Rietschel MD, Denis Sasseville MD, Frances J. Storrs MD, James S. Taylor MD, Erin M. Warshaw MD

*Dartmouth-Hitchcock Medical Center, Lebanon, NH

Objectives: Determine frequency of positive and relevant patch tests in children; examine if and how key data differ in children and adults.

Methods: Retrospective analysis of NACDG patch tested patients from 2001-2004 (n = 10,061) analyzed using SPSS. Study subset: 18 and younger (n=391).

Results: 64.2% of children had at least one positive reaction. There was no statistically significant difference in frequency of relevant positive patch test reactions in children (51.2%) vs. adults (54.1%). Most common positives in children: nickel (28.3%), cobalt (17.8%), thimerosal (15.38%), neomycin (8.0%), gold (7.8%), and fragrance (5.1%). Most common *relevant* positives in children: nickel (26.0%), cobalt (12.4%), neomycin (4.4%), fragrance (4.1%), gold (3.6%), quaternium-15 (3.6%). Of top 10 allergens, children were more likely positive to nickel, cobalt, thimerosal, lanolin; adults more likely positive to neomycin, fragrance, balsam of peru, quaternium-15. Top 10 allergens in children did not correlate with their age except lanolin. 34.0% of children (vs 11.2% of adults) with a relevant positive also had an atopic eczema history. Children with an eczema history were not more likely to have a relevant positive than children without. Most common irritant reactions in children: gold, cobalt, nickel. 15.1% and 39.5% of children had relevant allergens not included on NACDG and T.R.U.E. TEST® series respectively.

Conclusions:

Adults and children in this select group are equally likely to have allergic contact dermatitis; frequency of relevant allergens differs.

CONTACT DERMATITIS OF THE HAND CROSS-SECTIONAL ANALYSES OF NACDG DATA. 1994-2004.

Erin M. Warshaw, MD, MS¹ and Rehana L Ahmed, PhD, Donald V Belsito, MD. Vincent A. DeLeo, MD, Joseph F. Fowler, Jr., MD, Howard I. Maibach, MD. James G. Marks, Jr., MD, C.G. Toby Mathias, MD, Melanie D. Pratt, MD. Robert L. Rietschel, MD, Denis Sasseville, MD, Frances J. Storrs, MD.

James S. Taylor, MD, Kathryn A. Zug, MD.

¹ University of Minnesota and Veterans Affairs Medical Center, Minneapolis, MN, USA.

Background: The purpose of this study was to evaluate allergens and relevant irritants associated with contact dermatitis of the hand using North American Contact Dermatitis Group (NACDG) data.

Methods: 22,025 patients were patch tested by the NACDG between 1994-2004 with 50-65 allergens. Analyses included: demographics, final diagnoses, and allergen frequencies. Further analyses with the 2000-2004 data evaluated occupation and allergen/irritant sources.

Results: 6,935 patients had hand coded as a site of involvement: 959 had ACD as the only diagnosis. In these 959 patients, the twelve most frequent relevant allergens were: quaternium-15 (16.5%), formaldehyde (13.0%), nickel sulfate (12.2%), fragrance mix (11.3%), thiuram mix (10.2%), balsam of Peru (9.6%), carba mix (7.8%), neomycin sulfate (7.7%), bacitracin (7.4%), methyldibromoglutaronitrile/phenoxyethanol 2.0% (7.4%), cobalt chloride (6.5%), and methyldibromoglutaronitrile/phenoxyethanol 2.5% (6.3%). Rubber allergens were most commonly associated with occupation. One-third of patients with hand ACD also had identifiable relevant irritants.

Conclusion: In NACDG patients with hand ACD, the most common allergens included preservatives, metals, fragrances, topical antibiotics, and rubber additives.

PATCH TESTS IN PATIENTS WITHOUT HISTORY OF ALLERGIC CONTACT DERMATITIS.

Ida Duarte, Ohalis Luanda Fernanda Nunez, Rutsnei Schmitz Jr.
Clinic of Dermatology from Santa Casa de São Paulo, Brazil - School of Medicine and Hospital

Summary:

Objectives: 1) to verify the frequency of negative tests in population without history of Allergic Contact Dermatitis (ACD); 2) to compare the results with a group of patients with history of ACD tested with the same battery of tests.

Methods: 100 patients without ACD had been selected. It was applied the standard battery of contact tests, composed by 30 elements.

Results: 84 patients had all negative tests and 16 had positive tests (one positive test per patient). In 14 positive tests it was tried to establish a relevance of the positive tests with a previous ACD to the current illness. Among the 2580 testes realized in 86 patients with no history of ACD, 2578 tests were negative(99%). Comparing the number of positive and negative tests obtained in a group of 967

patients with ACD history submitted with the same battery, the differences were statically significant($p=0.000$).

Conclusions: In the research of the etiology of the contact dermatitis, positive tests without relation with the current history of ACD, can not be false-positive, but positive for previous history of ACD. Contact tests are more positive in population with ACD. Thus, it can be considered that negative tests move away the diagnosis from ACD.

SHOE ALLERGENS: REVIEW OF THE LITERATURE AND RETROSPECTIVE ANALYSIS OF CROSS-SECTIONAL DATA FROM THE NORTH AMERICAN CONTACT DERMATITIS GROUP 2001-2004

Erin M. Warshaw MD, MS*, Sarah E. Schram MD*, Donald V. Belsito MD, Vincent A. DeLeo MD, Joseph F. Fowler, Jr. MD, Howard I. Maibach MD, James G. Marks, Jr. MD, C.G. Toby Mathias MD, Melanie D. Pratt MD, Robert L. Rietschel MD, Denis Sasseville MD, Frances J. Storrs MD, James S. Taylor MD, Kathryn A. Zug MD
*VAMC; Minneapolis, MN.

Background: Chemicals involved in leather tanning, rubber processing, and/or adhesives are the most often cited culprits in footwear dermatitis.

Objectives: 1) Determine the frequency of allergens associated with a shoe source in North American Contact Dermatitis Group (NACDG) patients with footwear allergic contact dermatitis; 2) compare these results to allergen frequencies from other published studies.

Methods: Retrospective analysis of 10,061 patients patch tested by the NACDG between 2001 and 2004.

Results: 109 NACDG patients had ACD of the foot and a shoe source of allergens. In these patients, para-tertiary butylphenol formaldehyde resin (PTBFR), was the most common allergen; accounting for 24.7% of positive patch test results, followed by potassium dichromate (17.5%) and carba mix (11.7%). As a group, rubber chemicals (40.4%) were most frequent, followed by adhesives (32.5%), and leather components (20.1%). In pooled data from published studies, potassium dichromate (31.5%) was most frequent, followed by PTBFR (17.1%), and cobalt chloride (12.9%). NACDG patients were statistically more likely to have a positive patch test to PTBFR and less likely to have a positive patch test to potassium dichromate than patients in pooled data.

Conclusions: In NACDG patients, the most common shoe allergen was PTBFR. As a group, rubber chemicals were most common.

OCCUPATIONAL DERMATOSES IN HEALTHCARE WORKERS EVALUATED FOR SUSPECTED ALLERGIC CONTACT DERMATITIS

Tina Suneja, MD (Denver Dermatology, Denver, CO) and Donald V. Belsito, M.D. (American Dermatology Associates, Shawnee, KS)

Background: Occupational skin diseases, including allergic contact dermatitis (ACD), irritant contact dermatitis (ICD), and allergic contact urticaria (ACU), occur commonly among health-care workers (HCWs).

