Psoriasis, Self-Esteem & Social Support: Assessing Social Support and Its Effect on the Self-Esteem of Young Women Living With Psoriasis

Renita Ahluwalia, University Of Toronto, Toronto, ON

Introduction: Previous research has shown that psoriasis can cause a detrimental social impact. Many afflicted individuals report social rejection and stigmatization. This can have a profound impact on self-esteem. This is especially true for young women, a group that tends to commonly suffer from self-esteem issues. Strong social support networks could help improve self-esteem and ability to manage living with psoriasis. The goal of this project is to assess if young women with psoriasis need increased social support and if strengthening social support networks will have a positive impact on their self-esteem.

Methods: A three part Likert scaled survey consisting of the Dermatology Life Quality Index Questionnaire, the Rosenberg Self-Esteem Scale and an adapted version of the Medical Outcomes Study Social Support Survey was administered to female patients between the ages of 15 and 30 of the Phototherapy Education and Research Centre, Toronto. In addition, two one on one patient interviews were conducted.

Results: Weak to moderate correlations were found between the three variables. (DLQI & SS: r= –.304, p =1.68, DLQI & SE: –.249, p=.265, SE & SS: .292, p=.187.) Both interviewees expressed links between their psoriasis, their self-esteem and their social support networks.

Conclusions: The results indicate that young women living with psoriasis are likely to benefit from an increase in social support and that when utilizing the DLQI, one needs to be cautious to ensure self-esteem is not misrepresented. Recommendations to increase support include asking patients questions regarding self-esteem at every visit, offering referrals to other disciplines, finding external forms of social support, such as camps and women’s groups, the creation of programs at PERC, including a Buddy Program and increasing public awareness of Psoriasis.

Therapeutic Considerations in Skin of Colour

Andrew F. Alexis, St. Luke’s-Roosevelt Hospital; Columbia University, New York, NY, USA

Ethnic skin or “skin of color” refers to the broad range of skin types and complexities that characterize individuals of African, Asian, Latino, and Native American descent. Differences in structure, function, and cultural practices in individuals with ethnic skin contribute to variations in the prevalence and clinical presentation of numerous skin conditions. This session will serve as a practical overview of important skin and hair disorders in non-Caucasian populations, including dyschromias, alopecias, keloids and acne vulgaris. Emphasis will be on special therapeutic considerations in ethnic skin.

Fever and Rash in a Returning Traveler: Dengue

Yuka Asai;1 Frederic Dankoff;2,1
1. Division of Dermatology, McGill University Health Centre, Montreal, QC; 2. Emergency Department, Royal Victoria Hospital, Montreal, QC

The dengue virus is a mosquito-borne flavivirus that occurs ubiquitously in tropical and subtropical regions. It has four serotypes, and is transmitted via mosquito vector (Aedes). Although infection from one serotype will give lifelong immunity to that particular serotype, it does not confer immunity to the others; in fact, severe dengue infections are thought to be in part a consequence of a pre-existing host antibody to a heterologous serotype, and thus are more likely to occur in areas which have endemic infection and have co-circulation of multiple dengue serotypes. Dengue can have range of clinical presentations, from dengue fever to dengue shock syndrome. Classic signs and symptoms include severe myalgias and arthralgias (“breakbone fever”), a blanching macular eruption with “islands of sparing”, and the “tourniquet’s sign.”

We report a case of dengue hemorrhagic fever in a 16-year old male recently returned from Bangladesh, who presented with fever, headache, myalgia and cough. He had a non-pruritic, blanching eruption of macular erythema, with small patches of unaffected skin, as well as bilateral conjunctival hyperemia. His hands were edematous and he had a positive tourniquet sign, with petechiae at the site of his blood pressure cuff. There was no active bleeding. His bloodwork showed thrombocytopenia and a relative leukopenia. Panculture was negative, as were malaria smears and serology for HIV and hepatitis. Dengue serology was positive.

Since cessation of the mosquito eradication program, Aedes populations have grown throughout the world. Dengue epidemics have been recently reported in various parts of South-east Asia. The major cause of morbidity is shock, and the mainstay of treatment includes early and aggressive fluid resuscitation. Patients should also be cross-matched.

Vector spread, combined with increased travel to endemic areas may indicate a future increase in dengue cases presenting to physicians in Canada.
Olmsted Syndrome and Skin Grafting: 
Post-Surgical Follow-Up of Two Cases

Marie-sophie Bédard;1 Julie Powell;2 Patricia Bortoluzzi;1 Claire Allard-Dansereau;1 Louise Laberge;1 Danielle Marcoux;2


Olmsted syndrome is a rare congenital mutilating palmoplantar keratoderma associated with periorificial keratotic plaques. It starts in early childhood and progresses slowly, causing flexural deformities and spontaneous amputation of the extremities. Other clinical manifestations include keratotic lesions in the intertriginous folds, diffuse alopecia, onychodystrophy and oral leukokeratosis. The genetics underlying this syndrome have not yet been elucidated.

Treatment options include topical keratolytics, systemic retinoids, and surgical debulking procedures. In order to alleviate the pain and the incapacity associated with thick palmoplantar hyperkeratosis, full-thickness excision of hyperkeratotic plaques followed by skin grafting has been reported in the medical literature, although long-term results have not been evaluated.

We present two new cases of Olmsted syndrome with severe palmoplantar keratoderma treated with excision and skin grafting, along with long-term clinical results 11 years (case 1) and 6 years (case 2) following their initial surgery.

Ethical, Legal, and Social Issues in Dermatologic Genetics: The PXE Paradigm

Lionel Bercovitch;1 Sharon F. Terry;2

1. Dept. of Medicine, Yale-New Haven Hospital, Yale Medical School, New Haven, CT, USA; 2. Div. of Infectious Diseases, South Shore Hospital, Harvard Medical School, South Weymouth, MA, USA; 3. Dept of Dermatology, Brown Medical School, Brockton, MA, USA

The gene for pseudoxanthoma elasticum (PXE) was discovered in 2000. A patent for the gene became clinically available in 2007. Several ethical, legal, and social issues have been encountered along the way that can serve as a model for other genodermatoses. Issues of privacy of genetic information, ownership of DNA, and ethical and legal issues relating to biobanking and gene patents are generic to other genetic disorders and will be discussed in detail. In addition, other ethical issues encountered included whether or not to release test results to individuals while the test was considered investigational; whether it is ethical to test asymptomatic minor siblings of affected children for a disorder for which there is no proven prevention or treatment, as well as the broader question of the ethics of genetic testing of children and adolescents for adult-onset disorders; whether prenatal testing or pre-implantation genetic diagnosis should be offered for a genetic disorder compatible with a normal lifespan; and informed decision-making for genetic testing. Further, the management of incidental findings of genetic testing such as misattributed paternity will be described.

The Tuberculin Skin Test and Screening for Latent Tuberculosis: What the Dermatologist Needs to Know

Robert S. Bercovitch;1 Todd S. Ellerin;2 Lionel Bercovitch;3

1. Dept of Medicine, Yale-New Haven Hospital, Yale Medical School, New Haven, CT, USA; 2. Div. of Infectious Diseases, South Shore Hospital, Harvard Medical School, South Weymouth, MA, USA; 3. Dept of Dermatology, Brown Medical School, Brockton, MA, USA

Biologic agents, in particular, tumor necrosis factor-α (TNF-α) antagonists, are widely used in the treatment of moderate to severe psoriasis. Reactivation of latent tuberculosis (TB) has been associated with TNF-α blockade, most notably with infliximab, but also with etanercept and adalimumab. Although dermatologists are adept at administering and reading intradermal tests, some lack expertise in interpreting and utilizing the results of tuberculin skin tests, a central component of screening for latent TB. Other immunosuppressive agents such as methotrexate or agents which affect T-cell function, or ultraviolet light therapy may affect tuberculin reactivity. False positive and negative results can occur in tuberculin skin testing. The proper technique for administering and interpreting the tuberculin skin test, factors relating to psoriasis therapy which potentially affect the test, factors which can lead to false positive and negative results, screening of high risk groups, and additional topics such as the booster effect and interferon (IFN)-gamma assays will be discussed. An algorithm for screening for latent TB and using the tuberculin skin test to make therapeutic decisions regarding TNF-α blockade for psoriasis therapy will be presented.

Novel Use of Imiquimod 5% Cream in Extragenital Lichen Sclerosus

Melody Cheung-Lee; Marlene Dytoc, University of Alberta, Edmonton, AB

Introduction: Extragenital lichen sclerosus (LS) is a chronic inflammatory condition bearing histologic overlap with morphea, and may result in ulceration and scarring. In contrast to the genital variety, extragenital LS is usually asymptomatic, does not carry risk for squamous cell carcinoma, and differs in
Vitamin D Deficiency in Photosensitive Lupus Patients In Ireland

Claire S Danby1, Caitriona Cusack1, Patrick O’Kelly2, Barbara Murray3, Gillian M Murphy1.

1. Department of Dermatology, Beaumont Hospital, Dublin, Ireland; 2. Department of Nephrology, Beaumont Hospital, Dublin, Ireland; 3. Metabolic Lab, St. Vincent’s University Hospital, Dublin, Ireland.

Vitamin D deficiency is known to be the result of insufficient sun exposure, prolonged use of sunscreens or inadequate dietary intake. A theoretical risk of vitamin D deficiency secondary to photoprotection, which also includes regular sunscreen application, led us to investigate if patients with photo-aggravated cutaneous lupus are deficient in vitamin D.

Following ethical approval, consenting patients with biopsy-proven cutaneous lupus were recruited from the outpatient department at Beaumont Hospital, Dublin, Ireland. Vitamin D levels were measured using the Dia-Sorin 25-hydroxyvitamin D (25-OH-D) assay between June and September 2006. Patients also completed a questionnaire recording Fitzpatrick skin type, vitamin supplement ingestion and an analysis of photoprotection.

Results: Significant low vitamin D levels were recorded in our patient cohort: 64% had levels below the World Health Organisation recommended 80nmol/l. As photoprotection is necessary for disease control and as low levels correlated with lack of oral vitamin D supplementation, we propose that photosensitive lupus patients should supplement their diet with vitamin D3.

Eczema Awareness, Support and Education (EASE) Database Web Survey

Isaiah J. Day; Marlene T. Dytoc, Division of Dermatology and Cutaneous Sciences, University of Alberta, Edmonton, AB

Introduction: Eczema is a disease that is challenging to treat, due to its chronic, relapsing course and complex pathogenesis. It is, therefore, often managed sub-optimally. This study assesses how Canadian patients educate themselves regarding eczema, the extent to which they are suffering from the disease, and reviews the perceived advantages and disadvantages of common treatments for eczema.

Methods: An online survey was carried out among English and French-speaking Canadians. A total of 1071 questionnaires were completed. Qualified respondents to the questionnaire were individuals who personally suffer from eczema (n=767), or have a close relative who suffers from eczema (n=304). Results were analyzed with differences being significant at the 95% confidence interval.

Results and Conclusions: Seven hundred and seven respondents rely foremost on self-conducted research on the internet for educating themselves regarding eczema. Ninety percent of respondents report significant frustration with their eczema. The most commonly reported frustrations include high cost of medications, interference with sleep, as well as relationship and cosmetic concerns. Fifty-nine percent of respondents rely foremost on self-conducted research on the internet for educating themselves regarding eczema. Ninety percent of respondents report significant frustration with their eczema. The most commonly reported frustrations include high cost of medications, interference with sleep, as well as relationship and cosmetic concerns. Fifty-nine percent of respondents expressed concerns about using steroids to treat their eczema. Conclusions drawn from this study include the following issues. Physicians are doing an excellent job of
introducing patients to new treatment options, however, their verbal counselling is perceived by patients as poor. Eczema affects a patient’s quality of life and is both emotionally and physically distressing. The recent emergence of non-steroidal eczema therapeutics such as Protopic™ and Elidel™ provide effective treatment options for patients who either have not responded to, or who refuse to use, topical steroid therapy.

Are Narrow-Band Ultraviolet B (NB-UVB) Home Units a Viable Option for Continuous or Maintenance Therapy of Photoresponsive Diseases?

Kay-anne Haykal; Jean-pierre DesGroseilliers, University of Ottawa, Ottawa, ON

Introduction: Phototherapy is an effective treatment for several photo responsive diseases. Many patients are unable to attend hospital-based treatment and prefer home phototherapy. The purpose of this study is to survey patients that were prescribed home phototherapy in order to determine the viability of NB-UVB home units in the continuous or maintenance treatment of photo responsive diseases.

Methods: A patient questionnaire was prepared focusing on different areas of interest: reason for choosing home therapy, appropriate teaching, previous medical treatment, present exposure therapy, improvement of condition, side effects, regular dermatological follow-ups, and effectiveness of this approach. Twenty-seven patients who attended the photo dermatology clinics at the Elisabeth Bruyère Health Centre in Ottawa and the Ottawa Hospital Civic Campus were contacted.

Results: Twenty-five patients completed the questionnaire by telephone or e-mail. One refused to participate and one was out of the country. The main reasons for choosing home phototherapy were time (40%), travel expenses (25%), difficulty with work schedule (17%) and recommendation by physician (6%). Other reasons included: loss of income, personal stress, knowledge that the disease recurs when phototherapy is discontinued, moving from the city, personal stress and convenience of being at home. Regarding the effectiveness of the home phototherapy, twenty-four (96%) viewed the home unit approach to be effective. All patients agreed that they would continue the treatment; they would repeat it and they would recommend it. Reported side effects included erythema (36%), blisters (1%), pruritus (8%) and dryness (1%). Fourteen (56%) patients reported not experiencing any side effects.

Conclusion: NB-UVB home phototherapy was found to be an effective form of continuous or maintenance therapy for photo responsive diseases. It is safe and it presents few side effects when patients receive appropriate guidelines, teaching and follow-ups.

Mentorship in Dermatology Residency Training Programs

Jeffrey C. Donovan, James R Nethercott Occupational Health Clinic, University of Toronto, Toronto, ON

Introduction: The mentoring of residents by established faculty has been linked to resident personal growth, productivity, and retention in academics. Previous studies support a notion that dermatology residents value faculty mentorship. Although the optimal method to facilitate establishment of resident-faculty mentoring relationships is unknown, the views of Program Directors may influence such opportunities.

Methods: Residency Program Directors within the Association of Professors of Dermatology (APD) were surveyed regarding multiple topics relating to mentorship during residency training.

Results: Fifty Program Directors within the APD completed an on-line survey. 90 % of respondents indicated that mentorship played a ‘somewhat’ or ‘very important’ role in their own career development and 82 % felt that it was important for residents to have access to mentors during residency training. The vast majority of Program Directors indicated a desire to have more of their graduating residents pursue academic careers and/or positions of leadership. 42 respondents (87 %) felt that the development of more structured mentorship opportunities within the training curriculum had the potential to increase the number of dermatology residents pursuing careers in academics and/or leadership.

Conclusions: Program Directors regard the establishment of resident-faculty mentoring relationships as an important resource for their residents’ professional development. Continued research and discussion of the topic of mentorship is needed in order to develop models that capitalize on the many benefits of mentorship.

Mediterranean Pearls, 2007

Benjamin K. Fisher, Hertzliya Medical Centre, Hertzliya-Pituach, Israel

Several unusual and interesting cases seen in Israel in the past year will be shown in this rapid and friendly presentation. Audience participation is encouraged.
Tanning Behaviors of Thames Valley District Teens

Danielle M. Gordon; Lyn Guenther, Schulich School of Medicine & Dentistry, U.W.O., London, ON

Introduction: To date, no studies have assessed sunless tanning product and tanning parlor usage in Canadian teens. The objectives included: determination of teens’ knowledge, behavior and attitudes on tanning, tanning parlors, self tanning products and photoprotection.

Methods: A cross-sectional study of grade ten students in Thames Valley district in Ontario was conducted using a self-report questionnaire.

Results: Twenty-eight percent of the 1202 students had used a sunless tanning product; 67% used one 1-10 times per year, and 16% at least once a week. Use was more common in females (p= 0.015). Sixty-two percent of users believed that these products gave adequate photoprotection and 13% were confident that these products do not cause cancer. Indoor tanning parlors were used by 14%, with 75% of users being female. Use was at least once a week in 29%. In the past year, usage increased in 42%, stayed the same in 34% and decreased in 24%. The most important factor influencing teen’s use of parlors was a perceived positive effect on appearance. There was a strong association between both parental and child parlor usage as well as parent and child product usage. Only 46% believed that tanning parlors can induce skin cancer. Only 12% used sunscreen daily in the summer; 20% never used it. Females were more likely to wear sunscreen, especially daily or on most days.

Conclusions: Tanning parlor usage in Thames Valley district grade 10 students is low, while over one quarter of students use self tanning products. The lack of regular sunscreen use, increased usage of tanning parlors in students who use them, and lack of knowledge about the photoprotection provided by self tanning products, and safety of tanning parlors is concerning. Better sun awareness education for teens is needed.

Comorbidities Associated with Psoriasis in the Newfoundland and Labrador Founder Population*

Dr. Wayne Gulliver; Zohair Tomi; Reza Alaghehbandan

Aim: Psoriasis is a common inherited inflammatory disorder of the skin that affects 1 to 2 percent of the population. The relationship between psoriasis and psoriatic arthritis has been well established clinically and genetically. Recently researchers have suggested that there may be other comorbidities such as lymphoma, obesity, type 2 diabetes, dyslipidemia, hypertension, cardiovascular disease and lymphoma and melanoma and non melanoma skin cancer linked to psoriasis.

Method: Using the Newfoundland and Labrador founder population through the Newfoundland & Labrador Centre for Health Information (NLCHI) we have undertaken the task of studying 3400 psoriasis patients with respect to these comorbidities.

Results: Initial investigation of 100 patients with mild and severe psoriasis showed increased rates of heart disease, diabetes, and hypertension with under representation of asthma. The present study has analyzed 3400 patients for these and other comorbidities, as well as, 800 patients who have been genotyped for HLACw6 and TNF-alpha 238 will have comorbidities and the genetic markers linked.

Conclusions: This study demonstrates that the use of the Newfoundland and Labrador founder population and its comprehensive health information data base linked to genetic analysis will be a powerful tool in understanding the genetics of comorbidities linked to psoriasis. Other significant findings include the association between early age of onset and HLACw6 as well as the presence of psoriatic arthritis and genetic markers.