Purpose: To evaluate the etiology of the various skin diseases afflicting HCWs evaluated for suspicion of ACD and/or ACU, and to identify the most common allergens among HCWs found to have ACD and/or ACU.

Methods: Between 1 July 1994 and 30 June 2006, a total of 1434 patients underwent patch testing. The demographic data and most common allergens for HCWs (n=100) and non-HCWS (n=1334) were compared.

Results: HCWs were statistically more likely than non-HCWS to be female, have hand dermatitis, and have a history of atopy. HCWs were also more likely to be allergic to quaternium-15, thiuram, carba mix, glutaraldehyde, and benzalkonium chloride.

Limitations: This study was retrospective and is subject to the resultant biases of all such investigations. Only patients suspected of having ACD and who underwent patch testing are included in our data base. Thus, not all HCWs presenting for evaluation are included in this report and the incidence rates for ACD and ACU are likely to be higher than that seen in the general HCW population.

Conclusions: Our results underscore the importance of thoroughly evaluating HCWs for ACD and ACU with the use of expanded standard allergen trays and prick testing.

OCCUPATIONAL ALLERGIC CONTACT DERMATITIS TO PLATINUM, PALLADIUM, AND GOLD

Kalman L. Watsky, MD

Section Chief of Dermatology, Hospital of Saint Raphael
Associate Clinical Professor of Dermatology, Yale School of Medicine
330 Orchard Street, Suite 103
New Haven, CT 06511

We report the case of a 35yo female laboratory technician working with precious and other metals who developed a facial eruption that recurred over six months. Initial patch testing showed positive reactions to palladium and gold but negative reactions to nickel, cobalt, mercury, chromate, copper, tin, and aluminum; avoidance led to improvement, but not clearing. She subsequently developed hand dermatitis and suspected platinum as a cause. Further patch testing showed a positive reaction to sodium hexachloroplatinate but a negative reaction to sodium tetrachloroplatinate. Rhodium and iridium were not tested. Avoidance of her allergens has allowed her to remain in her position without further episodes of dermatitis.

Platinum group elements (platinum, palladium, rhodium, and iridium) are known to cause acute hypersensitivity reactions and, less commonly, contact dermatitis. Risk of sensitization is thought to be greatest in the occupational setting, though few cases have been reported. Dental alloys are another important source of exposure. This case illustrates the importance of comprehensive patch testing in cases of occupational contact dermatitis.

CONTACT DERMATITIS IN THE WORKING CHILD, AN INTERNATIONAL ISSUE IN NORTH AMERICA.

Castanedo-Tardan M.P.,* Díaz-Barriga F.⁺, Jacob S.E.**

*Universidad Anáhuac, Escuela de Medicina - Mexico City, Mexico.

⁺Universidad Autónoma de San Luis Potosí, Department of Environmental Toxicology, Risk Assessment and Working Child's Environmental Health -Mexico.

**University of Miami, Department of Dermatology - Miami, FL.

According to the International Labor Office (ILO) the number of working children ages 5 to 17 in the year 2000 was 352 million worldwide. Major sectors incorporating child labor include agriculture (70%) and manufacturing (8%).

The rising migration phenomenon has encouraged poor migrant children into the labor force. The Report on the Youth Labor Force of 2000, indicate that 126,000 14 to 17 year-old were working in U.S. fields per year according to the National Agricultural Workers Survey (NAWS). Furthermore 1.2 billion pounds of pesticides are used annually in U.S. agriculture (i.e. Acefate, carbaryl, diazinon mancozeb).

The manufacturing industry on the Mexican-American border is also identified as a significant source of child labor. Children are exposed to chemicals like leather dust, benzene and p-tert butyl phenols. Job-related injuries in children associated with pesticides use and manufacturing chemicals include irritant and allergic contact dermatitis.

This presentation discusses the hazardous results of child labor and the need for both awareness and elimination.

WHAT ACDS MEMBERS ASKED FOR...NEW FUNCTIONALITY OF THE CONTACT ALLERGEN REPLACEMENT DATABASE AND MORE

James A. Yiannias MD, Mayo Clinic College of Medicine, Scottsdale, Arizona

One of the most challenging aspects regarding the management of allergic contact dermatitis is successful patient education. The following "New for 2007" electronic resources from the ACDS can facilitate this process. (www.contactderm.org)

1. Allergen Avoidance Handouts
 - a. With each issue of *Dermatitis*, a new "patient ready" handout will be published. In addition to being able to access these PDF files via the

journal's web site, the Contact Allergen Replacement Database (CARD) allows for printing of these avoidance handouts, as well as all of those found in *Occupational & Contact Dermatitis* (Marks, Elsner, DeLeo).

2. CARD

- a. Provides skin care product "shopping list" for patients, free of an unlimited number of allergens and their cross reactors
- b. *New User Interface for 2007*
 - i. Customization of cross reactions (E.g., patient with fragrance allergy can be allowed to use botanical containing products.)
 - ii. User prompts for possible cross reactions (E.g., entry of tixocortal pivalate will prompt user to consider exclusion of potential cross reacting corticosteroids in structural groups B and D2.)
 - iii. Option to easily "de-select" make-ups and feminine hygiene products to shorten CARD printouts
 - iv. Ability to email CARD results
 - v. Behind the scenes: robust new Microsoft.net platform, enhanced data entry and quality assurance mechanisms
- c. Coming later in 2007
 - i. One Step creation of updated shopping list for your patient
 - ii. CARD will generate a reusable code, unique to the combination of allergens the user has entered, so that the user can simply enter the code (rather than all the allergens) in order to create an updated shopping list.

CONTACT ALLERGY TO EPOXY RESIN

Antoine Amado, MD, James S. Taylor, MD
Department of Dermatology A-61, Cleveland Clinic Foundation, Cleveland,
OH

Introduction: Epoxy resins (ER) are ubiquitous chemicals of which 75% are based on epichlorhydrin and bisphenol A.

Methods: We retrospectively reviewed our patch test data base registry to identify patients with reactions to ER on the standard patch test tray between 1996-2006. Relevance was defined according to criteria of the North American Contact Dermatitis Group.

Results: Forty-six of 2540 patients were patch test positive to ER and records of 45 were available for review. The average age was 49.5 years and 28 were male. Of the 22 patients with occupationally-related dermatitis, relevance was definite in 1 case, probable in 16, possible in 1, and past in 4. Hands and/or arms were commonly involved. The most common sources of exposure in this group were adhesives and product finishes. Of the 19 non-occupational cases, relevance was definite in 1 case, possible in 4, past in 2, and unknown in 12. Scattered generalized dermatitis, followed by hand involvement was commonly seen in this group. Adhesives, dental products or product finishes were the sources of exposure in 5 patients; exposure was unknown in 12 patients. In 4 cases the occupational association of the dermatitis could not be determined.

Conclusion: In our series, occupational exposure accounted for almost half of the cases. Relevance to current dermatitis was much more likely to occur in the occupational than the non-occupational cases.

15 YEARS EXPERIENCE WITH A CONTACT ALLERGEN BANK IN DENMARK

Klaus E. Andersen, Department of Dermatology, Odense University Hospital,
University of Southern Denmark.

The Allergen Bank was established in 1992, and the concept described in *Acta Dermato-Venereologica* 1996; 76:136-140. The purpose is on request to supply dermatologists in practise with special contact allergens for aimed patch testing of selected contact dermatitis patients, where exposure analysis gives rise to suspicion of contact allergy to substances beyond those present in the Standard Series. The European Standard Series only detects around 75-80% of contact allergies according to published data. Easy access to extra selected patch test materials makes it possible for the dermatologists to make an early diagnosis of special cases of allergic contact dermatitis.

In 2005 a total of 58 Danish dermatologists tested 617 patients with Allergen Bank test material, in all 8651 patches. The dermatologists use pattern of the bank service varies considerably, reflecting what they have available in their clinic of extra allergens beyond the Standard Series, as well as their patient population tested and interest in contact dermatitis. The patch test results are reported and entered into a database. This is a valuable source of information in

relation to quality control and clinical research in the field of allergic contact dermatitis.

During the last 6 years the frequency of positive test reactions to Allergen Bank material varies between 5.2 to 6.2%.

IS THERE ANY POINT IN READING PATCH TESTS BEYOND 5 DAYS?

Bhate K (Imperial College, London, U.K.); Davis MD; Rohlinger A; Farmer S; Richardson D. Departments of Dermatology and Biostatistics, Mayo Clinic, Rochester, Minnesota.

Background: Whether or not it is important to read patch test reactions beyond 5 days is debated. At Mayo Clinic, when patch testing to metal and corticosteroid series, we have insisted on formal late readings (at 7-10 days for corticosteroids, 7 & 14 days for metals); all reactions are interpreted at each visit. We retrospectively looked at the patch tests that became positive after 5.

Objective: To examine which allergens became positive at readings beyond 5 days

Method: Retrospective study of our clinical database containing results from April 2001 ? June 2004, since formal late readings were initiated.

Results: 30,585 individual reactions to 446 allergens in 317 patients were interpreted at both day 5 and > day 7. The additional patch test reading demonstrated late allergic patch test reactions (>1%) to the metal series (35/2880 (1.22%)) , antibiotics (bacitracin 5/231; (2%), neomycin 9/231 (3.9%)); dodecyl gallate (6/81, 7.4%) and other individual allergens; surprisingly low yield from the late readings were noted for the corticosteroid series (3/2590 (0.12%) and Paraphenylenediamine (1 / 229 (0.44%)).

Conclusion: Late patch-test readings (day 7 or beyond) were useful when interpreting reactions to metals and topical antibiotics but in contrast to other literature, was of very low yield in the diagnosis of allergic patch test reactions to other allergens, including corticosteroids and Paraphenylenediamine.

CLINICAL-IN USE STUDY TO EVALUATE THE SKIN TOLERANCE OF T-SHIRTS TREATED WITH BOUNCE-FREE DRYER ADDED FABRIC CONDITIONER (DAFC)*

Mario Green, Ph.D.¹, Patricia Engasser, M.D.,³ Donald Blaney M.D., Ph.D.², Mary Bailey, Ph.D.², Sue Pitts¹, Shaoying Zhou, Ph.D.¹, Ted Adams¹

¹The Procter & Gamble Company, Cincinnati, OH

²North Cliff Consultants, Inc., Cincinnati, OH

³ Adjunct Professor of Dermatology, Stanford University

Objective: To evaluate potential skin effects of T-shirts treated with Bounce-Free DAFC in adults with sensitive skin

Methods: One hundred thirty-five male and female subjects with self-assessed sensitive skin were enrolled during summer in a double-blinded, cross-over designed T-shirt wear test which groups were balanced based on T-shirt size and initial skin grades. Subjects wore T-shirts washed with detergent and dried with or without Bounce-Free DAFC 23 hours per day for 14 days. After a 14-day rest period, subjects switched to the other treated T-shirts for 14 days. Panelists were examined for evidence of skin irritation by a qualified skin grader and dermatologist before and after each 14-day exposure to the test and control T-shirts using a 0-5 point skin irritation scale.

Results: There was no difference in skin irritation between panelists wearing T-shirts dried with or without Bounce-Free DAFC. Both groups experienced minimal skin irritation during the 14-day T-shirt wearing periods.

Conclusion: These results confirm that there is no difference in skin tolerance of T-shirts treated with or without Bounce Free in adults with sensitive skin.

*Conducted in compliance with federal, state and local government regulations, guidelines, and standards, including, but not limited to, Good Clinical Practices.

REPEATED OPEN APPLICATION TESTING WITH METHYLISOTHIAZOLINONE: MULTICENTRE STUDY WITHIN THE EEC DRG

Birgitta Gruvberger¹, Christophe Le Coz², Margarida Gonçalo³, An Goossens⁴, Magnus Bruze¹.

¹Department of Occupational and Environmental Dermatology, Lund University, Malmö University Hospital, Malmö, Sweden, ² Department of Dermatology, Hôpital universitaire de Strasbourg, Strasbourg, France, ³ Clinica de Dermatologia, Hospital da Universidade, Coimbra, Portugal, ⁴ Department of Dermatology, Contact Allergy Unit, University Hospital, K.U. Leuven, Belgium.

Background: The preservative mixture methylchloroisothiazolinone/methylisothiazolinone (MCI/MI) has been used for many years. Since a few years a preservative containing MI only has been introduced on the market.

Objective: To investigate via usage tests (ROAT) the individual clinical relevance in patients testing positively to MCI/MI and/or MI.

Material and Methods: In 15 patients with a positive patch test reaction to at least one of the aqueous test solutions of MCI/MI 100 ppm, MI 1000 ppm, 1500 ppm or 2000 ppm, a repeated open application test (ROAT) with moisturizers with and without MI at 100 ppm was performed twice daily on the upper arms during 2 weeks.

Results: 8 of the 15 (53 %) patients developed a positive ROAT only to the moisturizer with MI ($p < 0.05$); 6 of the 8 patients with positive ROAT tested positively to MCI/MI and 2 tested positively only to MI.

Conclusion. Patients allergic to MCI/MI and/or MI should avoid exposure to MI-containing leave-on products.

GOVERNMENTAL REGULATIONS OF CONTACT ALLERGENS IN THE USA AND EUROPEAN UNION

Daniel J Hogan MD, John Ledet medical student. LSUHSC Shreveport,

The following search sites were used: EUROPA.eu (Gateway to the European Union), Regulations.gov (USA), Organization for Economic Corporation and Development (OECD), The Federal Register (USA), and OVID Medline for these search terms: laws or jurisprudence, regulation or social control/formal, environmental monitoring, maximal allowable concentration, occupational exposure, exposure limits, Threshold Limit Values, skin diseases, contact dermatitis, allergy, hypersensitivity, nickel, FDA, United States Food and Drug Administration, EPA, and United States Environmental Protection Agency. Regulations in the USA most recently focus on FDA regulation of contact allergens for patch testing. The EU has recent regulations based on the opinions of the Scientific Committee on Cosmetic Products and Non-Food Products intended for consumers (SCCNFP). EU regulations include: hexavalent chromate should be <2:10000 in cement; nickel migration point of 0.2mg/cm²/wk for earring posts; the synthetic fragrance 4-(4-hydroxy-4-methylpentyl)-3-cyclohexene carboxaldehyde (Lyrall) should not exceed 0.2% in a finished cosmetic product; methyl dibromo glutaronitrile is safe at the current use of 0.1% and its use should be restricted to rinse-off products; 36 different compounds including Balsam of Peru should not be used as fragrance ingredients and the maximum use concentration of 2% paraphenylenediamine when used as a hair dye. The USA was the first country to require labeling of cosmetic ingredients (excluding fragrance allergens) but currently the EU has more regulations to minimize allergic contact dermatitis particularly for metals and fragrance allergens.