*Unrestricted funding from Merck Serono

Fibromyalgia and other Comorbidities Associated with Psoriasis in the Newfoundland and Labrador Founder Population

Wayne P. Gulliver; Zohair Tomi; Syed Pirzada

1. NewLab Clinical Research Inc., St. John’s, NL; 2. Memorial University of Newfoundland, St. John’s, NL

Aim: Psoriasis is a common inherited inflammatory disorder of the skin that affects 1 to 2 percent of the population. The relationship between psoriasis and other comorbidities such as psoriatic arthritis, type 2 diabetes, hypertension, cardiovascular disease and lymphoma is well established. A single report studying the prevalence of fibromyalgia in psoriasis patients has been presented in 2005 of which 8.3% were found to have suffered from fibromyalgia. Fibromyalgia is a syndrome of chronic musculoskeletal discomfort in which there is no underlying evidence of soft tissue inflammation and it may occur in 10% of the population. We have observed cases of fibromyalgia in the Newfoundland and Labrador psoriasis population.

Method: Using the Newfoundland and Labrador founder population in collaboration with the Newfoundland & Labrador Centre for Health Information (NLCHI) we are undertaking the study of 3400 psoriasis patients with respect to the
Comorbidity of fibromyalgia. Fibromyalgia has been identified in the Newfoundland and Labrador founder population in patients with psoriasis.

Results: Data from the 3400 patients investigating the association of fibromyalgia and other comorbidities will be provided. An early example of the association is demonstrated from initial observations in two female patients who both suffer from fibromyalgia, obesity and chronic plaque psoriasis. The fibromyalgia was diagnosed some 5 and 14 years after the initial onset and the diagnoses of psoriasis.

Conclusion: This study may demonstrate that the use of the Newfoundland and Labrador founder population and the comprehensive health information data bank linked to data analysis will be a powerful tool in understanding the genetics of comorbidity such as fibromyalgia that are linked to psoriasis. This Comorbidity will also be linked to genetic markers such as HLA-Cw6, TNF-α 238 and 308

HLA-Cw6 and TNF-α polymorphisms may help predict response to biologic therapy in patients with chronic plaque psoriasis

Dr. Wayne P. Gulliver, Dr. Zohair Tomi and Dr. Syed Pirzada

Aim: Psoriasis is a common inherited inflammatory disorder that affects 1 to 2 percent of the population. With the introduction of biologics the treatment of psoriasis has been transformed. The following table indicates the efficacy of biologic therapies:

Efficacy of PASI 75 for Biologics Therapies

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Brand Name</th>
<th>Dose</th>
<th>Percent of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alefacept</td>
<td>Amevive</td>
<td>i.m. 1.5 mg/qwk</td>
<td>21%</td>
</tr>
<tr>
<td>Efalizumab</td>
<td>Raptisa</td>
<td>1 mg/kg/qwk</td>
<td>31%*</td>
</tr>
<tr>
<td>Etanercept</td>
<td>Enbrel</td>
<td>25 mg BIW</td>
<td>34%</td>
</tr>
<tr>
<td>Etanercept</td>
<td>Enbrel</td>
<td>50 mg BIW</td>
<td>49%</td>
</tr>
<tr>
<td>Infliximab</td>
<td>Remicade</td>
<td>5 mg/kg</td>
<td>80%</td>
</tr>
</tbody>
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*Dubertert et al, BJD 2006, 155, 170-181

To-date response to biologics has been based on clinical observation and no genetics markers have been found to predict response to treatment. Recently in rheumatoid arthritis response to etanercept may be predicted when patients are sub divided using single nucleotide polymorphisms, TNF- 308, G/A genotype versus G/G genotype. It was found that the G/A genotype had a 20.1% response versus a 79.1% response in the G/G genotype.

Method: Using the Newfoundland and Labrador founder population we have genotyped 19 patients who have been treated with biologics. Seven treated with etanercept, 6 with Alefacept, 4 with Efalizumab and 2 with Infliximab. HLA-Cw6 status as well as TNF- 238 and 308 status has been determined. The frequency of HLA-Cw6 is 32%, TNF- 238 G/G is 85% and G/A is 15%. The TNF- 308 G/G is 68% and G/A is 32%.

Results: Preliminary results suggested that patients who are positive for HLA-Cw6 respond to biologics and those patients negative for HLA-Cw6 may fail biologics. In the Newfoundland and Labrador founder population analysis of TNF- 238 and 308 SNPs will be analyzed and may also be useful in determining response to biologics as was seen in the rheumatoid arthritis patient population.

Conclusion: This study demonstrates that the use of the Newfoundland and Labrador founder population and HLA-Cw6 status may be helpful in predicting response to certain biologics.

*Funded by unrestricted grant from Merck Serono

HLA-Cw6 Target for the Future

Wayne P. Gulliver, NewLab Clinical Research Inc. and Memorial University of Newfoundland, St. John’s, NL

Our data suggested that HLA-Cw6 was linked to both age-of-onset of psoriasis as well as the need for patients to require photo or systemic treatment for psoriasis. Under a genowide scan using 396 markers from 1995 we have confirmed HLA-Cw6 and TNF-α as psoriasis susceptibility genes. Not only is TNF-α a psoriasis susceptibility gene it is a target for multiple TH1 related conditions. Data presented at the ACR confirms that the single nucleotide polymorphism of TNF-α 308 could determine response to therapy.

The data from our studies suggest that HLA-Cw6 may also be able to predict response to biologics. We have hypothesized that HLA-Cw6 could indeed be a potential drugable psoriasis gene target and have in development peptides that may block HLA-Cw6 residue 77 to 80 in hopes that this will allow natural killer T cells to initiate apoptosis of activated T cells. It is a known fact that many drugs in the development for psoriasis target gene products that are found in many of the psoriasis susceptibility regions PSORS 1 to 7. As well being potential therapeutic target genes within the psoriasis susceptibility region may also help identify patients at risk for significant adverse events. This pharmacogenomics discovery may help us identify patients who are at risk of developing severe liver toxicity from methotrexate. Other studies suggest that response to treatment may also be determined by a singular nucleotide polymorphism within the folate metabolic pathway.

Since these events occur infrequently it is likely that this will make many years as well as many thousands of patients treated before significant numbers of adverse events occur which will allow us to do pharmacogenomics studies. One
other approach may be to pre-screen patients and see if they have SMP's associated with those rare adverse events. The best approach initially may be to identify patients at risk and use biologic less likely to be associated with these severe but rare adverse events.

The Dermatology Workforce Shortage in Eastern Ontario: Survey Results and Implications for the Future

Caroline E. Heughan;1 Nordau Kanigsberg;1 Esiahas Amdemichael;2 Dean Fergusson;3
1. Division of Dermatology, University of Ottawa and The Ottawa Hospital, Ottawa, ON; 2. Private Practice, Cambridge, ON; 3. Ottawa Health Research Institute, University of Ottawa, Ottawa, ON

Introduction: It is well recognized that dermatology is an under-serviced specialty. Wait-times to see a dermatologist are increasing and the demand for dermatological services continues to grow. Eastern Ontario has a critical shortage of dermatologists, which reflects the deficiency experienced within North America. We surveyed dermatologists in Eastern Ontario 3 times over a 7-year period to ascertain demographic data, workload, and career plans in order to understand the basis of this workforce shortage and outlook for the future.

Methods: A survey was sent by mail in 1999, 2003, and 2006 to all dermatologists whose primary practice was in Eastern Ontario. Information requested included practitioner age, the number of half-days of clinic worked per week and number of patients seen, the number of weeks spent working and average number of patients seen per year, the average wait-time to see new and returning patients, and the number of years expected to remain in practice.

Results and Conclusions: One hundred percent of dermatologists practicing in Eastern Ontario responded to all three surveys. Despite a growth in the population, the number of practicing dermatologists decreased from 26 in 1999 to 23 in 2006. Ten of these 23 dermatologists plan to retire within the next 5 years. The wait-time to see a new patient increased from 5.8 weeks to 18.5 weeks from 1999 to 2006 respectively, well above the Canadian average of 7.1 weeks. In the event that all residents trained at the University of Ottawa remain to practice in Eastern Ontario, the shortage of dermatologists in this region will persist. The findings of this study emphasize the need for additional funding for dermatology training positions, continued mentorship in general dermatology, as well as incentives to attract doctors to under-serviced areas.

Revisiting blashkos lines and mosaicism

Fatemeh Jafarian MD

Cutaneous mosaicism continues to be a fascinating field of research in dermatology. The term mosaicism refers to the occurrence in an individual of two or more genetically different cell population derived from a genetically homogenous zygote. This presentation reviews the current knowledge of cutaneous mosaicism and its important implications in the pathogenesis of patterned skin disease and genetic counselling.

Cutaneous B-cell Chronic Lymphocytic Leukemia Mimicking Necrobiosis Lipoidica: An Unusual Case

Sunil Kalia;1 Chih-ho Hong;1,2 Richard Crawford;1,2
1. Department of Dermatology and Skin Sciences, University of British Columbia, Vancouver, BC; 2. St. Paul’s Hospital, Vancouver, BC

Introduction: Hematological malignancies uncommonly infiltrate the skin. The presence of cutaneous manifestations in B-cell chronic lymphocytic leukemia (CLL) is estimated to range from 4% to 44%. Skin biopsy of a cutaneous infiltrate of CLL usually shows nodular aggregates of atypical lymphocytes. We present a case of CLL developing in the skin which on biopsy showed histologic features of necrobiosis lipoidica.

Case Presentation: A 67 year-old male known to have CLL presented with an asymptomatic eruption overlying the left thigh of seven months duration. This eruption was initially treated as shingles with valacyclovir by another physician. However the medication resulted in no improvement. The patient was referred for dermatologic assessment.

Examination revealed red brown to slightly purple infiltrated papules with slight superficial scale on the anterior and lateral thigh. A skin biopsy was done. Histology showed palisading granulomata surrounding areas of altered collagen, similar to necrobiosis lipoidica. Immunohistochemistry demonstrated a clonal B-cell population within the inflammatory infiltrate suggesting cutaneous infiltration of CLL.

Discussion: Necrobiotic granulomatous inflammation is known to occur in cutaneous T-cell lymphoma, Hodgkin’s disease and multiple myeloma. There have been cases reported in the literature that have identified CLL with granulomatous inflammation as seen in our case. Granuloma annulare-like inflammation was seen in one of the cases of cutaneous CLL invasion, and in another case, histology revealed necrobiotic inflammation with CLL. This association highlights the importance of considering necrobiotic granulomatous inflammation in the diagnosis of cutaneous infiltration by B-cell CLL.
Dermatology in the Medical School Curriculum: A Canadian Survey

Carly Kirshen B.Sc, MD (cand)

Skin diseases affect between one quarter and one third of the population at any given time and are increasingly being managed by nondermatologists. Studies have revealed that dermatologists are superior to nondermatologists in their ability to recognize and manage cutaneous diseases; however, performance in dermatology diagnosis improves with increased training. All residents and physicians encounter skin diseases and thus, it should be essential to teach core dermatology skills to all undergraduate medical students across the country. With the long waitlists for dermatologists, medical graduates need to be able to recognize the need for referral or treat the primary problem. Disappointingly, the average number of hours of dermatology education has fallen from 18 to 10 hours between 1967 and 1983. Since, in Canada, there are currently no accreditation requirements for medical schools concerning dermatology, the approach is not standardized and experiences vary greatly. This presentation will provide an outline of dermatology curriculums throughout Canada and suggest moving towards a standard that dermatologists and educators across the country can apply and in time evaluate.

Where is the Line? A Reflection on the Ethics of Self-Promotion in Medicine

C. N. Kitson, University of British Columbia, BC

The Canadian Medical Association Code of Ethics explicitly acknowledges that doctors promote their services (and always have done). With the development of many new elective and cosmetic procedures and treatments, the promotion and advertising of these has become more aggressive, as befits a competition model in a free enterprise system. On the other hand, the CMA Code of Ethics prohibits doctors making recommendations of services (other than their own) or products for personal gain. In my own jurisdiction, the British Columbia College of Physicians and Surgeons, acknowledging the “Rocket v Royal College of Dental Surgeons of Ontario” decision in 1990, that advertising by professionals was to be as limited as possible, explicitly prohibits claims that are exaggerated, false, inaccurate or be reasonably capable of being misinterpreted. My intent in this presentation is to look at both sides of this dilemma, particularly as self promotion may conflict with the traditional search for knowledge associated with Medicine. I will present two working models for discussion, one from my experience and one from imagination.

Epidermal Growth Factor Receptor Inhibitors: A New Era of Dermatological Side Effects

John N. Kraft,1 Scott R. Walsh,2

1. Division of Dermatology, University of Toronto, Toronto, ON; 2. Division of Dermatology, Sunnybrook Hospital, University of Toronto, Toronto, ON

Epidermal growth factor receptor (EGFR) inhibitors are a group of novel biologically-targeted therapies that block molecular pathways affecting cancer growth and spread.

Two classes of EGFR inhibitors exist. Monoclonal antibodies directly block ligand-induced activation of the receptor tyrosine kinase; examples include a chimeric human/murine monoclonal antibody, cetuximab (Erbitux), and a fully humanized chimeric monoclonal antibody, panitumumab (Vectibix). In contrast, tyrosine kinase inhibitors bind to the tyrosine kinase portion of the EGFR and block its catalytic activity and subsequent signalling; examples include gefitinib (Iressa), erlotinib (Tarceva), lapatinib, and canertinib.

EGFR inhibitors represent a new approach in contemporary cancer therapy. They are approved or are under investigation for treating recurrent or metastatic squamous cell carcinoma of the head and neck, non-small-cell lung cancer, advanced pancreatic cancer, renal cell carcinoma, colorectal carcinoma that has metastasized following chemotherapy, and metastatic breast cancer.

As their use in oncology continues to expand, dermatologists will play a key role in recognizing and managing their cutaneous side effects.

Up to 100% of patients treated with EGFR inhibitors experience dermatological complications. Cutaneous side effects include an acneiform eruption, xerosis, severe paronychia, and less commonly, trichomegaly, hyperpigmentation, and telangiectasia. Since skin toxicity is universal to all varieties of EGFR inhibitors, skin involvement has been proposed as a marker for EGFR inhibition and degree of tumour response.

We present a series of patients seen in the Division of Dermatology at Sunnybrook Hospital with a variety of cutaneous manifestations of EGFR inhibitors. These dermatological complications are often distressing for patients and treatment is challenging. We provide an approach to managing these patients based on a literature review and our experiences.
Cost-Comparison of Managing High-Risk Basal Cell Carcinoma: a Canadian Study

Christian A. Murray;1 William Lear;2 Elizabeth Barnes;3 Nowell Solish;1
1. Women’s College Hospital, Toronto, ON; 2. University of Toronto Dermatology, Toronto, ON; 3. Toronto Sunnybrook Regional Cancer Centre, Toronto, ON

Introduction: Basal cell carcinoma (BCC) is the most common human malignancy and accounts for over 60 000 new cases of cancer in Canada annually. Although expensive to the Canadian health care system, few studies have reported the costs involved in management. This study calculates the costs of managing high risk BCC’s, comparing radiation with Mohs micrographic surgery (MMS).

Methods: 49 consecutive complex BCC cases presenting to a skin cancer referral centre were collected prospectively. All were located on the head and neck, and were either recurrent or situated in ‘at risk’ sites such as the eye, ear, lip or nose. All patients underwent MMS. Cases were reviewed retrospectively by a radiation oncologist. Costs for MMS included all actual costs management, with an additional amount added to account for the technical costs of the surgery. The costs of radiotherapy included physician fees and technical fees. A sensitivity analysis was performed using known recurrence rates from the medical literature.

Results: 5 patients were excluded from the comparative analysis as radiation was not recommended (age <50 or radiation would overlap with a prior radiation field) The overall average cost of Mohs surgery was $934 (range 846-1022) and $3661 (range 3617-3705) for radiotherapy (p< 0.01). There were no significant differences between subgroups (age, gender, previous therapy, duration of illness) within each treatment category.

Conclusions: This study attempted to document the costs associated with two well recognized and effective methods of treating complex BCC. Subgroup analysis revealed independent associations between aggressive histology, size, and site with the complexity of surgical closure, but these did not translate into significantly higher costs. Although we did notice a trend towards greater costs in patients with recurrent disease, in males, younger patients and tumors present for >1 year; these did not reach significance within our sample size. We hope this preliminary report will initiate further study into comparing Canadian costs of managing skin cancer.

Low Pressure Graduated Compression Stockings: Guidelines to Selection and Use

Robert N. Richards, North York General Hospital and University of Toronto, Toronto, ON

Introduction: The use of graduated compression stockings (GCS) is fundamental to the treatment and prevention of venous and edematous problems of the lower legs.

Methods: Information was collected from medical colleagues, manufacturers, pharmacies, patients, personal use and Medline searches.

Results and Conclusions: There are no specific international standards for the pressures or use of GCS. It is generally accepted that below knee GCS are as effective as longer stockings. Mid thigh and pantyhose are sometimes preferable (personal preference or upper leg problems). Low support hose pressures are better than no pressure at all and higher pressures are not always better than lower pressure stockings. GCS of medium pressures of 20 mm of mercury at the ankle are ideally suited for widespread use for the prevention and treatment of lower leg problems in dermatology practice. Cases requiring stronger GCS pressures are usually treated in consultation with vascular specialists or a wound clinic. Doppler tests are helpful in assessing leg veins and arteries and provide the brachial ankle index. GCS over 20 mm of mercury at the ankle are often by prescription for (tradition and insurance requirements).