PATCH TESTING WITH COMPUTERIZED CHARTING

Christen M. Mowad MD, Department of Dermatology, Geisinger Medical Center, Danville, PA

Objective

To demonstrate a method for patch testing documentation within a computerized charting system.

Computerized charts are increasingly being used to enhance documentation and efficiency in the office setting. Patch testing presents a unique issue with the computerized charting system. Needing to have the same forms available over several days poses issues to the computer system which typically requests that you close each patient encounter daily. Furthermore, identifying the patch test results that are buried in a computerized list can be difficult. Our patch testing clinic worked with our information technology department to facilitate better documentation of the patch test procedure as it has unique issues that were

department specific. Demonstration of the system used to facilitate this process will be shown. Furthermore, benefits of this system will be discussed including its ability to provide an easy search engine that will facilitate research. The users of this computerized chart feel this charting tool will allow for a more user friendly system that allows for better documentation and easier research capabilities.

Conclusion:

Patch testing presents unique issues when dealing with computerized charting programs. Developing a system to provide accurate, accessible patch testing data enhances the efficiency and research capabilities of the patch testing clinic.

ACUTE PAPULOVESICULAR CONTACT DERMATITIS SIMULATING A DRUG ERUPTION REQUIRING PREDNISONE FOR PATCH TESTING

Titilayo Olupona, MD and Pamela Scheinman, MD

Department of Dermatology, Tufts-New England Medical Center, Boston, MA

Objective: We present a case of a 22 year old woman who developed an acute generalized papulovesicular eruption, beginning on her face and spreading to her trunk and extremities. She was status-post thyroidectomy and had begun levothyroxine 1 month prior to her eruption. Results: A biopsy was consistent with a hypersensitivity reaction, "possibly to drug". She required 2 prednisone tapers and did not clear completely. We therefore maintained her on 10 mg of prednisone during patch testing. Patch testing was performed using a modified North American Contact Dermatitis Group standard series, textile, rubber, hair, cosmetics, and fragrance series (Chemotechnique Diagnostics). Among her reactions included formaldehyde, textile formaldehyde resins, paraphenylenediamine, and methylchloroisothiazolinone/methylisothiazolinone. We found many of her allergens within her cosmetics. Conclusions: Because levothyroxine was a crucial medication for her, we were reluctant to have her stop it before ruling out allergic contact dermatitis as causing her eruption. Given her prominent facial involvement and "hypersensitivity reaction" on biopsy, we felt patch testing was justified. Her eruption was quite refractory to treatment precisely because her allergens were present in many cosmetics and clothing. In the setting of biopsy- proven hypersensitivity reactions, when a drug eruption is considered but not strongly suspected, patch testing can be valuable even in patients requiring low dose prednisone during testing.

CHEMICAL INVESTIGATION OF DISPERSE DYES IN PATCH TEST PREPARATIONS

Kristina Ryberg¹, Birgitta Gruvberger¹, Erik Zimerson¹, Marléne Isaksson¹, Lena Persson¹, Östen Sörensen¹, An Goossens², M Bruze¹.

¹Department of Occupational and Environmental Dermatology, Lund University, Malmö University Hospital, Sweden. ²Department of Dermatology, Contact Allergy Unit, University Hospital, K.U. Leuven, Belgium.

Aim: To investigate 8 disperse dyes (DDs) used for patch testing in our clinic and to compare them to test preparations used at various dermatology departments.
Material and Methods: The investigated DDs were Disperse Blue (DB) 35, 106 and 124, Disperse Yellow (DY) 3, Disperse Orange (DO) 1 and 3, Disperse Red (DR) 1 and 17. From 13 clinics 107 petrolatum preparations representing 4 suppliers were analyzed, using high performance liquid chromatography and thin layer chromatography (TLC) and compared to purified reference dye substances obtained at our laboratory. Concerning DB 35 no reference substance could be identified.

Results: TLC visualised many impurities. For each DD, except DB 35, the mean value of purified dye substance in the preparations labelled to contain 1.0% were: DB 106: 0.30%, DB 124: 0.25%, DY 3: 0.44%, DO 1: 0.40%, DO 3: 0.68%, DR 1: 0.49%, and DR17: 0.35%. DO 3 could not be demonstrated in 4/15 preparations labelled DO 3.

Conclusions: The content of purified dye substance in the test preparations was lower than expected; there were variations between the samples analyzed, also with regard to the number of impurities present. This may have implications for individual prevention and when comparing test results from various centres.

UNEXPECTED PATCH TEST REACTIONS

Maria Antonieta Scherrer- UFMG- Belo Horizonte - Brazil

Skin hyporeactivity may explain false-negative patch tests.

A 41 - year - old healthy bricklayer has presented chronic eczematous lesions on his hands, arms, legs, feet, trunk and face for 7 years. He was patch tested to a standard series showing a doubtful reaction to PPD-mix at 96 hours, and 2 eczematous lesions adjacent to the test site. Three weeks later another test was done with samples of his shoes, dodecil mercaptano, dibutilurea and dietilurea with negative results. Similar lesions showed up again. Eighth weeks later, potassium dichromate was tested alone, showing 3+ reaction and 3 eczematous lesions near the test area. Because of the possibility of metal co-sensitization, two separate patch tests to cobalt and nickel were performed with an eighth - week interval between them. The former was negative, and the latter was 3+ positive. Two or three eczematous lesions showed up adjacent to the test site during each test.

The separate patch tests were based on the fact that if the position of the substances interfere in false-positive reactions, it could also affect the false-negatives.

Furthermore, according to some studies, false-negative results might reflect an impaired or suppressed inflammatory response, or both, on previously irritated sites. As some standard allergens are also irritants, they might influence these results.

This is an example of altered reactivity at the patch test site.

Poster Presentations

Unilateral Hand Dermatitis: A Distinctive Clinical Presentation Of Allergic Contact Dermatitis

Bryan Anderson, MD

The International Fellowship: Creating Envirotxin Awareness in the Americas.

Mari Paz Castanedo Tardan, MD

Hand Dermatitis in Health Care Workers Evaluated Through Two Clinical Assessment Streams

Jeff C H Donovan, MD PhD

Cosmetics and skin care products

Ida Duarte, MD

Allergic Contact Dermatitis to Mafenide Acetate (Sulfamylon™)

Maj. J Scott Henning, DO

Analysis Of Presentation Topics at Recent Meetings of the ACDS and ESCD

Daniel J Hogan, MD

Prevalence of Hand Eczema and Contact Allergy Among Manila-Based Dentists

Faith Balongangey Kishi Generao, MD

Phytophotodermatitis following PUVA and the use of a citrus containing lotion

Jennifer Kwinter, BS

The Angry Back Associated with Patch Testing: Are There Any Predictors?

Anna J Magembe, BA

Acrylic Reactions: Four Years? Experience.

Luciana Molina, MD

Contact Dermatitis from Acrylics in a Histology Laboratory Assistant.