GCS are underutilized for various reasons including cost, application problems, colour selection and most specifically, lack of detailed instructions. Low pressure GCS are helpful to acclimatize patients to GCS before proceeding to higher pressures and are helpful for patients who should have but who cannot tolerate the higher pressures. In Canada the commonly available non prescription low and medium pressure GCS (8-15 and 15-20) are manufactured by Airway, Jobst, Sigvaris, and Venosan. Pressures given by the manufacturer are machine determined but in actual usage will have a variance of 2 to 5 mm of mercury plus or minus depending on leg and ankle shape. Patients considering GCS should often try different brands as different products may suit different individuals. Socks may be machine washed in cool water and air dried but should not be put in a dryer.
Sun Protective Behaviours in Ontario: Results of the National Sun Safety Survey 2006

Cheryl F. Rosen;¹ David Northrup;¹ Erin Pichora;¹ Bronwen Waller;¹ Michael Spinks;⁴ Loraine D. Marrett;³,⁵

1. Toronto Western Hospital, University of Toronto, Toronto, ON; 2. Institute for Social Research, York University, Toronto, ON; 3. Surveillance Unit, Division of Preventive Oncology, Cancer Care Ontario, Toronto, ON; 4. Cancer Care Ontario, Toronto, ON; 5. Dept of Public Health Sciences, University of Toronto, Toronto, ON

The first Canadian survey of sun exposure and protective behaviours was conducted in 1996. Analysis of Ontario data from this time showed that Canadians were not adequately protecting themselves from the harmful effects of the sun: 37% of those aged 15 to 24, and 47% of children aged 12 and under reported spending an average of 2 or more hours of their leisure time in the sun every summer day. Over 50% of adults and 46% of children had at least one sunburn during the summer months and fewer than 50% of adults always or often engaged in sun protective behaviours such as seeking shade, avoiding sun in the peak hours, covering up with clothing, using sunscreen or wearing sunglasses.

The Second National Sun Survey has recently been completed, providing data on sun exposure and sun protective behaviours during the summer of 2006. Preliminary analysis of Ontario data suggest that approximately 17% of people had at least one sunburn, while 83% did not sunburn at all. Within the 12 months preceding the survey, 15% of Ontarians between ages 18 and 34 used tanning equipment. 18% of women used tanning equipment compared to 8% of men. On a typical weekday in the summer, 41% of adults spent more than 1 hour in the sun, whereas on a typical weekend day 70% of Ontarians spent more than 1 hour in the sun between 11:00 a.m. and 4:00 p.m.. When out in the sun for more than 30 minutes, 46% of Ontarians always or often sought shade or avoided direct sun exposure between 11:00 a.m. and 4:00 p.m and 41% always or often used sunscreen on their face. Of note, women were at least twice as likely to use sunscreen on the face (58%), compared to men (26%).

A New Topical Anti-Inflammatory Chronic Wound Care Toolkit: Dressings With Ibuprofen, Ionized Silver, MMP Sequestering Granules

Gary Sibbald;¹ Kevin Woo;¹ Patricia Coutts;² Marjorie Fierheller;² Sunita Coelho;¹

1. Women’s College Hospital, Toronto, ON; 2. Private Practice, Mississauga, ON

Chronic wounds require a consistent approach to treatment of the cause, and patient centered concerns prior to considering the components of local wound care. Wounds can be stalled due to inadequate debridement, prolonged inflammation, or increased superficial bacterial burden or deep infection, and moisture imbalance. We are now recognizing the potential important role that topical anti-inflammatory agents can play in modulating abnormal inflammation that stalls healing. Anti-inflammatory action has been demonstrated from dressings with topical non steroidal anti-inflammatory agents (NSAIDs), ionized silver, and protease sequestering agents. Randomised controlled trials have demonstrated clinical efficacy from these agents in the treatment of stalled wounds not healing at the expected rate. We will present evidence for the beneficial action from:

a) topical NSAID (ibuprofen) combined with a advanced foam dressing (partial fluid lock and fluid exchange) in reducing pain for persons with venous leg ulcers.

b) Ionized silver in an absorptive dressing for stalled venous ulcers with increased bacterial burden.

c) Protease absorbing substrate in miscellaneous stalled chronic wounds (venous, diabetic, and pressure ulcers).

These three dressings constitute a new topical anti-inflammatory tool kit. It is important to rule out infection of the deep compartment prior to applying these agents. If local wound pain is the major issue, the topical NSAID preparation would be preferred. If increased bacterial burden is noted in the superficial compartment, ionized silver will provide appropriate anti-microbial control. MMP sequestering agents are useful in non-infected but chronically inflamed stalled chronic wounds. The benefit to side effect risk of these topical agents is substantial over oral anti-inflammatory alternatives (especially oral NSAIDs) that have been associated with renal compromise and gastrointestinal hemorrhage in the elderly population.
The Use of Betadine in Chronic Non-Healing Wounds: A Pilot Study

Kevin Woo; Sunita Coelho; Gary Sibbald, Women's College Hospital, Toronto, ON

The gold standard for the management of chronic wounds is to prepare the wound bed for optimal healing by treating the cause, addressing patient centered concerns and maintaining moist interactive healing. However, this paradigm does not apply to wounds where the cause cannot be treated or to patients who are not able to adhere to the treatment plan due to personal/system/cost issues. When healing is not the primary objective, these wounds are often described as maintenance (will stay the same) or non-healable (will probably deteriorate). Moist interactive healing is contraindicated in non-healable wounds. Instead, local wound care involves conservative debridement, moisture reduction, and bioburden management. These wounds are best treated with antiseptics because the decrease in bacterial burden and moisture reduction are more important than tissue toxicity. The purpose of this pilot study is to assess the effectiveness of topical povidine-iodine (PVP-I) as a topical antimicrobial agent to manage maintenance or non-healable wounds. We conducted a retrospective chart review of 30 patients (17 male and 13 female) with a total number of 42 wounds. Of all the wounds reviewed, 28% achieved complete closure and 74% improved with topical PVP-I. Surface areas of the wounds were significantly smaller than the initial measurements in this cohort of patients with chronic wounds (Wilcoxon signed ranks test, p=0.011). We concluded that judicious use of povidone-iodine in selected patients may be an option to the treatment of maintenance and non-healable wounds.

Keynote Presentation: Approaching your Maintenance of Certification

Erik Stratman, Chairmam for the Council on Education for the American Academy of Dermatology

The Royal College of Physicians & Surgeons of Canada and the American Board of Medical Specialties have each designed a framework for Maintenance of Certification. In this educational session, the components of the two programs will be compared and contrasted, and educational efforts of the American Academy of Dermatology which would help address these components will be highlighted.

IL-10 Analysis of Lesions of Vitiligo After Treatment with Topical Tacrolimus: Completed Study

Zaki A. Taher; Sheilagh Maguiness; Gilles Lauzon; Marlene Dytoc, University of Alberta, Edmonton, AB

Background: Vitiligo is an acquired dermatologic condition that is characterized by depigmentation of patches of skin. It is relatively common, occurring in about 0.38-0.50% of general population, and can engender significant cosmetic disfigurement and psychological sequelae on the affected individual. Recent studies demonstrate that topical tacrolimus (Protopic®) is efficacious in the treatment of vitiligo. We propose that the successful treatment of vitiligo with topical tacrolimus involves the unique immunosuppressive actions of the T lymphocyte Th2 cytokine, interleukin-10 (IL-10).

Methods: We aimed to monitor clinical changes in lesions of vitiligo treated with topical tacrolimus 0.1% ointment (Protopic®) and quantitate IL-10 cytokine levels in non-vitiliginous skin, as well as lesions of vitiligo before and following topical tacrolimus therapy. Clinical evaluation of lesions of vitiligo on the basis of surface area and follicular repigmentation under Wood's lamp was performed in 20 enrolled adult patients. Biopsy specimens were obtained from non-vitiliginous skin, as well as lesions of vitiligo before and following topical tacrolimus (Protopic®) therapy. Specimens were processed and analyzed for expression of IL-10 using the method of Enzyme Linked Immunosorbert Assay (ELISA).

Results: A statistically significant mean decrease in vitiligo lesion size of 41.0% ± 5.2 (mean ± standard error) was observed following 3 months of treatment. A pattern of follicular repigmentation was noted by the third month of treatment for all patients completing study. In addition, there was a statistically significant difference between IL-10 expression in vitiligo lesions following treatment for 3 months with topical tacrolimus (Protopic®) compared to untreated vitiligo lesions (p=0.017) and normal skin (p=0.004).

Conclusions: These results confirm that topical tacrolimus is an effective treatment for vitiligo. We propose that topical tacrolimus (Protopic®) increases IL-10 expression in vitiligo lesions, and thereby inhibits melanocyte destruction triggered by unchecked Th1 pathways in vitiligo.
Development and Validation of A Comprehensive Acne Severity Scale (CASS)

Jerry K. Tan;1,2 Jing Tang;2 Karen Fung;1 Aditya K. Gupta;1,3 Richard Thomas;1 Sheetal Sapra;1 Charles Lynde;1 Yves Poulin;1 Wayne Gulliver;1 Rolf J. Sebaldr;10


Background: Although more than 25 acne grading systems exist, only 2 are inclusive of truncal acne. There is neither a gold standard nor consistently used standardized system.

Purpose: Our purpose was to develop and validate an acne grading system incorporating severity at face, chest and back.

Methods: We developed a comprehensive acne severity scale (CASS) by modifying a pre-existing facial acne scale, the Investigator Global Assessment (IGA), to include truncal acne. Validity and responsiveness of CASS grades were correlated with Leeds scores at baseline and after 6 months of standard acne treatment.

Results: Spearman correlations were significant between Leeds and CASS grades for face (0.823), chest (0.854) and back (0.872), respectively (P<0.001). After 6 months of therapy, changes in these scores were also significantly correlated (P<0.001) at all 3 sites.

Conclusion: Concurrent validity of CASS is demonstrated by a very strong correlation with Leeds grading. Furthermore we demonstrate that CASS is responsive to improvement with treatment. CASS is simpler to use than the Leeds system and more appropriate for translation of research trial results to clinical practice.

Rational Limits of Modern Hair Transplanting

Walter P. Unger, Private Practice, Toronto, ON

Introduction: Most hair exits the scalp in small groupings of two to four follicles that are referred to as Follicular Units (FUs). Virtually all modern hair transplanting is carried out utilizing grafts that contain only a single FU. The main advantage of that approach is that a single session of follicular unit transplanting (FUT) will look perfectly natural even in an area that is totally alopecic or destined to become so. Initially, FUT produced only relatively low density. The procedure, however, has been markedly improved during the last approximately five years. The purpose of this presentation is to acquaint dermatologists with the implications of those changes, and concurrently to discuss rational limitations of hair transplanting—given the preponderance of misleading advertising.

Methods: A strip of hair-bearing donor skin approximately 8 mm to 10 mm wide is excised from what is judged to be permanent hair-bearing skin in the rim of patients who have Male Pattern Baldness (MPB) or Female Pattern Hair Loss (FPHL). The donor strip is divided utilizing a stereoscopic microscope into individual FU that will be placed into small incisions, made with ordinary hypodermic needles or small blades, oriented at the same angle and direction as the original hair in the recipient area.

Results: “Before” and “after” photographs will be shown of a large number of male and female patients with early to extensive degrees of MPB and FPHL. These will demonstrate what is and isn’t possible to achieve with modern FUT.

Conclusions: Both male and female patients can benefit from hair transplanting. Contrary to popular belief, patients do not have to wait until the involved area is substantially or totally alopecic. Results can be expected to consist of good density hair that looks extraordinarily natural. There are, however, limits to all “good things”.

Congenital Nevi: A Case of Rapid Spontaneous Involution

Caridad Vera;1 Edmond Rizcallah;1 Julie Powell;2 Dominique Hanna;1

1. CHUS, Sherbrooke, QC; 2. CHU Sainte-Justine, Montreal, QC

Introduction: Melanocytic nevi are one of the most common cutaneous congenital lesions with an incidence rate near 5%. At birth, their morphology can vary from pale macules or patches to dark papules or plaques. They usually persist throughout life and may enlarge, darken and/or develop terminal hair. Depending on their size, number and location, some may be associated with complications such as malignant degeneration or meningeal involvement.

Methods: We describe the case of a 16 month-old female who was born with two brownish purplish lesions on the scalp. The plaques were located on the right parietal area and measured one and two centimeters. The pregnancy and delivery were uneventful. Over the next months, the lesions faded progressively. At 13 months of age, they were almost imperceptible. The growth and development of the child was completely normal.

Results: A skin biopsy was performed on one of the two lesions and showed residual congenital melanocytic nevi. Regression in these lesions is very rare and is usually associated
Conclusion: A congenital melanocytic nevus is a very common condition that may present with atypical clinical course and morphology. This is one of the rare cases showing spontaneous and almost complete regression of congenital melanocytic nevi occurring at a very young age.

Treatment Options For Generalized Pruritus
Scott R. Walsh, University of Toronto, Toronto, ON

Generalized pruritus without a rash (neurogenic pruritus) can be secondary to a variety of systemic diseases. Management of severe itch can be very frustrating for both the patient and the physician. This presentation will review current approaches to generalized pruritus based on pathophysiology. A review of current topical and systemic treatment options and their relative efficacies will follow. Focus will be placed upon the newer agents including mirtazapine and butorphenol.

Sarcoidosis
Scott R. Walsh, University of Toronto, Toronto, ON

Sarcoid is a multisystem granulomatous disease of unknown etiology. Formation of classically non-caseating epithelioid granulomas cause secondary derangement of normal tissue anatomy and function. Common sites of involvement include the lung, skin, lymph nodes and eyes. Morbidity may occur from ocular disease while mortality is most frequently due to pulmonary or cardiac involvement. Recent research suggests that granuloma formation is a product of various environmental exposures interacting with genetic factors that determine the pattern, progression and prognosis of the disease. Skin involvement is often one of the first presenting signs of systemic sarcoidosis. This presentation will review the pathophysiology, diagnosis, work-up and management of patients presenting with sarcoidosis of the skin with and without systemic involvement.

Dermatology Review 2006-2007
Scott R. Walsh, University of Toronto, Toronto, ON

This presentation will review recent advances reported in the basic sciences behind cutaneous diseases including psoriasis, vasculitis, T-cell lymphomas and dermal hypersensitivity reactions. Both new treatments and novel off-label uses of existing treatments featured in the current literature will also be highlighted.

Long Term Safety of ISA247 in Plaque Psoriasis After 60 Weeks of Dosing
Norman R. Wasel;1 Charles Lynde;2 Richard Langley;3 Robert Bissonnette;4 Robert B. Huizinga;5 Kim Papp;6 SPIRIT Study Investigators;7
1. Stratica Medical, Edmonton, AB; 2. Lynderm Research Inc., Markham, ON; 3. QEII Health Science Center, Halifax, NS; 4. Innovaderm Research Inc., Montreal, QC; 5. Isotechnika Inc., Edmonton, AB; 6. Probity Medical Research Inc., Waterloo, ON; 7. Canada

Introduction: ISA247, a new calcineurin inhibitor (CNI), demonstrates comparable efficacy with less toxicity than cyclosporine. A 60 week Phase III study with ISA247 in moderate to severe plaque psoriasis has been completed.

Methods: Plaque psoriasis patients (n=309) with ≥10 were enrolled into a 24 week study followed by a 36 week extension study. Patients were initially randomized to either placebo (12 weeks), 0.2, 0.3, and 0.4 mg/kg bid of ISA247 for 24 weeks. Placebo patients changed to 0.3 mg/kg bid at 12 weeks with all other groups converted to this dose at 24 weeks. After a total of 60 weeks of treatment, patients were followed for an additional 12 weeks. The primary objective of this extension study is to investigate long-term safety and tolerability of ISA247.

Results: The four most common treatment-related adverse events included hypertension (10.8%), exacerbated hypertension (3.4%), nasopharyngitis (3.0%) and nausea (1.7%). Renal function (mean GFR) remained stable over the 60 weeks, with 4.5% of patients experiencing a 30% decline in renal function. Renal function returned to normal in these patients after discontinuation of drug. PASI 50 response remained stable (67%, 68%, 67% and 63%) at weeks 24, 36, 48 and 60.

Conclusions: Results of this 60 week study demonstrate that long-term use of ISA247 was generally safe, well tolerated, and efficacious in the treatment of patients with stable plaque psoriasis.

A Dangerous Ulcer
Denise M. Wexler, University of Western Ontario, London, ON

Patient has had problems with non healing areas on the soles of the feet since 1998. Treated with zinc oxide wraps, various bandages, topical steroids and antibiotics, and Protopic ointment all with no effect. Assessed in 2004 and found to have one large ulceration on left lateral foot and numerous scaling papules on the soles of both feet. A previous biopsy was reported as consistent with pusular psoriasis. The initial differential included psoriasis, lichen planus, and discoi lupus. However, a biopsy of the ulcer was taken and showed...
a squamous cell carcinoma. Patient was referred to a plastic surgeon and the squamous cell carcinoma was excised. Left inguinal lymph nodes were also removed and were positive for metastatic disease. Since then further biopsies from two nodules in left thigh have also confirmed squamous cell carcinoma. One biopsy of the right foot did suggest an atypical lichen planus. The squamous cell carcinoma seems to be spreading locally and radiation was not felt to be an option. The patient has been started on Tarceva, one of the epidermal growth factor receptor inhibitors and to date there have been no side effects but there has been no improvement. Presented to show an unusual presentation of squamous cell carcinoma and use of one of the new epidermal growth factor inhibitors for treatment of a neoplasm.

Posters

The Identification of Cytoplasmic GW Bodies in Normal Human Skin

Karalee K. Shideler;1 Elaheh Akbari;2 Andrea Bruecks;3 Theophany Eystathioy;4 Marvin J. Fritzler;4 P. R. Mydlarski;5
1. Department of Health Sciences, Faculty of Medicine, University of Calgary, Calgary, AB; 2. Department of Medicine, Faculty of Medicine, University of Calgary, Calgary, AB; 3. Calgary Laboratory Services, Faculty of Medicine, University of Calgary, Calgary, AB; 4. Departments of Biochemistry and Molecular Biology, Faculty of Medicine, University of Calgary, Calgary, AB; S. Departments of Medicine and Medical Genetics, Faculty of Medicine, University of Calgary, Calgary, AB

Introduction: The GW182 mRNA binding protein has been shown to associate with specific mRNAs and reside within unique cytoplasmic compartments, termed GW bodies (GW Bs). Distinct from other organelles such as the Golgi complex, mitochondria, endosomes, lysosomes and peroxisomes, GW Bs are granular, electron-dense, amembranous bodies which range in size from 100 to 300 nm. Initially considered a site for mRNA storage and degradation, GW Bs have recently been linked to RNA interference (RNAi), microRNA (miRNA) processing, cell proliferation and cell cycle progression.

Methods: Using standard histopathology techniques, 8 μm-thick skin sections were cut from paraffin-embedded tissue blocks. Tissue sections were deparaffinized and treated with antigen retrieval methods (ARM). With mouse monoclonal antibodies to GW182 epitopes, GW Bs were identified on ARM-treated skin sections through indirect immunofluorescent techniques. Fluorescence intensity was measured semi-quantitatively and the distribution patterns of GW Bs were characterized in normal human skin. For correlative studies, serial sections were stained with the Ki67 proliferation marker.

Results and Conclusion: We have identified novel cytoplasmic GW Bs in normal human skin. GW Bs are most prominent in highly proliferative cell populations such as the basal layer of the epidermis, the outer root sheath and germinative matrix of the hair follicle, the secretory cells of eccrine glands and the basaloid cells of sebaceous glands. In the bulge region of hair follicles and the deep rete ridges of the epidermis, known sites of adult human stem cells, we observed larger and more numerous GW Bs. Herein, we discuss the potential roles of GW Bs in cutaneous stem cells, skin homeostasis, repair and disease.
Contact Allergens in Persons with Leg Ulcers: A Canadian Wound Healing Clinic Study

Afsaneh A. Alavi; Gary R. Sibbald, University of Toronto, Toronto, ON

Introduction: Individuals with chronic leg ulcers commonly develop contact allergic reactions to topical preparations applied both on their wounds and the surrounding skin.

Objective: To determine the frequency of positive patch test responses to common allergens in patients with leg ulcers or venous disease followed in a dermatologist supervised leg ulcer clinic.

Methods: We enrolled 100 consecutive, consenting patients with chronic venous disease and other causes of leg ulcers that were available for patch testing into a case series. The patients were tested with 39 common allergens including those most relevant to persons with leg ulcers.

Results: Forty six percent of the patients had at least one positive patch test response. Multiple reactions were common. The most frequent groups of sensitizers were fragrances, lanolin, antibacterial agents and rubber related allergens.

Conclusions: Though the prevalence of positive patch test reactions is high in this population, it is lower than commonly reported. This may be the result of clinical practice where in common sensitizers were avoided in the management of this group of patients.

A Prospective, Descriptive Review of the Manifestation of Diabetic Foot Ulcers

Afsaneh A. Alavi; Ronald G. Sibbald, University of Toronto, Toronto, ON

Background: Diabetes is a common chronic disease with many complications including foot ulcers and potential non traumatic loss of a limb that causes a considerable human suffering and pain. In Iran, over 2 million of people are affected with diabetes mellitus and there is a high risk of amputation in this population. We evaluated to study the feet of PWD attending an outpatient Diabetic clinic to identify important characteristics of the foot as a guide to the development of foot clinics and the prevention of amputations in PWD.

Methods: A skin biopsy was performed. Microscopic examination revealed dermal deposits of a protein-derivative substance. Histopathological differential diagnoses included amyloidosis, colloid milium, lipid proteinosis, cutaneous macroglobulinosis and erythropoietic protoporphyria. The deposits were PAS-positive and diastase resistant. Other special stains were all negative (Congo red, T-thioflavin, Giemsa-Weigert). These observations enabled us to make a final diagnosis of cutaneous macroglobulinosis.

Results and Conclusions: There are 2 types of cutaneous involvement with Waldenström Macroglobulinemia. The infiltrating form consists of plaques and nodules which occur mainly on the face, trunk and proximal extremities. The other form, macroglobulinosis, is characterized by direct skin deposition of macroglobulins, the so-called « IgM-storage papules ». They are highly specific of the disease. Upon physical examination, these papules arise on the extensor surfaces of the elbows, knees and buttocks. Pruritus is most
Posters

often minor or absent. Recognition of these peculiar skin lesions could possibly lead to an early diagnosis of this rare hematological condition.

**Persistence With Efalizumab for Plaque Psoriasis in Clinical Practice Versus a Clinical Trial Setting**

Kirk Barber; The Dermatology Centre, Calgary, AB

**Introduction:** Plaque psoriasis is a chronic skin disease that requires long-term management, therefore patient persistence with treatment is crucial for optimal control of symptoms. Topical and non-biological systemic drugs may hinder persistence because of their limited efficacy, potential toxicity, or inconvenient route of administration. The biological drug efalizumab is a humanized CD11a antibody; thus it specifically targets the immune response thought to be involved in psoriasis pathogenesis. Efalizumab has been approved for the treatment of adult patients with chronic moderate to severe plaque psoriasis. Several phase 3 clinical studies have demonstrated the efficacy and safety of efalizumab for continuous use over the short and long term (up to 3 years). Treatment persistence in the clinical trial setting is examined alongside persistence in ‘real-life’ clinical practice.

**Methods:** Data were obtained from the ACD2243 clinical trial and the Clear Support Program™ (CSP). The ACD2243 trial is an open-label trial that evaluated the efficacy and safety of treatment with efalizumab in adults with moderate to severe psoriasis. After the initial 12-week trial period, 86% (290/339) of patients who responded to efalizumab enrolled in a 33-month treatment extension. The CSP, a Canadian support program for patients who were prescribed and receive efalizumab, provides education, access to nurses, and insurance reimbursement advocacy. Persistence over 1 year of treatment with efalizumab in the ACD2243 trial and the first 200 patients enrolled in the CSP were compared.

**Results and Conclusions:** 12 months post-initiation, approximately 67% (228/339) of patients enrolled in the ACD2243 trial and 72% (145/200) of patients enrolled in the CSP remained on efalizumab therapy. These results indicate that persistence with efalizumab therapy and thus the long-term outcomes of treatment is high in the “real-life” clinical practice with patient training and active support.

**Chronic Actinic Dermatitis at the Ottawa Clinic**

Renee A. Beach;1 Melanie D. Pratt;2

1. McMaster University School of Medicine, Hamilton, ON; 2. Department of Dermatology, University of Ottawa, Ottawa, ON

**Introduction:** 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 4 cases of CAD seen in the Ottawa patch-test clinic in the past 5 years.

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 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 Chemotechnique or Hausen Plant Series, and photopatch tested to the NACDG photoseries. Readings occurred at 48 and 96 hours.

**Results and Conclusions:** 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 Chemotechnique or Hausen Plant Series, and the NACDG photoseries. Biopsy results were consistent with an eczematous pathology. Therapeutic management was determined on an individual basis, but largely consisted of sun-avoidance and sun-protection, as well as topical and oral steroid agents, immune modulator drugs, and symptomatic treatment.
Isotretinoin-Induced Hypertriglyceridemia Controlled With Concurrent Hypolipidemic Therapy

Renee A. Beach;1 Judy Wismer;2
1. McMaster University School of Medicine, Hamilton, ON; 2. Head, Division of Dermatology, McMaster University, Hamilton, ON

Introduction: Isotretinoin (Accutane, Claravis) is an oral retinoid treatment for recalcitrant, nodular-cystic acne. It is also a teratogen with several adverse effects. Here we report the development of significant hypertriglyceridemia in a young woman receiving isotretinoin therapy. The hypertriglyceridemia was refractory to dose and dietary modification. This necessitated hypolipidemic therapy to continue isotretinoin treatment.

Case: A 16 year-old woman with worsening cystic acne and no past medical history was prescribed Accutane 0.5mg/kg/day. Family history was positive for hypercholesterolemia and hypertriglyceridemia in her maternal grandfather and mother.

Course #1: After two months, she displayed elevated cholesterol and triglycerides. Treatment was discontinued to avoid acute pancreatitis secondary to her elevated triglycerides.

Course #2: Within one month, hypertriglyceridemia recurred and the drug was discontinued. The patient's cystic acne worsened and included scarring despite courses of minocycline, Diane-35, spironolactone and photodynamic therapy over the next 12 months.

Course #3: In anticipation of recurrent hyperlipidemia, she was prescribed atorvastatin calcium (Lipitor) along with low-fat diet, exercise and alcohol abstention during a 6 month course of Accutane. The sole side-effects were xerosis and chelitis. Her acne cleared. Lipitor was discontinued one month later.

Results and Conclusions: This patient required concomitant atorvastatin therapy in order to tolerate isotretinoin. A fibrate would have also been an appropriate hypolipidemic therapy option.

Investigation of concurrent isotretinoin and triglyceride-lowering medication within a larger patient sample would be beneficial. Dermatologists should therefore carefully monitor lipid levels during isotretinoin therapy and consider introducing triglyceride-lowering pharmacotherapy for significant isotretinoin-induced hypertriglyceridemia.

### Cellular Telephone Contact Dermatitis With Nickel Allergy

John Luo;1 Lionel Bercovitch;2
1. Program in Liberal Medical Education, Brown University, Providence, RI, USA; 2. Dept of Dermatology, Brown Medical School, Brockton, MA, USA

Case Report: An 18 year old male presented with a pruritic lichenified dermatitis of the lower abdomen with eczematous dermatitis of the extremities, flanks, and face of several weeks duration. He was clinically diagnosed with probable allergic contact dermatitis to nickel in his belt buckle with autoeczematization (id reaction). Patch testing using the NACDG allergen tray disclosed a 2+ (edematous papulovesicular) reaction to nickel but no other reactions. His belt buckle tested strongly positive for free nickel with the dimethylglyxime (DMG) spot test. He suspected the rash of the flank was related to contact with the antenna of the cell phone he wore in a belt holster and that his facial dermatitis was related to contact with the headphone. DMG testing using the NACDG allergen tray disclosed a 2+ (edematous papulovesicular) reaction to nickel but no other reactions. His belt buckle tested strongly positive for free nickel with the dimethylglyxime (DMG) spot test. He suspected the rash of the flank was related to contact with the antenna of the cell phone he wore in a belt holster and that his facial dermatitis was related to contact with the headphone. DMG testing revealed the antenna, which was plastic coated with metallic paint, to be negative and the headphone to be strongly positive for free nickel. He switched to a cell phone which contained no detectable free nickel and his facial dermatitis improved.

Evaluation of cellular phones for free nickel: 20 different popular models of cellular telephones from 7 manufacturers were tested with the DMG spot test for free nickel. Although most cellular telephones are plastic, several widely used brands were positive for free nickel, the commonest sites being the menu button, the area bordering the screen, and the headphones. Results of DMG testing of the various cell phone models and photographs illustrating the sources of nickel in the phones will be presented.
Conclusion: Cellular telephones can contain free nickel and should be considered as a possible cause of facial and ear contact dermatitis in nickel sensitive individuals.

Evaluation of the Comparative Efficacy of 50% Isopropyl Myristate (IPM) vs. Two Marketed Pediculicides in a Phase Two Clinical Design

James N. Bergman;1 Nalini Kaul;2 Kathleen G. Palma;3


Introduction: Head lice infestation is a major nuisance and remains a significant cause of embarrassment and frustration to parents/school authorities, lost time and increased costs. Over the counter (OTC) treatments containing pyrethrins/permethrins are commonly employed to treat head lice. Over time the ongoing use of OTC and prescription products has led to the development of pediculicide resistance, creating a therapeutic dilemma. Parents frustrated with lack of efficacy and concerns regarding potential safety of OTC & prescription pediculicides can resort to unproven home remedies/natural products. Safe, effective easy to use treatments are needed. Resultz™ (50% IPM) a colourless, odourless rinse was developed to attempt to provide a safe, easy to use alternative for resistant pediculosis. The primary objective was to evaluate the efficacy of Resultz™ in comparison to 2 other marketed products (Lyclear™) (1% permethrin) or RID® (0.33% pyrethrin, 4% piperonyl butoxide) in two phase 2 clinical trials with a controlled, parallel design. The secondary objective was to assess the safety of Resultz™.

Methods: Evaluations for efficacy and safety were conducted at screening, baseline and in follow up on days 2, 6, 9, 14 for first trial and days 0, 7, 14, 21 for second trial. A trained technician after detangling hair, applied Resultz™, until the hair felt wet to touch. The comparator was applied as per package instructions. After 10 minutes the hair was rinsed and combed for dead/dying adult lice and nymphs. On follow up days subjects were assessed for live lice. Safety was assessed from scalp irritation (erythema/edema) and adverse events/subject complaints.

Results & Conclusions: Subjects were successes if lice free, 7 days post treatment (first trial) and 7 & 14 days post treatment (second trial). Resultz™ showed higher success rate (p<0.001) (higher cure / fewer re-infestations) than Lyclear or RID. Adverse events were of mild severity in both trials. Resultz™ is an easy to use treatment option for head lice infestations that has demonstrated efficacy and safety.

A Novel Pediculicide Rinse: Mechanism of Action and Unique Product Features

James N. Bergman;1 Nalini Kaul;2 Kathleen G. Palma;3


Introduction: Head lice infestations are a major nuisance in school age children resulting in many lost school days and frustration for all concerned. Head lice resistance exists with both over the counter (OTC) and prescription pediculicides and therefore a safe and effective alternative is needed. A new colorless, odorless pediculicide rinse (Resultz™) with 50% Isopropyl Myristate (IPM)-active and 50% cyclomethicone (DS)-excipient has been developed. Our objective was to determine efficacy /dose ranging, miscibility and mode of action for 50% IPM rinse.

Methods: In vitro tests (body louse model) evaluating lice mortality to various investigational formulations were conducted. Additionally, studies to determine the active components responsible for efficacy within these formulations were carried out. The optimal concentrations for product efficacy against head lice was determined by in vitro dose ranging studies using different concentrations of IPM :DS. Scanning electron microscopy was used for determining the possible mode of action. Tests evaluating lice mortality from both direct contact or ingestion of 50% IPM were also completed. In addition, miscibility experiments for determining spreading characteristics of the product were conducted.

Results and Conclusions: Results demonstrate that IPM is the active pharmaceutical ingredient (API) and DS acts as a spreading agent in the formulation. 50% IPM is the optimal concentration for pediculicide use and the mechanism of action was demonstrated to be dehydration through disruption of the integrity of the exoskeleton. In vitro efficacy studies confirmed the optimal lice killing properties of 50% IPM rinse and demonstrate that “controlled contact coverage” of the louse with IPM dissolves the protective wax layer on the exoskeleton leading to loss of louse body fluid homeostasis and fatal dehydration. Since IPM does not act through neurotoxicity but rather by a unique mechanical mode of action, lice are much less likely to develop future resistance to IPM.
A 1-Year Randomized, Double-Blind Safety Study of Long-Term Treatment of a New Gel Formulation Containing Calcipotriol Plus Betamethasone Dipropionate in Scalp Psoriasis

Marc Bourcier, Private Practice, Moncton, NB

Methods: Two treatment groups were included: the study group, which was treated with the two-compound gel product (once daily), and a control group, which was treated with calcipotriol in the same gel vehicle (once daily).

Eight hundred and sixty nine patients with at least moderate scalp psoriasis were randomized in a double-blind fashion to one of the two treatment arms in a 1:1 ratio.

Results: Seventy two patients (17.5%) in the two-compound group had adverse drug reactions (ADRs) compared to 127 patients (29.5%) in the calcipotriol group. The difference in ADRs between the groups was significant (odds ratio (OR) 0.50, p<0.001). The two most common ADRs, pruritus and skin irritation, were reported in an approximate 3:1 ratio of patients, favoring the two-compound group. ADRs associated with long-term topical steroid use on the scalp were judged by a blinded, independent safety panel to be present in 11 patients (2.6%) in the two-compound group and 13 patients (3.0%) in the calcipotriol group (OR 0.798, p=0.11). There were no incidences of adrenal suppression in the two-compound group. The frequency of withdrawals due to “unacceptable adverse events” or “unacceptable efficacy” favored the two-compound group in an approximately 2:1 and 5:1 ratio, respectively.

Conclusion: Once daily use of the two-compound gel in the management of scalp psoriasis over 52 weeks was demonstrated to be safe and efficacious.

Diet and Acne – Theory and Integration

F. William (. Danby, Dartmouth Medical School, Manchester, NH, USA

The link between acne and diet is strengthening and will be briefly reviewed.

Increased levels of acnegenic androgens, and lowered levels of sex hormone-binding globulin, result from diet-induced stimulation of hyperglycemia, insulin resistance, and elevated insulin-like growth factor (IGF-1).

High glycemic load (GL) diets stimulate the hyperglycemia/insulin resistance / IGF-1 complex, as does the ingestion of milk.

In addition, dairy provides oral sources of dihydrotestosterone precursors.

Data will be presented briefly.

The challenge of teaching (to both patients and parents) the pathogenetic theory, the concept of high GL, and the need for dietary changes and for ensuring compliance will be discussed.

The object is to teach the teachers first.

Treatment of Vitiligo with Narrow-Band Ultra-Violet B (NB-UVB): Advantages and Disadvantages

Sonya J. Abdulla; Jean-pierre DesGroseilliers, University of Ottawa, Ottawa, ON

Introduction: NB-UVB therapy for vitiligo is increasingly used in patients who are unresponsive to other forms of therapy. This study measures the levels of patient and physician satisfaction with this treatment as well as other associated advantages and disadvantages.

Methods: We conducted a retrospective chart review of the first fifty patients with vitiligo treated at the Photoderm Clinic in Ottawa, Ontario. In order to fully assess advantages and disadvantages of NB-UVB, additional outcomes were evaluated not only effectiveness.

Results: 26 male and 24 female were assessed. Percent repigmentation as evaluated by the physician was designated the primary outcome [poor (0-33%), good (33-66%) or very good (66-100%)]. The face and body responded better to NB-UVB than the hands and feet. The physician and the patients were very satisfied with the results achieved with NB-UVB therapy as evidenced by the “very good” grading (MD 48%, Pt 50%) and “good” grading (MD 24%, Pt 22%). Binomial logistic regression was used to identify factors associated with the achievement of superior repigmentation (i.e. VG) as well as superior patient and physician satisfaction (i.e. VG).