Luciana Molina, MD

Allergic Contact Dermatitis to Rubber Prosthesis

Maximin Sison Navarro, MD

Patch Test Results in Turkish Pediatric Population

Meltem Onder, MD

Vitiligo After Diphencyprone for Alopecia Areata

Mario Cezar Pires, PhD

Utility of a Standard Allergen Series Alone in the Evaluation of Allergic Contact Dermatitis: A Continuing Prospective Series of 1916 Patients

Shaline Rao, BA, MD (2007)

Allergic Contact Cheilitis To BENZOPHENONE-3 In A Lip Balm and Flavoring in Foods

Sarah Elizabeth Schram, MD

PATCH TEST REACTIONS to Topical Anesthetics: Retrospective Analysis of Cross-sectional Data from the North American Contact Dermatitis Group 2001-2004
Sarah Elizabeth Schram, MD

Allergic Contact Dermatitis due to acrylates
Matthew Zirwas, MD

Poster Sessions

UNILATERAL HAND DERMATITIS: A DISTINCTIVE CLINICAL PRESENTATION OF ALLERGIC CONTACT DERMATITIS

BRYAN E. ANDERSON, MD
JAMES G. MARKS, JR. MD, SHARI B. CLARKE, MD

DEPARTMENT OF DERMATOLOGY
PENN STATE UNIVERSITY COLLEGE OF MEDICINE
MILTON S. HERSHEY MEDICAL CENTER, HERSHEY, PA

Allergic contact dermatitis (ACD), the prototype for Type 4 delayed hypersensitivity, occurs in predisposed individuals after contact with a specific allergen which elicits an immune response within 24-72 hours upon re-exposure to the antigen. On an immunologic level, this process is mediated primarily by Th1 and Langerhans cells. Clinically, ACD is characterized by vesicle formation in the acute stages and lichenification in the chronic stages. It has been estimated that at least 3,000 environmental chemicals have the ability to cause allergic contact dermatitis¹, however only a select few are responsible for the majority of ACD cases and patch testing remains the gold standard for confirmation of the diagnosis.

Combined, allergic and irritant contact dermatitis' comprise approximately 10% of all office visits to dermatologists³ and often pose a great treatment challenge for even the most experienced clinician. Allergic contact dermatitis of the hands represents a unique obstacle for physicians as there is considerable disability and financial burden for those affected. We report 2 cases of unilateral allergic contact hand dermatitis, one to Loctite® anaerobic sealant and the other to baby wipes, which is a unique clinical presentation for ACD. It is important that physicians keep ACD in mind when evaluating patients with unilateral hand dermatitis.

THE INTERNATIONAL FELLOWSHIP: CREATING ENVIROTOXIN AWARENESS IN THE AMERICAS.

Castanedo-Tardan M.P.[^], Stechschulte S.* , Jacob S.E. *

[^]Universidad Anáhuac, School of Medicine, Mexico City, Mexico.

*University of Miami, Department of Dermatology and Cutaneous Surgery, Miami, FL.

Envirottoxins are chemicals from the environment that enter the body through breathing, skin absorption, or orally and produce an untoward effect. According to a 1998 EPA report, 93% of the 2,800 synthetic chemicals produced annually lack some basic screening-level health data. Furthermore, the average home contains 62 toxic household chemicals such as phthalates, alkylphenols, parabens, pesticides, polybrominated diphenyl ethers (PBDEs), organotins, perfluorinated chemicals, formaldehyde, benzene, and toluene. Common sources of indoor pollutants include paints, solvents, cleansers, disinfectants, air fresheners, automotive products, carpets, gas, tobacco, building materials and furnishings, dry cleaned clothes and personal care products such as shampoos, lotions and cosmetics.

Many of the chemicals including the heavy metals, lead and mercury, are associated with a rise in the incidence of environmental allergen-induced medical conditions. Because environmental threat control has transboundary impacts, this poster highlights the important role of international groups in developing awareness, education and advocacy of the health impact of envirottoxins exposure. Such featured groups include the North American Contact Dermatitis Group, the Universidad Autónoma de San Luis Potosí Department of Environmental Toxicology and the Latin American Contact Dermatitis Research Group.

HAND DERMATITIS IN HEALTH CARE WORKERS EVALUATED THROUGH TWO CLINICAL ASSESSMENT STREAMS

Jeff Donovan, Irena Kudla, D Linn Holness
James R Nethercott Occupational Health Clinic, University of Toronto

Background: Hand dermatitis is a common occupational health problem of health care workers. In Ontario, patients with hand dermatitis may be evaluated through a government program (GP) or a contact dermatitis specialty program (SP) if an occupationally related cause is suspected.

Objective: We undertook a study to compare the incidence of irritant and allergic contact dermatitis (ACD) as well as patient demographics of health care workers referred to the GP and SP streams between 2002-2006.

Results: Forty patients were evaluated by the GP stream and 16 were evaluated through the SP. Patch testing was performed with a greater number of allergens in the SP than GP stream (average 73.0 vs. 53.3, $p < 0.0001$). 47 % of SP patients had occupationally relevant ACD compared to 19 % of GP ($p = 0.03$). Overall, health care workers with hand dermatitis referred to the SP stream had an approximately four-fold greater likelihood of being diagnosed with an occupationally relevant ACD ($p = 0.04$, odds ratio 3.92). A high prevalence of fragrance allergy (27.9 %) was found in health care workers in both streams compared to the prevalence reported in the general patch test population (10.4 %).

Conclusion: An increased incidence of ACD was found in a contact dermatitis specialty program. Fragrance allergens are disproportionately increased in the health care population and their exact contribution to hand dermatitis warrants further study.

COSMETICS AND SKIN CARE

Ida Duarte, MD

Cosmetics and skin care products have been used since ancient civilizations. Dermatologists should be familiar with all possible side effects and reactions to cosmetics.

Objectives: The purposes of this study were: 1) to determine the frequency of dermatoses caused by use of cosmetics in patients with specific complaints of reaction to cosmetic products; 2) to observe the main skin conditions frequently misunderstood by users as cosmetic reactions.

Methods: One hundred and seventy-six patients seen in a private medical office from 1999 to 2006, with complaint of dermatoses caused by cosmetics. The clinical history, physical examination, relation between site of reaction and use of cosmetics were assessed.

Results: There were 154 (87.5%) females and 22 (12.5%) males. About 90 (52%) patients had no skin condition related to cosmetics, 80 (45%) had dermatoses associated with cosmetics and six patients (3%) had inconclusive results. Melasma, contact dermatitis to other products and acne were the conditions that users associated more often to cosmetics. Fourteen percent of patients had skin lesions caused by inappropriate cosmetics use.

Conclusions: The true adverse reaction to cosmetics was not very common. In this study, dermatitis was associated with cosmetics in only 31% of patients with specific complaint of dermatitis caused by cosmetics. Therefore, 52% of patients misdiagnosed the condition and had other dermatoses and 14% made inappropriate use of cosmetics.

ALLERGIC CONTACT DERMATITIS TO MAFENIDE ACETATE (SULFAMYLON™)

MAJ Denise Goksel, MD¹ and MAJ Jeffrey S Henning, DO¹

Abstract: Burn patients represent a unique challenge with regards to wound care. During the process of the burn care, from initial treatment to complete re-epithelization, multiple topical products are used for cleansing, barrier and antimicrobial control. To date there are no published data on the incidence of contact or irritant dermatitis in this population. Contact dermatitis has been shown to complicate wound healing in other populations. We report a case series of four patients with extensive burns (>30% BSA) sustained during Operation Iraqi Freedom/Operation Enduring Freedom who developed contact dermatitis to mafenide acetate (Sulfamylon™). All patients were patch test positive to mafenide acetate 5% solution. In two patients, re-challenge with mafeniden acetate resulted in recrudescence of the eruption. Mafenide acetate (Sulfamylon™, alpha-amino-p-toluenesulfonamide monoacetate) is a common topical wound care antimicrobial used in burn patients. To our knowledge here are no reports of allergic contact dermatitis reported in the literature to malenide acetate.