Conclusions: These results suggest that NB-UVB therapy is an effective treatment for vitiligo that results in superior levels of patient and physician treatment-related satisfaction. The high rate of associated side effects, the limited accessibility to NB-UVB units, long wait times, poor hand and foot repigmentation are associated drawbacks. However, the advantages of NB-UVB therapy that include its highly effective repigmentation of the face and body, high levels of patient/physician satisfaction and its relative safety compared to PUVA therapy, far outweigh the drawbacks.
An Unusual Case of Histiocytosis

Pierre-luc Dion,1 Marie-marthe Thibeault,1 Éric Gagné,1 Éric Mongrain;2
1. CHUQ - L’Hôtel-Dieu de Quebec, Quebec, QC; 2. Private Practice, Quebec, QC

Rosai-Dorfman disease (sinus histiocytosis with massive lymphadenopathy) is a relatively rare histiocytic proliferative disorder that was described in 1969. It usually presents with massive painless bilateral cervical lymphadenopathy often accompanied by fever, elevated erythrocyte sedimentation rate, leukocytosis and IgG polyclonal hypergammaglobulinemia. Extranodal involvement, which can be the sole manifestation of the disease, is common, being found in 25-43% of patients. Virtually any organ may be affected but the most common sites of involvement are the skin, eye, upper respiratory tract, skeleton and nervous system.

We describe the case of a 40 year old man who presented with multiple firm yellow-red papules that were progressing since his early twenties. The patient neither had palpable lymphadenopathy nor symptoms of systemic involvement. A skin biopsy showed a dermal infiltrate composed predominantly of histiocytes, some of them multinucleated. Emperipolesis, which is characteristic of the disease, was also observed. The histiocytic cells were immunohistochemically strongly positive for S-100 protein and weakly for CD68; they stained negatively for CD1a. The patient is currently under investigation for systemic involvement.

Multiple asymptomatic xanthomatous papules and nodules is a frequent mode of presentation of the cutaneous lesions of Rosai-Dorfman disease. However, several other clinical mode of cutaneous involvement have been described. Since the cutaneous lesions of Rosai-Dorfman are most of the time clinically non-specific, the diagnosis is based on a combination of characteristic histological and immunohistochemical findings.

Hand Dermatitis Evaluated in Health Care Workers: Does Referral to an Occupational Dermatology Specialty Program Make A Difference?

Jeffrey C. Donovan; Irena Kudla; D Linn Holness, James R Nethercott Occupational Health Clinic, University of Toronto, Toronto, ON

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 an Occupational Disease Specialty Program (ODSP) 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 ODSP streams between 2002-2006.

Results: Forty patients were evaluated by the GP stream and 16 were evaluated through the ODSP. Patch testing was performed with a greater number of allergens in the ODSP than GP stream (average 73.0 vs. 53.3, p<0.0001). 47 % of ODSP patients had occupationally relevant ACD compared to 19 % of GP (p=0.03). Overall, health care workers with hand dermatitis referred to the ODSP 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.

Whipple’s Disease: A Case with Cutaneous Manifestations

Angélique Gagné-Henley; Benoit Daneault; Dominique Hanna; Bruno Maynard, University of Sherbrooke, Sherbrooke, QC

Introduction: Whipple’s disease is a rare multisystem disorder caused by Tropheryma whippelii, a Gram-positive bacillus. Most commonly involved organs include small intestine, joints, eyes, heart and brain. Typical symptoms are weight loss, diarrhea, arthralgia and fever. Cutaneous manifestations of Whipple’s disease are very rare and generally non specific. They include hyperpigmentation, subcutaneous nodules, erythroderma, purpura, hyperkeratosis and urticarial lesions.
Methods: We present a case of a 54 year-old male who initially developed interstitial nephritis followed by profuse diarrhea and weight loss. An intestinal biopsy was consistent with celiac disease. Patient responded well to prednisone and a gluten-free diet. He also developed generalized lymphadenopathies; lymph node biopsy revealed granulomatous lymphadenosis. A diagnosis of sarcoidosis was thereafter suggested. He was then referred to dermatology for numerous petechias and follicular hyperkeratosis on both legs and arms.

Results: Skin biopsy revealed granulomatous dermatitis. Repeat biopsy of enlarged lymph nodes was performed and PCR was positive for T. whippelei. The patient was treated with intravenous ceftriaxone for 2 weeks followed by oral trimethoprim-sulfamethoxazole for one year. All his symptoms resolved completely.

Conclusion: In retrospect, all the patient’s manifestations (interstitial nephritis, malabsorption, generalized lymphadenopathy, and dermatitis) were due to Whipple’s disease. Since this disease is associated with diverse signs and symptoms, a multidisciplinary approach (including a dermatologist) may be optimal in the diagnosis and management of this rare disease.

Vactioning Dermatologist’s Responsibilities (or Busman’s Holiday)

William Gerstein, Montreal General Hospital, McGill University Health Center, Montreal, QC

On a recent trip to the river and canal system of Russia in September 2006, starting at St. Petersburg and in Moscow I had the opportunity of making some quite incidental and accidental dermatological diagnosis which range from lentigos, actinic keratosis to the discovery of a basal cell carcinoma on the nose of a fellow passenger and as well a possible lentigo maligna also of a fellow passenger’s face. The dilemma one faces when making such accidental diagnosis is what does one do—just simply pass it off as an interesting finding or do we have an obligation to inform the person of the diagnosis and the possible risks of non-treatment etc. Such interventions sometimes are not well received or welcomed by the person bearing such lesions.

There is a French expression - “jamais deux sans trois”. This was borne out when, on our way to the EADV meeting in Rhodes in October to present a poster (follow-up of one presented at the CDA in Quebec City 2003), we stopped in London and spent an afternoon at the Tate London Gallery to see the well known Turner Exhibition. There was a guided tour to this exhibition which we took. The docent for this tour was a delightful gentleman with a ruddy complexion and a flamboyant white moustache. He was very knowledgeable about Turner and provided an informative and witty discussion of the various landscapes and other masterpieces produced by this great English artist. Of great interest to me was that sitting in the middle of his left cheek was a very distinctive black irregular lesion of approximately the size of a dime.

The approach I took to each of these individuals will be discussed.

Papuloerythroderma of Ofuji

William Gerstein,1 Natalie Nasser,2

1. Montreal General Hospital, McGill University Health Center, Montreal, QC; 2. McGill University Health Center, Montreal, QC

Introduction: Papuloerythroderma of Ofuji (PEO) is a rare disease mostly of elderly men characterized by widespread pruritic flat-topped erythematous or red-brown papules that spare the skin folds, yielding the typical “deck-chair” sign.1 Associated findings are lymphadenopathy, peripheral blood eosinophilia, lymphopenia, and elevated immunoglobulin E (IgE) levels.2,3

Methods: We describe an interesting case that went several years before being diagnosed. It typifies the condition and classic clinical findings, including the “deck-chair” sign. The patient is an 80 year old woman who presents with an extremely pruritic eruption for almost 10 years, which has been worsening over the past 2 years. It has also remained resistant to various treatment modalities. Multiple biopsies have been done as well, which show no evidence of cutaneous T cell lymphoma. The rest of her workup also shows no signs of underlying malignancy or associated systemic illness.

Results: Currently, the challenge continues to be controlling her intractable pruritus. After failing topical and other treatments, an oral retinoid was added, but stopped by the patient after only one week secondary to worsening of her condition. Recently, she improved greatly when systemic corticosteroids were administered, but relapse remains a real concern, as well as side effects from therapy.

Conclusion: PEO is a condition which was first reported by Ofuji et al. in 1984. While some speculate that it may represent a variant manifestation or reaction pattern in the elderly of several different inflammatory dermatoses including atopic dermatitis, the actual etiology remains unknown. It may also present in association with an underlying internal malignancy, HIV/AIDS, hypersensitivity to drugs, or as a manifestation...
of cutaneous lymphoma. Other rare associations reported include hepatitis C, strongyloidiasis, or choledocholithiasis. Various treatments have been tried such as topical and systemic corticosteroids, psoralen plus UVA (PUVA), systemic retinoids, retinoid plus PUVA (Re-PUVA), cyclosporine, azathioprine, and interferon. The results have been variable.

Experience with Efalizumab Used in Clinical Practice

Martin Gilbert, Hopital de L’Enfant Jesus, Hotel-Dieu de Lévis, Quebec, QC

Introduction: Plaque psoriasis, also called psoriasis vulgaris, is a skin disorder manifested as erythematous patches with dry silvery white scales. These lesions are caused by abnormal keratinocyte proliferation and differentiation. The underlying molecular mechanism involves heightened T-cell activity targeting the skin. The biological immunomodulator efalizumab is a humanized anti-CD11a antibody that inhibits T-cell activation, reactivation, and migration. Numerous randomized, placebo-controlled phase 3 clinical trials have demonstrated that efalizumab is safe and effective for the treatment of moderate to severe plaque psoriasis in adults and it is approved for this indication. Furthermore, long-term clinical trials (up to 3 years) have demonstrated that it can provide continuous control of the disease.

Methods: This case series explores the effectiveness of efalizumab in a clinical practice setting. All patients were adults who initiated treatment with efalizumab for moderate to severe plaque psoriasis at our center. Patients were monitored for satisfactory control of their symptoms of psoriasis and adverse events.

Results and Conclusions: Treatment with efalizumab reduced the symptoms of psoriasis and was well tolerated. The management of these psoriasis vulgaris patients as well as some psoriasis variants will be discussed in detail.

Comorbidities Associated with Psoriasis in the Newfoundland and Labrador Founder Population

Wayne P. Gulliver, Zohair Tomi, Reza Alaghehbandan

Aim: Psoriasis is a common inherited inflammatory disorder of the skin that affects 1 to 2 percent of the population. The relationship between psoriasis and psoriatic arthritis has been well established clinically and genetically. Recently researchers have suggested that there may be other comorbidities such as lymphoma, obesity, type 2 diabetes, dyslipidemia, hypertension, cardiovascular disease and lymphoma and melanoma and non melanoma skin cancer linked to psoriasis.

Method: Using the Newfoundland and Labrador founder population through the Newfoundland & Labrador Centre for Health Information (NLCHI) we have undertaken the task of studying 3400 psoriasis patients with respect to these comorbidities.

Results: Initial investigation of 100 patients with mild and severe psoriasis showed increased rates of heart disease, diabetes, and hypertension with under representation of asthma. The present study has analyzed 3400 patients for these and other comorbidities, as well as, 800 patients who have been genotyped for HLA-Cw6 and TNF-α 238 have will have comorbidities and the genetic markers linked.

Conclusions: This study demonstrates that the use of the Newfoundland and Labrador founder population and its comprehensive health information data base linked to genetic analysis will be a powerful tool in understanding the genetics of comorbidities linked to psoriasis. Other significant findings include the association between early age of onset and HLA-Cw6 as well as the presence of psoriatic arthritis and genetic markers.

*Unrestricted funding from Serono International

The Impact of Pharmacogenomics and Safety Profiles of Anti-Psoriatic Therapeutics

Wayne P. Gulliver, NewLab Clinical Research Inc. and Memorial University of Newfoundland, St. John’s, NL

Our data suggested that HLA-Cw6 was linked to both the age of onset of psoriasis as well as the need for patients to require photo or systemic therapy for psoriasis treatment. Our knowledge of psoriasis genetics and pharmacogenomics has advanced significantly. With biologic therapy we can treat this severe and relentless disease. Biologics offer us not only improved therapeutic benefit but a more favorable safety profile. Multiple studies have looked for single-nucleotide polymorphisms (SMP) that may identify patients who are at risk of the rare significant adverse events which include: multiple sclerosis; optic neuritis; thrombocytopenia; onset or worsening psoriatic arthritis; congestive heart failure; and lymphoma. Pharmacogenomics research is ongoing to discover susceptibility genes that will allow us to identify patients at risk of the severe rare adverse events associated with biologics. Since these events occur infrequently it will take years and thousands of patients before significant numbers of adverse events occur which will allow us to do pharmacogenomics studies. One approach may be to pre-screen patients and see if they have SMP’s associated with rare adverse events. For
example: susceptibility loci have been identified for multiple sclerosis and these are contained in the HLA region on chromosome 6. Patients with susceptibility to optic neuritis have associated SNPs in the HLA region including HLA-A24, B51, B38, B27 and B35. Risks for non-Hodgkin’s lymphoma are associated with genes linked to HLA including TNF308G. IL10-3575A is also linked to the risk of development of non-Hodgkin lymphoma. Multiple susceptibility genes have also been linked to the development of thrombocytopenia. Genes in the RUNX family of genes are linked to thrombocytopenia and may be important in psoriasis and inflammatory disorders. Multiple genes linked to psoriatic arthritis include: HLA-Cw0602, SEEK1, Card15, TNF-α, IL1, RUNX1, and NFκβ and others. These well described susceptibility loci may aid in identifying patients at risk of inflammatory adverse events.

**Successful Treatment of Recalcitrant Pyoderma Gangrenosum with Raptiva**

Wayne P. Gulliver; NewLab Clinical Research Inc. and Memorial University of Newfoundland, St. John’s, NL

**Aim:** To study and understand the benefits of efalizumab therapy in the treatment of Recalcitrant Pyoderma Gangrenosum

**Method:** AB is a 53 year old gentlemen with a 16 year history of psoriasis. Past medical history included alopecia areata. There is a family history of lichen planus both in his mother and sister (his mother has also had SCC of the tongue related to lichen planus). Psoriasis was initially controlled with phototherapy. October of 2002 he developed multiple ulcers in the mid and upper back consistent with recalcitrant pyoderma gangrenosum. Over the next four years he was treated with a multitude of therapies including: Cyclosporin 200 mg per day, Cyclosporin 200 mg per day in combination with Methotrexate 7.5 mg weekly. His psoriasis remained under excellent condition but his pyoderma gangrenosum did not clear. On the first of May 2006, efalizumab treatment was initially at 0.7 ml (weight 108.6 kilograms) and then 1 ml SC weekly. September 25, 2006 the pyoderma gangrenosum was in complete remission as was the psoriasis. Between September 25th and November 25th the patient’s Methotrexate and Cyclosporin were tapered.

**Results:** The patient’s pyoderma gangrenosum and psoriasis remain in remission.

**Conclusion:** Efalizumab is a successful treatment for patients with recalcitrant pyoderma gangrenosum.

**HLA-Cw6 and TNF-α Polymorphisms May Help Predict Response to Biologic Therapy in Patients With Chronic Plaque Psoriasis**

Wayne P. Gulliver;1,2 Zohair Tomi;3 Syed Pirzada;1

1. NewLab Clinical Research Inc., St. John’s, NL;
2. Memorial University of Newfoundland, St. John’s, NL

Psoriasis is a common inherited inflammatory disorder that affects 1 to 2 percent of the population. With the introduction of biologics the treatment of psoriasis has been transformed. The following table indicates the efficacy of Biologic therapies:

To-date response to biologics has been based on clinical observation and no genetics markers have been found to predict response to treatment. Recently in rheumatoid arthritis response to etanercept may be predicted when patients are sub divided using single nucleotide polymorphisms, TNF-α 308, G/A genotype versus G/G genotype. It was found that the G/A genotype had a 20.1% response versus a 79.1% response in the G/G genotype.

Using the NL founder population we have genotyped 19 patients who have been treated with biologics. Seven treated with etanercept, 6 with Alefacept, 4 with Efalizumab and 2 with Infliximab. HLA-Cw6 status as well as TNF-α 238 and 308 status has been determined. The frequency of HLA-Cw6 is 32%, TNF-α 238 G/G is 85% and G/A is 15%. The TNF-α 308 G/G is 68% and G/A is 32%.

Preliminary results suggested that patients who are positive for HLA-Cw6 respond to biologics and those patients negative for HLA-Cw6 may fail biologics. In the Newfoundland and Labrador founder population analysis of TNF-α 238 and 308 SNPs will be analyzed and may also be useful in determining response to biologics as was seen in the rheumatoid arthritis patient population.

This study demonstrates that the use of the Newfoundland and Labrador founder population and HLA-Cw6 status may be helpful in predicting response to certain biologics.

*Funded by unrestricted grant from Serono

**Treatment of Palmo-plantar Plaque Psoriasis with Efalizumab**

Wayne P. Gulliver;1 Richard G. Langley;2

1. Memorial University and Newlab Clinical Research Inc., St. John’s, NL; 2. Dalhousie University, Queen Elizabeth II Health Science Centre, Halifax, NS

**Introduction:** Plaque psoriasis results from an overactive immune response directed at the dermis and epidermis. The characteristic silver-white scales of plaque psoriasis are
formed after T-cells infiltrate the dermis and epidermis and interact with keratinocytes. Palmo-plantar plaque psoriasis is a particularly debilitating form of the disease because it adversely affects quality of life, including physical and social function. Treatment of palmo-plantar plaque psoriasis by topical or non-biological systemic drugs is hindered by limited efficacy and toxicity. The biological efalizumab is a humanized anti-CD11a antibody that modulates the immune response by limiting T-cell activities such as migration to skin layers and interaction with keratinocytes. It has been approved for the treatment of adult patients with chronic moderate to severe plaque psoriasis and its efficacy and safety have been demonstrated in several randomized, placebo-controlled phase 3 clinical studies. Clinical data show that efalizumab is equally effective in difficult-to-treat patients (i.e., patients whose conventional treatments are ineffective, contraindicated or poorly tolerated). Evidence is also accumulating that efalizumab is beneficial to patients with palmo-plantar psoriasis.

**Methods:** A series of case reports is presented documenting the use of efalizumab for the treatment of palmo-plantar psoriasis in adult patients. In all cases, the psoriasis was not satisfactorily controlled by other treatments when efalizumab was initiated.

**Results and Conclusions:** These case reports suggest that efalizumab may be effective and safe for the treatment of palmo-plantar psoriasis. The management of these patients will be discussed in detail.

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**Efficacy of Efalizumab in Psoriasis Patients Inadequately Controlled by Alefacept**

Aditya K. Gupta, University of Toronto and Mediprobe Research Inc., London, ON

**Introduction:** An inappropriate immune response mediated by T-cells is thought to underlie the pathogenesis of psoriasis. The biological drugs efalizumab and alefacept are immunomodulators that are approved for the treatment of psoriasis in adults. Efalizumab is a recombinant humanized monoclonal antibody directed towards the CD11a site on leukocyte function associated antigen-1 proteins on T-cells. Binding of efalizumab to CD11a prevents T-cell activation, reactivation, and trafficking. Alefacept is a dimeric fusion protein consisting of the extracellular CD-2 binding portion of the human leukocyte function antigen-3 (LFA-3) linked to the constant portion of a human IgG1 antibody. By blocking LFA-3/CD-2 interaction, alefacept inhibits T-cell activation and proliferation and induces apoptosis of memory-T cells. Several randomized, placebo-controlled and open-label phase 3 studies have shown that efalizumab is effective for 3 years of continuous use. Efalizumab's efficacy was also demonstrated in difficult-to-treat psoriasis patients (i.e. patients who are unresponsive to or intolerant of conventional treatments). Patients inadequately controlled by alefacept may benefit from switching to efalizumab.

**Methods:** Case reports are presented that document difficult-to-treat patients whose psoriasis did not respond satisfactorily to alefacept. All patients were switched from alefacept to efalizumab treatment.

**Results and Conclusions:** Replacing alefacept with efalizumab improved the symptoms of psoriasis in these patients. Patients inadequately controlled with alefacept may benefit from switching to efalizumab.

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**Evaluation Of An Intermittent Oral Terbinafine Regimen Compared To Continuous Terbinafine And Pulsed Itraconazole Regimens For Onychomycosis**

Aditya K. Gupta, Mediprobe Research Inc., London, ON

A randomized, evaluator-blinded study was performed to compare the efficacy and safety of intermittent terbinafine with a standard course of continuous terbinafine and a standard pulse regimen of itraconazole in patients with dermatophyte toenail onychomycosis. Patients with mycologically confirmed dermatophyte onychomycosis were randomized to receive either: intermittent terbinafine (TOT)-250mg/d for 4 weeks followed by 4 weeks of no terbinafine, and then an additional 4 weeks of terbinafine 250 mg/day; continuous terbinafine 250 mg/day for 12 weeks (CTerb); or itraconazole pulse of 200 mg twice daily for 7 days on, 21 days off, 3 pulses given (Pitra). Mycological cure rates for the TOT, CTerb, and Pitra groups at week 48 from the start of therapy (per protocol analysis) were 47/64 (73.4%), 35/46 (76.1%), and 27/39 (69.2%), respectively (P not significant); effective cure rates were 36/64 (56.3%), 25/46 (54.3%), and 16/39 (41.0%), respectively (P not significant). At 72 weeks mycological cure rates were 40/50 (80.0%), 30/40 (75.0%), and 19/36 (52.8%), for the TOT, CTerb, and Pitra groups, respectively (P < 0.01 for TOT vs. Pitra). Effective cure rates were 37/50 (74.0%), 25/40 (62.5%), and 13/36 (36.1%), respectively (P < 0.001 for TOT vs. Pitra; P < 0.01 for CTerb vs. Pitra). No significant differences in effective and mycological cure rates were noted between the two terbinafine groups. Neither of the groups reported serious adverse events. Intermittent terbinafine (4 weeks on, 4 weeks off, 4 weeks on) is a safe and effective regimen for the treatment of dermatophyte toenail onychomycosis.
**Isolation and Characterization of Antifungal Resistance Genes in Trichophyton mentagrophytes**

Muhammad Zaman; Jagpal Singh; Aditya K. Gupta, Mediprobe Research Inc., London, ON

Trichophyton mentagrophytes is one of the dominant pathogenic dermatophyte fungi that may cause skin, hair and nail infection due to their ability to utilize keratin. Though these infections are rarely life-threatening, they can be a significant cosmetic concern. Where nails are involved, untreated infection can lead to thickened nails which can be physically debilitating. Although T. mentagrophytes infections are normally treated with antifungals, there is evidence that effective treatment can be compromised by T. mentagrophytes's ability to adapt to prolonged drug exposure. A clear understanding of the molecular mechanisms for T. mentagrophytes drug resistance is therefore critical in new drug formulation and for devising effective treatment regimens. The first step in such studies would be the isolation and characterization of genes involved in conferring drug resistance. A project was undertaken to investigate and characterize the genes involved in conferring antifungal resistance in T. mentagrophytes. Using DNA sequencing techniques, we have successfully isolated a T. mentagrophytes gene named Tmmdr1 which has significant homology to the ATP-binding cassette (ABC) genes. The ABC genes confer multiple drug resistance (mdr) in a wide variety of prokaryotic and eukaryotic organism, and thus may also play a role in T. mentagrophytes resistance to antifungal therapy.

**Efficacy and Safety of Extended Courses of Alefacept For the Treatment of Moderate to Severe Psoriasis**

Aditya K. Gupta, Mediprobe Research Inc., London, ON

Alefacept is an immunosuppressive dimeric fusion protein that interferes with T-lymphocyte activation. This drug has shown efficacy in moderate to severe psoriasis during the standard 12-week dosing phase followed by a 12-week follow-up phase, and has been approved for use in Canada. Extension of treatment has been studied, and a second 12-week dosing/12-week follow-up demonstrated that longer dosing periods could improve the efficacy of treatment without compromising patient safety. Similarly, an extended 16-week course of alefacept also showed efficacy and safety, and suggested that extended dosing could be performed without the 12-week follow-up period between dosing phases. Based on this data, an open-label extended dosing study was performed to investigate the efficacy and safety of continuous dosing with alefacept for up to 24 weeks. Interim analysis showed that at week 24, 14 subjects achieved PASI50 compared to 3 subjects at week 12 (66.7% vs 14.3% respectively; P=0.001). Similarly, 8 subject achieved PASI75 at week 24 compared to 1 subject at week 12 (38.1% vs 4.8% respectively; P = 0.016). One subject achieved sufficient efficacy at week 16 (PASI = 0.6, PASI95 status), and ended treatment: the PASI score was 0.3 throughout the 12-week follow-up. One subject experienced asymptomatic elevations in liver functions possibly related to study drug and treatment was discontinued. Another subject experienced worsening of psoriasis and was discontinued from the trial. A third subject discontinued due to shoulder pain which was unrelated to drug use. No subjects discontinued treatment due to low CD4 counts, and no other serious adverse events were noted. This interim data suggests that continuous dosing up to 24 weeks with alefacept is safe and effective.

**In Vitro Evaluation of Griseofulvin Against Dermatophytes Implicated in the Etiology of Tinea Capitis**

Aditya K. Gupta; Judith V. Williams; Muhammad Zaman; Jagpal Singh

1. Mediprobe Research Inc., London, ON; 2. Children’s Specialty Group, Division of Dermatology, Norfolk, VA, USA

Griseofulvin has been the treatment of choice for tinea capitis for more than 40 years and is the sole oral antifungal agent approved by FDA for the management of tinea capitis. In North America and the UK, T. tonsurans is responsible for more than 90% of cases, while M. canis is an important pathogen in Europe. There are concerns that resistance to griseofulvin treatment has been developing. We evaluated the in vitro activity of griseofulvin against T. tonsurans (145), M. canis (7), and T. violaceum (2) tinea capitis isolates using the CLSI M38-A method. We also evaluated if increased dosing requirement for griseofulvin is the result of resistance to griseofulvin treatment has been developing. We evaluated the in vitro activity of griseofulvin against T. tonsurans (145), M. canis (7), and T. violaceum (2) tinea capitis isolates using the CLSI M38-A method. We also evaluated if increased dosing requirement for griseofulvin is the result of resistance to griseofulvin. The geometric means of MIC values at 80% and 100% growth inhibition and 100% growth inhibition, as compared to control growth. The geometric means of MIC values at 80% and 100% growth inhibition observed for T. tonsurans isolates were: 0.45µg/ml and 1.1µg/ml; M. canis isolates: 0.19µg/ml and 0.61µg/ml; and T. violaceum: 0.71µg/ml and 2.83µg/ml, respectively. We conclude that MIC values for the T. tonsurans and T. violaceum isolates are higher than those observed for M. canis isolates. To evaluate for increased resistance with high doses of griseofulvin, T. tonsurans isolates were repeatedly grown on SDA supplemented with 2 and 4 times higher concentration of griseofulvin respective to their MICs. Of 142 isolates only 3 isolates could grow on 4 times MICs. Of 142 isolates only 3 isolates could grow on 4 times higher concentration of griseofulvin respective to their MICs.
higher concentration representing low resistance frequencies of 1.3x10^-6, 6.9x10^-7, and 9.7x10^-7. Based on these results, there does not appear to be an increased resistance of T. tonsurans to griseofulvin in vitro.

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**Efficacy and Safety of Topical Ciclopirox Lacquer combined with an Oral Terbinafine Regimen for Treatment of Onychomycosis**

Aditya K. Gupta, Mediprobe Research Inc., London, ON

The gold standard regimen for onychomycosis is terbinafine 250 mg/day for 12 weeks. Though this regimen is effective, there is room for improvement in the efficacy and safety of onychomycosis therapy. Addition of a topical nail lacquer to the pulse terbinafine regimen may add to the efficacy of therapy without significantly adding to the risk of adverse events. Efficacy of a combination pulse terbinafine/ciclopirox nail lacquer regimen (PL6) compared to standard 12-week continuous terbinafine (L12) was studied in a randomized, evaluator-blinded study. Outcomes at weeks 60 and 84 included: mycological cure (MC) - negative KOH and negative culture, and effective cure (EC) - Less than or equal to 10% affected area and MC. In an interim analysis of over 350 subjects, mycological cure in the subjects who have completed week 60 was found in 57% of PL6 subjects compared to 49% of subject using L12. These percentages increased to 67% and 58% respectively at week 84. No significant differences were detected in MC rates between treatment groups. Effective cure was found in 39% of PL6 subjects compared to 25% of L12 subjects at week 60. Again, EC rates rose at week 84, to 55% and 35% respectively, for each regimen. The difference in EC was significant at both weeks 60 and 84 (P=0.001 and P<0.001, respectively). No serious unexpected AEs have been reported, and adverse events experienced have been within those presented in the package insert for terbinafine. All cure rates considered increased in percentage from week 60 to week 84, suggesting that nail outgrowth continued to occur from week 60 to week 84, allowing for continued improvement in clinical evaluation of affected area of the target toenail. This study demonstrates that the use of ciclopirox nail lacquer with pulse terbinafine is effective and safe.

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**Dermal Elastosis in the Skin of Breast Following Radiation Therapy**

Sate Hamza, Health Sciences Centre, University of Manitoba, Winnipeg, MB

The case of an 83-year-old female with a history of ductal carcinoma in situ (DCIS) of the right breast is reported. She underwent a lumpectomy with axillary lymph node dissection in 1995. This was followed by radiation therapy that same year. She has had changes to the skin of her right breast for an unknown period of time. She was variably described in the past to have a combination of erythema, hyperpigmentation and “radiation fibrosis”. The patient was seen again in 2006 and the skin of her right breast was indurated with slight, somewhat variegated, erythematous to tan discoloration, when compared to the skin of the left breast. No similar changes were reportedly seen in other areas of the body. A punch biopsy of skin showed a marked increase in elastic fibers in the dermis and this was readily visible on the hematoxylin and eosin (H&E)-stained sections. The elastic
fibers were not calcified. This clinicopathologic picture of localized cutaneous induration of previously irradiated skin, associated with prominent visible increase in dermal elastic fibers, is unusual and has not, to my knowledge, been described previously. This picture is distinct when compared to other cases with acquired disorders that are associated with accumulation of dermal elastic fibers and that have been reported to date.

Elastosis Perforans Serpiginosa: Treatment With Liquid Nitrogen Cryotherapy

Roop Randhawa,1 Shannon Humphrey,2 Chih-ho Hong,2

Background: Elastosis perforans serpiginosa (EPS) is an uncommon dermatosis affecting children and young adults, which presents with hyperkeratotic papules in an arcuate or serpiginous arrangement. Histologically EPS is characterized by transepidermal elimination of altered elastic fibers. Most reported treatment modalities have limited success in EPS. Reported ablative treatments include cryotherapy, cellophane tape stripping, electro-desiccation and curettage, cryotherapy, glycolic acid, salicylic acid, flashlamp pulsed-dye laser, Er:YAG laser, and carbon dioxide laser. Other methods include oral and topical retinoids, intralesional and topical steroids, and topical calcipotriene.

Objective: EPS is generally regarded as difficult to treat, and many treatments have been reported with modest efficacy. We report a case with complete clearance using liquid nitrogen cryotherapy to treat EPS and we review the relevant literature.

Case: A 13-year-old boy following successive treatments with cryotherapy. Liquid nitrogen cryotherapy may be an effective treatment method, and should be considered in the management of EPS.
Haemophilus Ducreyi Leg Ulceration in a Five-Year-Old Boy

Shannon Humphrey;1 Marc Romney;2 Sheila Au;1
1. Department of Dermatology and Skin Science, University of British Columbia, Vancouver, BC; 2. Department of Pathology and Laboratory Science, University of British Columbia, Vancouver, BC

Background: Chancroid, caused by the gram-negative bacillus Haemophilus ducreyi (H. ducreyi), classically manifests as genital ulceration with inguinal lymphadenitis. Chancroid is rare in Canada, but is one of the leading causes of genital ulcer disease worldwide. We report an unusual case of extra-genital H. ducreyi infection in a 5-year-old boy.

Case: A 5 year-old Sudanese refugee presented to our clinic with a four-week history of an ulceration involving the left shin. He was otherwise healthy. There were no known infectious contacts or preceding trauma. There was no history of genital ulceration. Examination revealed an irregular, 2.5 cm by 1.6 cm tender ulceration with purulent discharge adjacent to a 0.5 cm crusted erosion and partially intact 1 cm bulla. Tissue biopsy was sent for histopathology, which revealed non-specific changes. Gram stain demonstrated 1+ gram-positive cocci (S. aureus), and 3+ gram-negative bacilli. The bacterial culture grew colonies of gram-negative bacilli, identified as H. ducreyi by conventional biochemical testing. Two reference laboratories confirmed the presence of H. ducreyi by conventional biochemical and molecular testing. Culture for mycobacteria, leishmania, and fungus were negative. The patient was treated with oral azithromycin, but was lost to follow-up.

Discussion: We report a laboratory confirmed case of extra-genital H. ducreyi infection in a pediatric patient. There are few reports of extra-genital H. ducreyi infection reported in the English medical literature. The mode of transmission is unclear. Direct inoculation is a proposed mechanism of infection in laboratory workers who have contracted the disease. To our knowledge, there are no published reports of laboratory-confirmed chancroid in a pediatric patient.

This case is reportable because it represents the first H. ducreyi referral to the Canadian National Microbiology Laboratory in over ten years, and it occurred on the leg of a pediatric patient. H. ducreyi may be considered on the differential diagnosis of extra-genital ulceration in patients from endemic areas.

A New Scalp Formulation of Calcipotriene Plus Betamethasone in the Treatment of Scalp Psoriasis Compared to its Active Ingredients and The Vehicle

G B E Jemec;1 J P Ortonne;2 D Burden;3 Y Poulin;4 B Berne;5 J Austad;6 A Figueiredo;7 P Unamuno;8 M Damsgaard;9
1. Medical Department, Roskilde University Hospital, Roskilde, Denmark; 2. Hôpital de l’Archet, Service de Dermatologie, Nice, France; 3. Dermatology Department, Western Infirmary, Glasgow, UK; 4. Centre de Recherche Dermatologique du Quebec Metropolitain, Quebec City, QC; 5. Hudkiniken, Akademiska Sjukhuset, Uppsala, Sweden; 6. Hudiegekontoret, Sandbika Bad, Sandvika, Norway; 7. Servico de Dermatologia, Hospitais da Universidade de Coimbra, Portugal; 8. Dermatology, Hospital Clínico Salamanca, Salamanca, Spain; 9. LEO Pharma, Ballerup, Denmark

Methods: The efficacy and safety of LEO80185 (calcipotriene 50 mcg/g plus betamethasone 0.5 mg/g as dipropionate in a new scalp formulation) in scalp psoriasis was assessed in 2 pivotal phase III studies. In Study 1 with 1505 patients, the efficacy and safety of LEO80185 (n=541) was compared to betamethasone dipropionate 0.5 mg/g as dipropionate (BD) in the same vehicle (n=556), to calcipotriene 50 mcg/g (C) in the same vehicle (n=272) and to the vehicle alone (n=136). Patients were treated once daily for up to 8 wks. Responses were assessed by Investigator Global Assessment of disease severity (IGA) at each visit. The primary endpoint was controlled disease at 8 weeks.

Results: LEO80185 was superior to BD, C and the vehicle alone in terms of the IGA at wk 8 (P≤0.011). Patients treated with LEO80185 achieved controlled disease (“absence” or “very mild” disease) faster than those on other treatments (P≤0.0005 at wks 2 and 4). The patient’s overall assessment of treatment success was also in favour of LEO80185. The adverse event (AE) profile for LEO80185 was similar to BD with an incidence of lesional/perilesional AEs significantly lower than that for C and vehicle alone.

Conclusion: LEO80185 had a faster onset of action and was significantly more effective in scalp psoriasis than the active ingredients in the same vehicle.
Mohs Micrographic Surgery: Past, Present and Future

Mike S. Kalisiak; Mariusz J. Sapiaszko, University of Alberta, Edmonton, AB

The history of Mohs micrographic surgery consists of a remarkable interplay of serendipity, systematic research, mentorship and leadership. The technique was introduced into medical practice by Dr. Frederic Edward Mohs (1910-2002) in 1936 and in 1941 had its debut as a first-line treatment. This new form of surgery was initially met with skepticism and it took efforts of a number of individuals to bring it to the forefront of skin cancer treatment. In the early form of Mohs surgery, zinc chloride was used for in situ tissue fixation as well as hemostasis. The “fresh tissue technique” that is used today was discovered fortuitously by Dr. Mohs in 1953 and gained wider acceptance in the next two decades. Today, Mohs micrographic surgery enjoys the reputation of a treatment of choice for a number of skin malignancies. Nevertheless, it faces a number of challenges: making it faster, more cost-effective, and even more reliable.

This poster reviews cancer treatments dating back to ancient times that have provided background for Dr. Mohs discovery, outlines current use of Mohs micrographic surgery, and explores future directions.