¹Brooke Army Medical Center Department of Dermatology, Ft. Sam Houston Texas

Funding source: None

The authors have no conflict of interest to disclose.

The opinions expressed here are the private views of the authors and do not represent the official position of the Department of the Army.

Correspondence:

MAJ J. Scott Henning, DO
Department of Dermatology- Brooke Army Medical Center
3851 Roger Brooke Drive
Ft. Sam Houston, TX 78234-6200
jeffrey.henning@amedd.army.mil
210-916-8976, 210-916-4408

ANALYSIS OF PRESENTATION TOPICS AT RECENT MEETINGS OF THE ACDS AND ESCD

Daniel J Hogan MD, Mark Neal medical student. LSUHSC Shreveport, LA

The largest meetings held regularly on contact dermatitis are the annual meeting of the American Contact Dermatitis Society (ACDS) and the bi-annual meetings of

the European Society of Contact Dermatitis (ESCD). The ACDS is a 1 day meeting; the ESCD meeting is 2 1/2 days. We analyzed the topics of presentations at the last 2 core meetings of the ACDS and compared them to the 2006 core meeting of the ESCD to see if there were differences in the number of presentations on topics presented at these two meetings. Our findings: 1) hand eczema ESCD 8, ACDS 0; hairdressers, health care workers and cleaners ESCD 9, ACDS 0; nickel ESCD 5, ACDS 3; gold, chromium and other metals ESCD 11, ACDS 0; basic science talks including immunology and chemistry of allergens ESCD 31, ACDS 5; hair dye, fragrance and cosmetic allergy ESCD 11, ACDS 0; preservatives/biocides ESCD 4, ACDS 0 ; plants ESCD 1, ACDS 4; corticosteroid allergy ESCD 1, ACDS 3; patch testing ESCD 13, ACDS 17.

This review indicates that the ESCD meeting may be of particular interest for American dermatologists interested in presentations on the basic science and chemistry of allergens, EU regulation of allergens and the management of occupational dermatoses and hand dermatitis outside America.

PREVALENCE OF HAND ECZEMA AND CONTACT ALLERGY AMONG MANILA-BASED DENTISTS

Faith Kishi Generao, MD and Clarissa Villarama-Cellona, MD
Philippine General Hospital, Manila, Philippines

ABSTRACT

Dental professionals have an increased risk of developing hand eczema. Frequent hand washing, repeated use of hand hygiene products, and use of gloves, contribute to possible damage to the skin barrier resulting in dry skin and hand eczema. This study aimed to determine the prevalence of hand dermatitis, establish the diagnoses, investigate the occurrence of contact allergy, and evaluate certain consequences of hand eczema. 97 dentists answered a validated questionnaire. It included questions on skin symptoms, glove use, pertinent past medical history and consequences of hand eczema. All persons reporting the occurrence of hand eczema during the past 12 months were invited to undergo a clinical investigation. Patch testing was performed with the European Standard and Dental screening series.

The point prevalence of hand eczema among Manila-based dentists was 34%. The signs and symptoms of hand eczema were mild. There were no serious occupational consequences. The most common hand eczema was irritant contact dermatitis. Contactants were sterilizing solutions, betadine and disinfectants. The most common contact allergen were nickel, fragrance and rubber chemicals. There was a low incidence of contact allergy to (meth)acrylate 1%. There was also a high correlation of prolonged use of gloves particularly natural latex gloves to the development of hand eczema. Interestingly, for those dentists that do not use gloves, the risk of having hand eczema is very low <1%.

PHYTOPHOTODERMATITIS FOLLOWING PUVA AND THE USE OF A CITRUS CONTAINING LOTION

Jennifer Kwinter BA, Melanie Pratt MD, University of Ottawa, Ottawa, Ontario, Canada

Phytophotodermatitis is a well described phototoxic process whereby skin develops erythema, vesiculation and persistent hyperpigmentation upon exposure to ultraviolet radiation following sensitization with furocoumarin (psoralen) containing plants. A number of furocoumarin containing plant families have been implicated, one of which is the rutaceae family which includes lemon and lime. Previous reports have only discussed sensitization of the skin following direct contact with a furocoumarin containing plant and subsequent exposure to sunlight. We describe a case of phytophotodermatitis in a 26-year-old female using a body lotion containing lemon juice while receiving PUVA therapy for severe atopic dermatitis. During the seventh week of her bi-weekly treatment, our patient developed linear areas of erythema and hyperpigmentation on her chest characteristic of phytophotodermatitis. Despite prior instruction to discontinue the use of her non-prescribed creams and lotions and use only Protopic and Sarna HC lotions, the patient admitted to having used a Body Shop brand mixed fruit body lotion containing lemon juice. No other products were being used and the patient was not on any medications other than methotrexate for her atopic dermatitis. This unique case illustrates for the first time phytophotodermatitis following exposure to ultraviolet radiation through PUVA therapy rather than direct sunlight. It also demonstrates that exposure to furocoumarins through a manufactured product rather than direct handling of the plant itself is sufficient to develop this phototoxic phenomenon.

THE ANGRY BACK ASSOCIATED WITH PATCH TESTING: ARE THERE ANY PREDICTORS?

Anna J Magembe, BA, Mark P Davis, MD, Donna Richardson, RN
Department of Dermatology, Mayo Clinic, Rochester, MN

Abstract

Background: Considerable time and expense is invested in the process of performing and interpreting patch testing. A generalized, erythematous, dermatitic reaction on the back where the patch testing materials were placed may render patch test results uninterpretable, a situation which is frustrating for patient and physician. This phenomenon is known as the "angry back" or "excited skin response".

Objective: To determine whether or not there are any predictors to the development of an "angry back" in patients undergoing patch testing.

Methods: Retrospective chart review of patients undergoing patch testing from Jan 1, 2002- June 30, 2006.

Results: 12 patients (9 men, 3 women) with an angry back following patch testing were identified. Predisposing factors were: active dermatitis involving more than 20% of the body surface area (100%); history of recent (< 1 week; mean 5.5 days) hospital admission for management of dermatitis (in 50%); and recent (< 1 week) discontinuation of immunosuppressive drugs such as prednisone (25%).

Limitations: A retrospective study with small numbers.

Conclusion: Although an "angry back" is rare, it is frustrating for patients and physicians. In the circumstance of an active dermatitis involving more than 20% of the skin, recent hospitalization for a dermatitis or recent discontinuation of immunosuppressive drugs, consideration should be given to deferring patch testing until the skin is less excitable.

ACRYLIC REACTIONS: FOUR YEARS' EXPERIENCE.

Luciana Molina, MD , Antoine Amado, MD, James S. Taylor, MD.
Department of Dermatology (A-61). The Cleveland Clinic Foundation.
Cleveland, OH, 44195

Objective: Acrylics have increasingly been recognized to cause allergic contact dermatitis. We update our reported patch test clinic experience with 26 acrylics during the 4 year period, November 2002 – October 2006.

Methods: Individual records were reviewed to identify the relevance of test results and exposure source.