Spectrum of Cutaneous Side Effects Associated With Pegylated Interferon Alpha 2b/ribavirin Treatment

Mike S. Kalisiak; Gilles J. Lauzon; Ken Alanen; Mang Ma; Thomas G. Salopek, University of Alberta, Edmonton, AB

Peginterferon alfa 2b/ribavirin is a treatment regimen consisting of weekly pegylated interferon (IFN) alfa 2b injections and twice daily oral dosing of ribavirin. It demonstrated superior efficacy for the treatment of chronic hepatitis C infection and thus is often considered the treatment of choice. Localized, nonspecific injection-related cutaneous reactions are commonly observed. Less commonly, interferon alfa 2b/ribavirin treatment has been linked with various more severe cutaneous reactions such as leukocytoclastic vasculitis, bullous eruptions, pemphigus foliaceus, pyoderma gangrenosum, alopecia, as well as exacerbation or onset of psoriasis, sarcoidosis, lichen planus, vitiligo, porphyria cutanea tarda, and others. These reactions are largely reversible. We describe cases of erythema multiforme-like reaction and granuloma annulare whose onset coincided with initiation of peginterferon alfa 2b/ribavirin treatment. The cases illustrate the spectrum of cutaneous side effects of this treatment regimen, which we review.

Evaluating the Safety Profile of 50 % Isopropyl Myristate (IPM) Pediculicide Rinse: Pharmacokinetics and Phase 2 Clinical Trials for Safety

Nalini Kaul; Kathleen G. Palma; James N. Bergman


Introduction: IPM is used in many cosmetic/pharmaceutical products: most contain small amounts but some contain >25-50 % concentration. The Cosmetic Ingredient Review of the CTFA, concludes that IPM is a safe cosmetic excipient. A new pediculicide rinse with 50% IPM (Resultz™) has been developed. The primary objective was to assess its safety profile in infested pediatric & adult populations.

Seven clinical trials were conducted, which included a trial for pharmacokinetic analyses, a trial for assessing skin irritation and sensitization and 5 efficacy and safety trials in different locations (one each in Ecuador, Canada, U.K and two in U.S.A)

Methods: Pharmacokinetic analyses were conducted to determine systemic absorption and local/systemic tolerability after one 10 minute treatment in 13 lice infested subjects. The maximum amount of rinse used was 120ml. Scalp assessments for erythema and edema were conducted at baseline, 1 hour post application and after blood draws at 0, 1, 2, 4, 8 hours for patients <8 years & 0, 1, 2, 4, 6, 8, 12 hours for patients >8 years. A skin irritation and sensitization study was conducted and safety was assessed at each visit by erythema /edema scores (Draize) and reported irritation/adverse events. Safety of 50% IPM rinse was also studied in four Phase 2 clinical trials.

Results & Conclusions: The pharmacokinetic study showed no significant systemic absorption. The five safety trials did not demonstrate any serious adverse events and most of the adverse events involved mild transient local erythema, irritation or pruritus (10 reports of 78 patients studied) . The UK trial (n=35) identified 2 cases: one with “rash” on the cheek and another with nausea. No safety issues emerged from the second US trial and subjects with pre-existing pruritus/erythema were symptom free by day 24. Data presented support 50% IPM rinse as a safe topical pediculicide for pediatric and adult populations.
Cutaneous Manifestations of Evil: An Art History Dissection

Irène Kossintseva, Faculty of Medicine and Dentistry, University of Alberta, Edmonton,

Art history provides more than a poignant record of social attitudes, religious constructs and reflections of political atmosphere: it gives an insight into how at the time of an artwork’s creation it is able to not only reflect but also shape the society. Whether used along or against the grain of societal beliefs of the time, art often illustrates in a critical manner very stark attitudes towards certain principles. Principles at stake then are symbolized, personified and metamorphosized into humanoid form that simply take on either a good or an evil stance. Depiction of cutaneous disease frequently was and continues to be one of the techniques that artists turn to when exemplifying evil. Here I present illustrated examples of art and discuss how they use dermatological imagery as a tool for symbolic means.

Dermatological conditions, regardless of their malignancy, seem to be used as icons of madness, vice, disorder, corruption and sin. They are starkly contrasted to the ideas of not only physical but more so spiritual purity and beauty. Innumerably, as seen in depictions of Virgin Mary, Venus or other objects of aspiration and desire (consider Titian’s “Venus of Urbino” or Ingres’ “Grande Odalisque”) flawless skin is a symbol of good.

Whether it is Otto Dix’s criticism of 1933 Germany impersonated with peri-anal warts as the face of Nazism in “7 Deadly Sins", the saddened satire of dysfunctional post Franco-Prussian-war Spain by Francisco de Goya in his etchings, or Honoré Daumier’s caricatures of corrupt politicians and human folly: they all present disease as an allegory for social conscience. Likewise, suffering and emotional distress is externalized onto canvas as bruised figures which are often seen in the works of German Expressionists like Egon Schiele, reacting to the harrowing reality of World War I. Alternatively, some works personify mythological evil with skin disease, be it prints of witches by Albercht Dürer, or the symbolic examination of vice by Aubrey Beardsley. Such symbolism further stretches into religious territory, where even renaissance minds like those of Michelangelo illustrate their analogy of sin to human flesh, as seen in “The Last Judgment”.

It is obvious to this audience that cutaneous disease does not equal evil, but it is both curious and sad to note how through such analogies art throughout centuries has been able to deliver a misguided caution and distrust to the observer regarding those who bear skin conditions.

Peeling Skin Syndrome: Report of a Case

Mark Krasny,¹ Danh Tran-Thanh,² Victor Kokta,³ Danielle Marcoux,³

1. Centre Hospitalier de l’Universite de Montreal, Montreal, QC; 2. CHUM, Montreal, QC; 3. CHU St. Justine, Montreal, QC

A 13-year-old girl of Chinese origin, adopted at the age of 2-years-old, presented to our clinic with a lifelong seasonal history of pruritic, erythematous plaques of the extensor surfaces of her arms and legs and dorsum of her hands and feet, followed within 2 weeks by spontaneous desquamation and subsequent healing with hyperpigmentation. Apart from a mild atopic diathesis, the patient was in good health, and was not taking any medications. Physical exam, including teguments, was unremarkable. Blood and urine analysis were normal.

Cutaneous biopsies revealed a cleavage through the stratum corneum, between the zones of compact and “basket-weave” orthokeratosis. Moreover, the epidermis presented mild spongiosis, scant lymphocyte exocytosis, and a superficial perivascular lymphohistiocytic infiltrate with few eosinophils. Ultrastructural studies demonstrated that the site of cleavage was intercellular.

The history, clinical morphology, and histological analysis were consistent with Peeling Skin Syndrome (PSS), type B (inflammatory).

PSS is a heterogenous group of rare disorders characterized by spontaneous, sometimes continual, lifelong peeling of the epidermis. Upon clinical and histological differences, peeling skin syndrome cases has been classified into two subtypes: noninflammatory type A and inflammatory type B, with presence of pruritus and erythema characterizing the clinical presentation in the latter. The pathognomonic histopathologic feature of both is cleavage above the stratum granulosum, distinguishing itself from the various forms of epidermolysis bullosa. In some families, an acral form of PSS (APSS) has been reported in which skin peeling is limited to the dorsa of hands and feet; mutations in TGM5, encoding transglutaminase 5 (TG5), a protein involved in cross-linking of the cornified envelope of the epidermis have recently been described in one family with APSS. Recognition and reporting of this condition in conjunction with continued biochemical and molecular research are vital in elucidating its pathogenesis.
**Exacerbation of Undiagnosed Mycosis Fungoides (MF) During Treatment With Etanercept**

Philippe Lafaille; Nathalie Provost, University of Montreal Hospital Centre, Montreal, QC

In September of 2005, a 47-year-old male presented to our clinic with recent onset and progression of erythematous and scaly plaques. The patient had been followed for an HLA-B27 positive oligoarticular arthritis, diagnosed 5 years previous, which was successfully controlled with methotrexate. At the time of diagnosis of his arthritis, several discrete erythematous plaques were present, and a presumptive diagnosis of psoriasis was made. Progression of these plaques was noted in 2003, with a partial response to subsequent treatment with methotrexate, narrow band UVB and PUVA therapy. Etanercept was started in January 2005 and over the next few months the patient experienced a marked deterioration of his skin condition with the progression of plaques, alopecia and an ulcerating tumour on his scalp. Two biopsies demonstrated classic features of MF, including follicular involvement over the scalp. No systemic involvement was found on staging. Etanercept was discontinued and a moderate clinical response was achieved following narrow band UVB and interferon alpha 2b therapy.

The deterioration of our patient’s MF during etanercept therapy and subsequent clinical improvement following its withdrawal (and treatment with appropriate therapy) strikes us as more than coincidental. Similar associations with biologics and the progression of MF have been previously reported by Schmidt A et al. (JAAD, 2005) with alefacept, Dalle S et al. (Br J Derm, 2005) with adalimumab and Adams AE et al. (JAAD, 2004) with etanercept and infliximab. Biologics should be used with caution in patients with known MF, and pre-treatment skin biopsies should be performed to exclude neoplastic lymphocytic processes in those patients where a diagnosis of psoriasis is unclear.

**Merkel Cell Carcinoma: An Approach to Diagnosis and Management**

Carrie B. Lynde; John N. Kraft; Charles W. Lynde;

1. Faculty of Medicine, University of Toronto, Toronto, ON;
2. Division of Dermatology, University of Toronto, Toronto, ON

Merkel cell carcinoma (MCC) is a rare cutaneous tumour of neuroendocrine origin. It affects predominantly the elderly and has a predilection for sun-exposed areas. MCC has been described as the most aggressive cutaneous malignancy. It has the propensity to invade into the dermal lymphatics at an early stage, and spreads to lymph nodes. It can also spread hematogenously to distant sites. Factors that have been implicated in its cause include exposure to sunlight and immunosuppression.

MCC is one of the most deadly of cutaneous malignancies, with a fatality rate of approximately 25-30%. The best treatment outcomes are achieved with early recognition and a multimodal approach to therapy, including surgery, radiation and chemotherapy. Treatment is often challenging as most of the patients are elderly and lesions have a propensity for difficult sites such as the head and neck.

We present a case of an 81-year-old gentleman with a MCC involving his scalp. We review the etiology, pathogenesis, clinical and pathological attributes of MCC. We also outline an approach to diagnosing and treating this highly aggressive and deadly tumour.

**Novel Agents for Intractable Itch**

Carrie B. Lynde; John N. Kraft; Charles W. Lynde;

1. Faculty of Medicine, University of Toronto, Toronto, ON;
2. Division of Dermatology, University of Toronto, Toronto, ON

Intractable itch is commonly encountered by dermatologists. Many therapies are often tried to no avail. There are multiple causes for pruritus, such as a primary dermatological disease (i.e. atopic dermatitis, psoriasis, urticaria), an underlying systemic disease (i.e. renal or hepatic disease), or a medication (i.e. opiates, drug reactions). However, often establishing the etiology cannot cure the itch. Traditional agents for treating chronic itch include topical steroids, oral antihistamines, and topical menthol and camphor. In the past, if these agents were not effective, dermatologists had few options. Recently, a new understanding of the pathophysiology of itch has lead to novel therapies becoming available. These include opiate receptor antagonists, antidepressants, and antiepileptics. These medications may be effective when other traditional agents fail.

An Ovid Medline search for agents used in the treatment of chronic itch was conducted. We present an evidence-based approach to treating patients with recalcitrant itch. This approach is practical for dermatologists and beneficial for their patients facing this frustrating problem. Now dermatologists are able to approach intractable itch with renewed vigor and confidence.
Use of Biologicals Among Patients with Difficult-to-treat Moderate to Severe Psoriasis

Charles W. Lynde, University of Toronto, University Health Network and Lynde Center for Dermatology, Markham, ON

Introduction: Efalizumab is a humanized anti-CD11a antibody that has been administered over the long term (up to 3 years) in clinical trials, providing continuous control of moderate to severe plaque psoriasis. Efalizumab as well as other biologicals have been approved for use in moderate to severe psoriasis in Canada and Europe. However, given the higher costs of the biologicals relative to traditional therapies, regulatory bodies in these regions have chosen to restrict the financial coverage of these treatments, effectively limiting them to second-line use for many patients.

Methods: We reviewed the evidence cited by the Canadian Expert Drug Advisory Committee (CEDAC) regarding coverage of efalizumab, alefacept as well as clinical trial data from other anti-psoriatic biologicals.

Results and Conclusions: Health Canada has approved the use of alefacept, efalizumab and etanercept in moderate to severe plaque psoriasis. However, efalizumab is the only such agent reviewed by CEDAC to receive a positive recommendation for reimbursement under federal and provincial formularies, in patients with severe, debilitating psoriasis who are contraindicated to, or intolerant of, or who do not respond to, other specified treatments. This decision was based in part on CLEAR (Clinical Experience Acquired with Raptiva) trial data. CLEAR showed that efalizumab is statistically superior to placebo for ‘high-need’ difficult-to-treat patients (those who were contraindicated to, or intolerant of, or had failed two other systemic therapies) as for the general moderate to severe psoriasis population (p<0.0001 for PASI-75 response for each patient group) with similar proportion of PASI-75 response in the two groups (29.5% and 31.4% respectively).

The Use of Topical Imiquimod 5% Cream in Infantile Hemangioma

Catherine C. McCuaig,1,2 Julie Powell,2 Josée Dubois,2 Claude Belleville,2 Fatimeh Jafarian,3

1. Hôpital Sainte-Justine, QC; 2. Université de Montréal, Montreal, QC

We wish to present the findings of an open label pilot study of topical imiquimod 5% cream on proliferating infantile hemangioma in healthy full-term babies. Case reports have suggested that imiquimod could be useful in hemangioma, probably through the inhibition of angiogenesis through local interferon production. The primary objectives of our study were to determine the safety and efficacy of such therapy.

The study design was 3-7 times per week application of imiquimod 5% cream on proliferating infantile hemangioma for 16 weeks in 16 patients aged between 2 to 12 months. Patients were monitored by daily diaries, clinical examination, medical photographs, doppler-ultrasound, serum measurements of IFN, imiquimod, bFGF, VEGF, and blood chemistry profiles for the 16 week active treatment period as well as a 16 week post treatment follow-up.

Response and side effects will be discussed.

References:


Dystrophic Epidermolysis Bullosa with Aplasia Cutis Congenita: Rapid Healing within Three Weeks of Birth

Andrei Metelitsa;1 Victor Tron;2 Halliday Idikio;2 Andrew N. Lin;1

1. Division of Dermatology and Cutaneous Sciences, University of Alberta, Edmonton, AB; 2. Department of Laboratory Medicine and Pathology, University of Alberta, Edmonton, AB

Introduction: Dystrophic epidermolysis bullosa is a severe disorder caused by mutations in the gene encoding type VII collagen, and is characterized by blistering below the lamina densa.

Methods: We describe the case of an infant boy who presented at age 2 days to our clinic with a history of denuded skin. He was born at full term by spontaneous vaginal delivery to non-consanguineous parents. There was no family history of blistering diseases. Examination showed well demarcated areas denuded of skin involving the dorsum and sole of the right foot, right shin, and dorsum of the right hand. These areas were glistening with readily visible veins. Blisters were present on the left heel, where the patient had been held immobile the previous day in an attempt at venipuncture. Erosions...
were present on the tongue and hard palate. No erosions were noted on the conjunctiva. The patient was feeding and passing stools.

**Results:** H & E examination of an elliptical incisional biopsy of a small blister on the thigh showed a dermal fragment. Electron microscopy showed separation below the lamina densa. These findings indicated dystrophic epidermolysis bullosa, either dominant dystrophic, or mild type of recessive dystrophic. Mupirocin ointment was applied twice daily to the erosions and covered with non-adherent dressings which were held in place with gauze. Adhesive tape was applied to the gauze, but not to the skin. Three weeks later, there was complete healing of the oral erosions and the previously denuded areas on the right shin and right hand. One month later, the same areas remained healed and he was feeding well, although he continued to develop small blisters on the hands and feet.

**Conclusions:** This case demonstrates that patients with dystrophic epidermolysis bullosa can have a favorable prognosis. At the time of birth, this patient had areas on the shin, foot and hand that were denuded of skin, but these healed with only topical antibiotic therapy within three weeks.

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**The Incidence Pattern of Cutaneous Malignant Melanoma in the Ottawa Region 1996 - 2006**

Tara A. Nevins; 1 Steven Doucette; 2 Nordau Kanigsberg; 3

1. University of Ottawa, Ottawa, ON; 2. Ottawa Health Research Institute, Ottawa, ON; 3. The Ottawa Hospital, Ottawa, ON

**Introduction:** In Canada, the incidence rates of primary cutaneous malignant melanoma increased from 1969 up until 1993, with a gradual tapering of incidence rates observed at the end of this time period. This trend suggested that the incidence of melanoma in Canada was stabilizing; however, knowledge of the recent trend was lacking. This study examined the temporal trend of both in situ and invasive melanoma within the Ottawa region over a ten year period.

**Methods:** The histopathology reports of all diagnosed cutaneous melanomas were obtained from the diagnostic centers that service the Ottawa region. Reports from two one-year periods were examined: 1996 and 2006. In addition to the diagnosis, the age, first three characters of the postal code, site, sex and Breslow thickness were recorded.

**Results:** The age standardized incidence of cutaneous melanoma per 100,000 population, both in situ and invasive, was 26.4 in 2006 and 23.0 in 1996. In 2006, there were 235 melanomas diagnosed: 41% in situ; 29% < 1 mm; 26% > 1 mm; 3% unspecified. In 1996, there were 181 melanomas diagnosed: 37% in situ; 35% < 1 mm; 22% > 1 mm; 6% unspecified.

**Conclusions:** Our trend analysis indicates that the incidence of melanoma within the Ottawa region has only slightly increased since 2006. In addition, the incidence rates of both in situ and thick lesions have stabilized, indicating that detection rates have remained relatively constant.

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**Pigmented Basomelanocytic Tumor, Report of a Case With Immunohistochemical and Ultrastructural Studies and Literature Review**

Firouzeh Niakosari; S. Salama Salama, University of Toronto, Toronto, ON

Squamo-melanocytic tumors (SMT) are very rare pigmented skin tumors that appear to represent a biphasic neoplasm with uncertain biological behavior. Pigmented Squamous cell carcinoma (SCC) appears to be a variant of this tumor.