Results: Of the 918 patients patch tested with the standard screening tray of the North American Contact Dermatitis Group, 28 were also tested with some or all of the acrylic tray, 8 with the dental tray, and 2 with printing acrylates. Twenty-three patients had an allergic reaction to at least 1 (meth)acrylate. The most frequent positive reactions were to methyl methacrylate (11) and ethyl acrylate (9), both on our standard screening tray; followed by 2-hydroxyethyl methacrylate (9), and ethylene glycol dimethacrylate (8), tested on an "aimed" basis. The principal sites of dermatitis were the hands (12), feet (3) and face (3); and the average duration of lesions was 2.4 years. The main sources of acrylic exposure were acrylic nails (12) and adhesives (4). Five cases were occupationally related: 3 from adhesives, 1 from laboratory work, and 1 from acrylic nail chemicals.

Conclusion: We continue to observe an increase in the number of patients positive to (meth)acrylates as compared with our first report. Aimed patch testing with additional acrylics is important in high-risk groups.

CONTACT DERMATITIS FROM ACRYLICS IN A HISTOLOGY LABORATORY ASSISTANT

Luciana Molina, MD, Antoine Amado, MD, Peter L Mattei IV, BS, James S Taylor, MD.
Cleveland Clinic Foundation. Cleveland, OH.

Introduction: The use of acrylics has expanded enormously, and has resulted in a vast range of products for both occupational and non-occupational purposes. This is reflected in the increase in dermatological problems, particularly allergic contact dermatitis, related to their use.

Case Report: We present a 50-year-old histology laboratory assistant, with a 2-month history of hand eczema. She developed dermatitis after coming into contact with Technovit® in her work place. This product is an embedding resin system based on hydroxyethyl methacrylate. Patch tests were performed with the first twenty chemicals from the standard screening tray of the North American Contact Dermatitis Group, ethyl acrylate 0.1%, methyl methacrylate 2%, glutaral 1%, ethylene glycol dimethacrylate 2% (EGDMA), 2-hydroxyethyl metacrylate 2% (2HEMA), 2-hydroxypropyl metacrylate 2% (2HPMA), benzoyl peroxide 1%, diaminodiphenylmethane 0.5%, hydroquinone 1% and her personal protective gloves. Readings were performed at 48 hours and at 7 days. She had positive reactions to EGDMA, 2HEMA and 2HPMA.

Discussion: The clinical and occupational history associated with these positive patch test results was directly relevant to her new onset dermatitis. Avoidance of acrylic exposure in conjunction with topical corticosteroid therapy resulted in resolution of her lesions.

Conclusion: There are very few reports of contact dermatitis in histologists or their assistances. 2HEMA was a common positive reaction in each of the cases.

ALLERGIC CONTACT DERMATITIS TO RUBBER PROSTHESIS

Maximin S. Navarro, M.D., Lillian L. Villafuerte, MD, MOH, FPDS. Department of Dermatology, Jose Reyes Memorial Medical Center, Manila, Philippines.

INTRODUCTION: Contact dermatitis to rubber leg prosthesis is rarely reported. We report a rare case of a 63 year old male who developed an eczematous reaction on the amputated leg at the site of contact with the rubber prosthesis.

CASE REPORT: A 63 year old male, below the knee amputee who developed erythematous scaly patches on areas covered by rubber prosthesis two months after wearing it. Prosthesis was made from rubber materials and was worn by the patient for 12 hours daily. Patch test was positive for Thiuram.

DISCUSSION: Below the knee prosthesis are usually made of rubber, latex, or neoprene. Sensitization to rubber is most often due to sensitization to thiurams¹ Rubber and latex allergy has become a challenging phenomenon in health care delivery for the last several years. The allergic reaction to rubber and latex ranges from a minor skin rash to anaphylactic shock. Preventing exposure is the key to managing and preventing this allergy. Moreover, all health care professionals has the responsibility to provide a safe environment for patients with allergy to rubber and latex . 2

BIBLIOGRAPHY:

1

Knudsen BB, Menne T. Contact allergy and exposure patterns to thiurams and carbamates in consecutive patients. Contact Dermatitis. 1996 Aug;35(2):97-9.

2 Bumann NH. Latex allergy. An orthopaedic case presentation and considerations in patient care. Orthop Nurs. 1999 May-Jun;18(3):15-20; quiz 21-2.

PATCH TEST RESULTS IN TURKISH PEDIATRIC POPULATION

Onder M, Adisen E

Gazi University, Faculty of Medicine, Department of Dermatology, Ankara, Turkey.

Aim: Contact dermatitis is increasing in childhood . Our aim is to show common contact allergens in pediatric population.

Material and methods: From 1993 to 2005, 360 children (2-16 years old) the diagnosis of contact dermatitis were patch tested in the Department of Dermatology, Gazi University Faculty of Medicine, Ankara. A detailed history, careful examination of the patient's skin disease, suspected allergens and the age, sex of the patients, duration and localization of the lesions were recorded. All patients were tested with the European Standard Series.

Results: Present clinical relevance of the positive patch tests was found in 30.5 % of the patients. Of the patients tested, 118 (32%) had one or more positive allergic patch test reaction. Seventy eight of 118 patients were girls (66%) and 40 were boys (34%). Of 118 children. The overall number of positive allergic patch test reactions were 127. The top 10 frequency of positive reactions were obtained from the following: nickel sulphate, cobalt chloride, P-phenylenediamine, neomycin sulphate, formaldehyde, fragrance mix, mercapto mix, quaternium, benzocaine, potassium dichromate, paraben mix and Balsam of Peru.

Discussion:

The most common allergen was nickel sulphate. Piercing may be the most important reason. Shoe dermatitis was another clinical picture of dermatitis related with non leather shoes. Topical antibiotal products were the other common cause of dermatitis. Temporary henna tattoos are becoming popular in young age groups which explain para-phenylendiamine increased contact reaction.

VITILIGO AFTER DIPHENCYPRONE FOR ALOPECIA AREATA

João Mauricio Martins *, Mario Cezar Pires** , Montealegre F *** , Gatti F *

* Dermatologist of Complexo Hospitalar Padre Bento de Guarulhos

** Dermatologist and Chief of Department, CHPBG

*** Immunologist, Ponce School of Medicine, Puerto Rico, USA

Dermatology Department, CHPBG, São Paulo, Brazil.

The topical immunotherapy is used with variable success in alopecia areata treatment since more than 30 years ago. Lesions vitiligo-like were described, but we do not know the incidence. We describe the case of a male young patient that presented vitiliginous maculae associated to persistent leucotrychia after use of the diphencyprone acetate for alopecia areata.

DISCUSSION

Even with the absence of clinical or laboratory evidences of personal or family vitiligo, is not possible to discard that our patient had the primary form of the disease. There are two possibilities regarding our case:

- a) Diphencyprone provoked the destruction (toxic action) of the local melanocytes
- b) The patient had genetic base for vitiligo and the disease was unchained by the contact hypersensitivity provoked by DPCP

This case presented suitable evolution with previous reports, however we need more time to evaluate the pigmentation of the patches and hairs. The real incidence of vitiligo in patients using DPCD is not defined, however it is imperious the clearing front to the patient of this unpleasant side effect. Moreover, we believe that it would be interesting the investigation of personal or family history of vitiligo in patients under topical immunotherapy before the beginning of the treatment.

UTILITY OF A STANDARD ALLERGEN SERIES ALONE IN THE EVALUATION OF ALLERGIC CONTACT DERMATITIS: A CONTINUING PROSPECTIVE SERIES OF 1916 PATIENTS

David E. Cohen, MD, MPH¹, Shaline Rao¹, Louisa M. Tift¹, and Ronald R. Brancaccio¹, MD

¹Ronald O. Perelman Department of Dermatology
New York University School of Medicine

Abstract

Background: Patch testing is the gold standard for diagnosing allergic contact dermatitis. Past studies have not completely addressed the validity and usefulness of the allergens of the T.R.U.E. Test.

Objective: The purpose of this study is to independently examine the utility of using the allergens of the T.R.U.E. Test as exclusive screening methods in the diagnosis of contact allergy.

Methods: The charts of 1122 patients and a supplemental series of 794 patients recommended for patch testing using North American Contact Dermatitis Group screening series with or without additional supplemental allergens were reviewed for positive patch tests results. The study groups were analyzed to determine

whether positive reactions were to allergens of the T.R.U.E. Test or the supplementary group. Positive reactors were distinguished on the basis of the clinical relevance of their reactions for the first series of patients only. This relevance analysis was discontinued in the second series of patients.

Results: Part I (1994-1998) Of 1122 patients patch tested between July 1, 1994 and December 31, 1998, 818 (72.9%) had a positive result, and 563 (50.2%) had clinically relevant reactions. Only 226 (27.6%) patients with positive patch tests reacted to allergens exclusively present in the T.R.U.E. Test, and only 125 (15.3%) patients with positive results had clinically relevant reactions detected using allergens tested in the T.R.U.E. Test alone.

Part II (2004-2006) Of the 794 patients patch tested between July 1, 2004 and July 1, 2006, 590 (74.31%) had a positive result. Only 129 (21.86%) patients tested were positive to a T.R.U.E. Test allergen only, and 322 (54.58%) of the total positive reactors were positive to at least one T.R.U.E. Test allergen.

Conclusion: The allergens of the T.R.U.E. Test are of limited utility as a screening method when used exclusively in the evaluation of patients with allergic contact dermatitis. The pooled data reveals that the overall rate of positive responses to patch testing is 73.5%, 25.21% of the 1912 patients were positive to T.R.U.E. Test allergens only, 19.9% were positive to supplementary allergens only, 54.7% of the total patients were positive to at least one supplemental and one T.R.U.E. Test allergen, and 79.97%

ALLERGIC CONTACT CHELITIS TO BENZOPHENONE-3 IN A LIP BALM AND FLAVORING IN FOODS

Sarah E. Schram MD,¹ Lynn A. Glesne MD,^{2,3} Erin M. Warshaw MD, MS^{1,2,3}

¹ Minneapolis VAMC, ²University of Minnesota, ³Hennepin Faculty Associates; Minneapolis, MN.

Benzophenones are the most frequent cause of sunscreen allergy; both photoallergic and non-photoallergic reactions have been described.

A 45 year old male presented with a three month history of intensely pruritic, bilateral lip, perioral, cheek, ear, hand, and forearm dermatitis. He worked as a shop technician and was exposed to numerous metals, cutting oils and hydraulic fluids and washed his hands and face up to 30 times a day with a fragranced liquid soap. He used lip balm multiple times per day and regularly consumed hard candies, chewing gum and artificially flavored drinks. Personal products included lip balm, flavored breath strips, flavored toothpaste, musk oil cologne and scented soaps and shave balms. Positive reactions were found to benzophenone-3, balsam of Peru, balsam of Tolu, vanillin, Blistex[®] (containing benzophenone-3 and flavoring) and Carmex[®] (containing flavoring).

We believe that both flavoring/fragrance allergy as well as benzophenone-3 allergy were relevant. It is possible that the patient initially developed fragrance/flavoring allergy and then became sensitized to benzophenone-3 when he applied Blistex[®] to his dermatitic lips. Avoidance of fragrance and benzophenone-3 along with a low balsam diet has led to complete clearance.

PATCH TEST REACTIONS TO TOPICAL ANESTHETICS: RETROSPECTIVE ANALYSIS OF CROSS-SECTIONAL DATA FROM THE NORTH AMERICAN CONTACT DERMATITIS GROUP 2001-2004

Erin M. Warshaw MD, MS*, Sarah E. Schram MD*, Donald V. Belsito MD, Vincent A. DeLeo MD, Joseph F. Fowler, Jr. MD, Howard I. Maibach MD, James G. Marks, Jr. MD, C.G. Toby Mathias MD, Melanie D. Pratt MD, Robert L. Rietschel MD, Denis Sasseville MD, Frances J. Storrs MD, James S. Taylor MD, Kathryn A. Zug MD

*VAMC; Minneapolis, MN.

Background: Cross-reactivity amongst topical anesthetics and the screening value of benzocaine alone are not well understood.

Objectives: 1) Evaluate the frequency and pattern of allergic positive patch test reactions to topical anesthetics in the North America Contact Dermatitis Group (NACDG) database; and 2) compare these results to allergen frequencies from other published studies.

Methods: 344 of the 10,061 (3.4%) patients patch tested by the NACDG between 2001 and 2004 had positive patch test reactions to one or more of the following: benzocaine, lidocaine, dibucaine, tetracaine, and/or prilocaine. Frequencies and cross-reaction patterns were examined in this group.

Results: 320 of the 344 (93.0%) patients had allergic reactions to only one topical anesthetic. Overall, benzocaine (50.0%, 172/344) was most prevalent followed by dibucaine (27.9%, 96/344). 19 patients (5.5%) reacted to both an amide and an ester anesthetic.

Conclusions: Of the topical anesthetics patch tested by the NACDG, reactions to benzocaine were most prevalent, but benzocaine as a single screening agent would have missed over 50% of allergic reactions to topical anesthetics.

ALLERGIC CONTACT DERMATITIS DUE TO ACRYLATES

Mohammad Diab MD
Jacquelyn Coloe
Eleanor Kurtz
Matthew J Zirwas MD
The Ohio State University

Acrylates are a significant cause of occupational and non-occupational contact dermatitis. We present seven cases of allergic contact dermatitis due to acrylates with clinical photos that represent the most common routes of occupational and non-occupational exposure.

Completely cured acrylic resins with no residual monomers or small polymers are not allergenic. However, 100% cure is unlikely with most resins, and small amounts of monomers or small polymers are often released from recently cured acrylics. Individuals working with uncured acrylates are at particularly high risk for developing allergy to acrylates, as acrylates in the uncured powder, liquid, or paste forms are highly allergenic.

Acrylic resins are used in numerous products, including dental resins and composites, two-component adhesives, artificial nail preparations, and orthopedic bone cement. UV-cured acrylic inks are commonly used in the printing industry for labeling items such as paper, wood, cans, bottles, and computer hard discs. Occupations particularly at risk include nail technicians, dental technicians, industrial workers using acrylate glues, UV printing press operators, and orthopedic surgeons and nurses working with bone cement.

Chronic allergic contact dermatitis to methyl methacrylate, especially of the fingertips, can lead to fingertip neuropathy secondary to nerve inflammation.

Acrylates are able to rapidly penetrate most disposable rubber gloves and will also penetrate most thicker rubber gloves over relatively short time periods. This makes effective protection of the hands difficult. Multilayer laminate gloves, such as "Barrier Chemical Protective Gloves (Ansell Healthcare) or Silvershield Gloves (North Safety Products) can be effectively used for protection.