We report a case presenting in the skin of the ear of a 70 year-old male, clinically diagnosed as nodular melanoma.

Histologically, the tumor showed a biphasic pattern of basal cell carcinoma and clusters of heavily pigmented cells resembling melanoma.

Immunohistochemistry showed the pigmented cells to express S100, HMB45 and other melanocytic markers, while the basaloid cells expressed cytokeratin markers. Electron microscopy demonstrated an epithelial neoplasm, which harbor melanosomes precursor within the cytoplasm of the neoplastic cells.

Although the differential diagnosis includes a collision tumor (BCC and Melanoma), the intimate admixture of the two components distinguishes this unusual biphasic neoplasm. The presence of the melanosomes within the epithelial cells suggests, pigment transfer from the non-neoplastic melanocytic cells.

The tumor was excised, with no recurrence in one year follow up, suggesting a favorable outcome. However, prolonged clinical follow-up is needed.

We alert Dermatopathologists to the existence of this rare entity, and the pitfalls of the diagnosis.
Systemic Allergy Contact Dermatitis Due to Ethylenediamine During Technetium-99M Sesta-MIBI Stress Testing

Simon Nigen; Isabelle D. Tremblay, Université de Montréal, Montreal, QC

Introduction: Ethylenediamine is an aliphatic amine with many applications in industry. Some topical medicaments contain ethylenediamine as a stabilizer. Aminophylline is the ethylenediamine salt of theophylline, which is more water soluble. Adverse reactions to aminophylline are usually manifested by the toxic effects of theophylline on the gastrointestinal, cardiac and central nervous systems. Reactions to its ethylenediamine component are less commonly encountered.

Case: We report a case of aminophylline-induced maculopapular exanthema due to ethylenediamine. A sixty-year-old woman presented to our dermato-allergy clinic to evaluate a generalized maculopapular reaction. She performed a dipyridamole technetium-99m sestamibi myocardial scintigraphy for her heart condition. She received intravenous dipyridamole, aminophylline and technetium-99m sestamibi. Twenty four hour later she developed a red scaly maculopapular rash affecting the arms, trunk, legs and face. Patch testing for aminophylline was positive as well as for ethylenediamine. A negative patch testing was found with dipyridamole and theophylline.

Conclusion: Allergy to ethylenediamine should be asked in patient undergoing a dipyridamole technetium-99m sesta-mibi myocardial scintigraphy in order to avoid aminophylline-induced allergy.

Approaches to Reporting Long-term Data

Kim A. Papp, Probity Medical Research, Waterloo, ON

Introduction: The effectiveness and safety of a drug is supported by a large data set from both short-term, randomized controlled trials (RTCs) and longer-term studies. Various prospectively defined statistical methods can be used to analyze trial data such as intent-to-treat (ITT) and per-protocol (PP) analyses. However, analysis of data from long-term studies using the standard methodologies for short-term studies may not always be appropriate. As the length of the study increases, the use of a placebo is less acceptable for ethical reasons and missing data due to patient drop-outs become more of a problem, which, depending on the reason for the drop-out, can introduce bias into the results.

Methods: Analytical issues associated with missing data in long-term clinical trials are reviewed by presenting a hypothetical model and a dataset from a 36 month-long clinical study of efalizumab, a humanized anti-CD11a antibody approved for chronic moderate to severe plaque psoriasis.

Results and Conclusions: In the hypothetical model a ‘missing equals failure’ (MEF) analysis provided 55% success, versus a more conservative ‘missing equals success’ approach (MES) (85%). In the efalizumab trial, the ‘last observation carried forward’ (LOCF) imputation and analysis gave the most conservative estimate of efficacy at month 27 (47% of patients achieved a PASI-75). By contrast, a ‘missing equals excluded’ (MEX) approach provides more optimistic results (72%). These two approaches give quite different results for efficacy, but only the conservation result (LOCF) was peer-reviewed published. Regulatory authorities and practice guidelines support the use of multiple analyses, but they are not widely used in medical literature. We suggest at least three approaches for handling missing data should be reported, along with a sensitivity analysis. This multiple analysis approach will provide more meaningful information, allowing better informed decisions and prevent misleading conclusions arising from the data.

Pooled Safety Data For a Calcipotriene/Betamethasone Dipropionate Two-Compound Product In the Treatment of Psoriasis Vulgaris

Kim A. Papp;1 A. Melgaard;2

1. Probity Medical Research, Waterloo, ON; 2. LEO Pharma, Ballerup, Denmark

Introduction: The purpose of this integrated analysis was to evaluate the safety profile of a two-compound product containing calcipotriene 50 $\mu$g/g plus betamethasone 0.5 mg/g as dipropionate (CBD) in patients with psoriasis vulgaris.

Methods: Safety data from 7 clinical studies were pooled. The studies were randomised, double-blind (all but one), vehicle- and/or active controlled studies of the two-compound product applied once daily or twice daily in adult patients with psoriasis vulgaris involving trunk and/or limbs amenable to topical therapy. Treatment periods were of 4-12 weeks duration. Active controls included betamethasone dipropionate (BD) and calcipotriene (C) used as monotherapy.

Results: Fewer patients reported AEs in the CBD group than in the vehicle (p=0.005) and C (p<0.001) groups. The median time from treatment start to a lesional/perilesional AE was 7 days and most AEs (58%) were of mild intensity. The incidence of serious AEs (SAE) was low in all treatment groups, and most SAEs were judged not related to study treatment.
17 patients (0.7%) in the CBD group, 16 (3.4%) in the vehicle group, 79 (2.5%) in the C group and 7 (0.6%) patients in the BD group discontinued the study because of an AE.

**Conclusion:** Treatment of psoriasis vulgaris with the two-compound product (CBD) is safe, mainly involving local skin reactions of mild intensity.

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**Rituximab: A B Cell Depletion For Dermatologic Disease**

Vimal Prajapati;¹ P. Régine Mydlarski;²

1. Faculty of Medicine, University of Calgary, Calgary, AB; 2. Division of Dermatology, Departments of Medicine and Medical Genetics, Faculty of Medicine, University of Calgary, Calgary, AB

**Introduction:** Rituximab is a genetically engineered chimeric murine/human monoclonal antibody directed against CD20, a B lymphocyte-specific antigen. Initially approved for the treatment of relapsed or refractory low-grade or follicular non-Hodgkin lymphoma (NHL), rituximab has been increasingly used to treat a variety of immune-mediated and autoimmune diseases. Anecdotal case reports recommend its use in dermatology, but randomized clinical trials are lacking. Herein, we review the potential applications and limitations of rituximab in dermatology.

**Methods:** A search of the MEDLINE database was performed (1966 - 2007) using the key words “rituximab,” “rituxan” and “CD20 antigen” in combination with the following dermatology-related key words: “skin”, “dermatology”, “dermatological”, “cutaneous”, “pemphigus”, “pemphigoid”, “vesiculobullous”, “papulosquamous”, “psoriasis”, “dermatitis”, “eczema”, “urticaria”, “angioidema”, “collagen vascular disease”, “vasculitis”, “lupus”, “dermatomyositis”, “sclerodema”, “cryoglobulinemia”, “vitiligo”, “alopecia”, “granulomatous disease” and “graft versus host disease”. Additional sources were investigated when referenced by other authors. The levels of evidence were graded in accordance with recommendations from the Oxford Centre for Evidence-Based Medicine.

**Results and Conclusions:** Rituximab is increasingly recognized as a therapeutic option for B-cell mediated dermatologic disease. Case reports document the efficacy of rituximab in recalcitrant dermatomyositis, systemic lupus erythematosus, cutaneous vasculitis, Wegener’s granulomatosis, pemphigus vulgaris, pemphigus foliaceus, paraneoplastic pemphigus, bullous pemphigoid, epidermolysis bullosa acquisita, chronic graft versus host disease, and primary cutaneous B-cell lymphoma. Randomized clinical trials with long-term follow-ups are required in order to firmly establish the safety and efficacy of this promising biologic in dermatology.

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**Pediatric Allergic Contact Dermatitis Study: Ottawa Hospital Patch Testing Clinic 1996-2006**

Marcia Hogeling; Melanie Pratt, University of Ottawa, Ottawa, ON

**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 100 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:** 70% of children had at least one positive patch test. 55.8% of positive patch test reactions were relevant. The female to male ratio was 62%:38%, consistent with other pediatric studies. The most common allergens were nickel sulfate 37%, cobalt 13%, fragrance mix 10%, neomycin 10%, colophon 9%, formaldehyde 7% lanolin 6%, quaternium 15, 6% and paraphenylenediamine 6%. Nickel co-reacted with cobalt and palladium. 38% of children tested had a history of atopic dermatitis.

**Conclusions:** The frequency of positive and relevant allergens in children is similar to that of adults as compared to the NACDG data 2001-2002 study period. Differences between the top 10 allergens in children and adults were seen, with nickel and cobalt being more common in children, and colophon, lanolin and paraphenylenediamine ranking in the top 10 in children. Relevant allergens were detected in 28% of children when special extra series were utilized.

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**The International Interprofessional Wound Care Course - A Five Year Evolution**

Gary Sibbald;¹ Carly Kirshen;² Adam Katchky;¹ Douglas Queen;³ Heather L. Orsted;⁴ David Keast;⁵ Siobhan Ryan;¹ Kevin Woo;¹

1. Women’s College Hospital, Toronto, ON; 2. Women’s College Hospital, Hamilton, ON; 3. CanCare Consultancy Services, Toronto, ON; 4. Calgary Regional Health Authority, Calgary, AB; 5. University of Western Ontario, London, ON

**Purpose:** An 8-month longitudinal certificate course was designed in 1999-2000 to train opinion leaders in wound care and improve patient care. The course consists of two 4-day residential weekends, nine self-study modules, and a selective related to each registrant’s(tm)s day-to-day activities. The IWCC is founded on principles of adult education, interprofessional collaboration and evidence-based medicine, and focuses on the re-education of wound care specialists...
as opinion leaders in an attempt to improve healthcare professional performance and patient outcomes. The course was evaluated both quantitatively and qualitatively.

**Methods:** For quantitative analysis, attendees participated in pre and post tests (first/second residential weekends) via and Audience Response System. The questions were designed to identify knowledge gained from the self-study modules.

For qualitative analysis, attendees participated in a 15-minute exit interview.

The major themes explored were:

- Benefits of the residential weekends and modules
- Factors influencing choice of selective and selective accomplishments
- Most positive and negative aspects of the course
- Barriers for course implementation

**Results:** The International Interdisciplinary Wound Care Program is an example of a continuing education program designed to:

- provide longitudinal educational framework with improvement in pre-test/post-test scores
- utilize residential weekend structure and self-study to train healthcare professionals living long distances from the training centre and allowing them to continue full-time employment
- provide a certificate of completion for 50-70% of attendees from the University of Toronto instead of a certificate of attendance
- allow for interdisciplinary focus and international networking that students appreciated as a major outcome from the course
- empower individuals to become opinion leaders and interpret their new knowledge for their current work environment through their selective

**Conclusions:** A successful interprofessional education model has been constructed to foster learning and set the stage for improved patient outcomes in the clinical setting.

**A Transprofessional Comprehensive Assessment Model For Persons With Lower Extremity Leg and Foot Ulcers**

Kevin Woo;1 Afaneh Alavi;2 Mariam Botros;1 Laura-lee Kozody;2 Gary Sibbald;1

1. Women’s College Hospital, Toronto, ON; 2. Private Practice, Mississauga, ON

Leg and foot ulcers are more common in the elderly, often recalcitrant to healing, tend to recur, and become a long-term chronic health care problem. To establish the prevalence of leg and foot ulcers in the community we had conducted a series of survey benchmark clients serviced by community care access centers (CCACs). Evidence informed management of these ulcers involves detailed examination, investigation, and discussion of results with patients. However, there are inadequacies within the current healthcare system that do not allow health care providers to be financially remunerated for extended visits and lengthy comprehensive assessments.

We hypothesised that patient outcomes can be improved after a comprehensive interprofessional assessment on admission to home care. In this longitudinal study, 111 patients were followed prospectively for 4 weeks in 2006. A total number of 78 leg ulcers and 96 foot ulcers evaluated at the beginning and 66 leg ulcers (85.9%) and 85 foot ulcers (88.5%) were evaluated at the end of the study. We compared the wound surface areas at week one and four to determine the relative healing rate. By addressing the wound etiology and following the best practice recommendations of the wound type (high compression for venous ulcers and regular debridement along with pressure redistribution for neurotrophic foot ulcers), the majority of the wounds improved. The surface areas were significantly reduced from 29.05 cm² to 13.97 cm² at week 4 (t= 2.67; p=0.01) in the leg ulcer group and from 4.5 cm² to 2.95 cm² in the foot ulcer population. at week 4 (t=2.31; p=0.023). When the results are compared to usual outcomes in a home cost effectiveness model significant cost savings can result. There is a need reform home care service to deliver a new interprofessional model including an admission comprehensive assessment and persons qualified to debride and pressure redistribute the plantar surface of persons with neurotrophic foot ulcers.

**Coexistent Nodular Fascitis and DFSP**

Zaki A. Taher; Muba Taher; Ken Alanen, University of Alberta, Edmonton, AB

**Introduction:** Dermatofibrosarcoma Protuberans is an uncommon sarcoma that can present in children and young to middle-aged adults. In light of its tendency to invade local tissue and recur, early identification and appropriate management is key to availing the best prognosis.

**Case Report:** We present a case of DFSP where initial pathologic evaluation was suggestive of Nodular Fascitis, a benign skin tumor, but further histopathologic evaluation following surgical excision revealed DFSP.

A 30 year old female presents with a two month history of enlarging nodule at the right upper shoulder initially appearing as a violaceous fluctuant cyst. An incisional biopsy was performed of the 3 cm ill defined subcutaneous nodular plaque with raised red to brown multilobulated intact nonerosive soft surface.
Initial histologic evaluation revealed findings classical for nodular fasciitis including numerous vessels in association with banal stellate “tissue culture” fibroblasts, and the presence of mitotic figures but absence of atypical mitoses. Following wide excision of the lesion, histopathology revealed a rounded tumor involving dermis and extending into subcutaneous tissue. Also observed were spindled to plump appearing cells with scattered mitotic activity. It was shown that the tumor was strongly positive for vimentin and CD34, weakly positive for factor 13 and negative for actin, $100 and desmin.

**Conclusion:** Nodular fasciitis can occur in association with DFSP. Thus histologic identification of benign nodular fasciitis in a gradually enlarging nodule can simply be a sampling bias and should raise the possibility of coexistent DFSP.

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**Efficacy of Imiquimod as an Adjunct to Cryotherapy**

Jerry K. Tan;1,5 Richard Thomas;2,4 Yves Poulin;3 Frances Maddin;4 Jing Tang;5

1. University of Western Ontario, Windsor, ON; 2. University of British Columbia, Vancouver, BC; 3. Laval University, Centre de Recherche Dermatologique du Quebec metropolitain, Quebec City, Que; 4. Derm Research @ 888 Inc, Vancouver, BC; 5. Windsor Clinical Research Inc., Windsor, ON

**Background:** Cryotherapy is standard of care for clinically apparent (target) actinic keratoses (AKs). Topical imiquimod may reduce initially inapparent or subclinical AKs.

**Objective:** We evaluated the potential of topical imiquimod to decrease subclinical AKs after cryotherapy of target AKs.

**Methods:** Randomised trial of imiquimod or vehicle twice weekly for 8 weeks following 3-5 s cryotherapy of target AKs within a 50cm² field at face/scalp. Efficacy outcomes included clearance of target, subclinical and total AKs, and proportions clear of AKs. Subjects with residual AKs were offered cryotherapy and open label imiquimod twice weekly for 8 weeks.

**Results:** 63 subjects completed the randomised phase. At 12 weeks, target AK clearance was similar for imiquimod and vehicle (79% versus 76%) but less total AKs were noted for imiquimod (78 versus 116). This was due to progressive reduction of subclinical AKs with imiquimod compared to progressive increase with vehicle. More subjects treated with imiquimod achieved clearance of subclinical (58% versus 34%; $p = 0.06) and total AKs (23% versus 9%; $p = 0.21).

**Conclusion:** Imiquimod post-cryotherapy may increase clearance of subclinical and total AKs and proportions of subjects clear at 3 months. These findings require confirmation in larger controlled trials powered for statistical significance.

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**Cutaneous Myiasis – From Panama, South America**

Patricia Ting;1 Benjamin Barankin;2

1. University of Alberta, Edmonton, AB; 2. Private Practice, Toronto, ON

**Introduction:** Myiasis is a cutaneous infection in humans and mammals with larvae belonging to the Diptera two-winged fly order. Eggs and/or larvae are transmitted directly from the environment or via insect vectors; larvae are able to burrow into the dermis of intact skin or external body orifices. Three clinical variants of myiasis include furuncular (boils with openings in skin for larva respiration), migratory (or creeping), and infestation of wound or decomposing tissue.

**Methods:** A 35-year-old otherwise healthy male presented with a one-month history of progressively worsening furuncles on the left knee and posterior thigh following his return from a vacation in Panama, South America. Clinical exam revealed tender, 6 cm and 2 cm erythematous to violaceous furuncles with surrounding desquamation and central punctums draining serosanguinous fluid on the knee and posterior thigh. 5 mm punch biopsies and tissue swabs were performed at both sites.

**Results and Conclusion:** Punch biopsies uncovered the ends of larvae beneath each punctum. The larvae were carefully extruded and sent to pathology for species determination. The patient was empirically treated with cephalaxin and ciprofloxacin for secondary bacterial cellulitis prior to the availability of tissue swabs, which cultured group B streptococcus. A tetanus booster was recommended. A few days later, the patient returned with eczematous pruritic halos surrounding the previously described wounds, a reaction that has been well-documented in the literature, and postulated to be related to a contact allergic reaction to the larvae or their manipulation. This case report describes a relatively rare cutaneous infestation with Dermatobia Hominis, a Central and South American endemic larva of the human botfly not commonly observed in North America. Increasing trends towards immigration and global travel to tropical and subtropic areas will likely increase the frequency of encounters with such parasitic cutaneous infestations in North American outpatient dermatology clinics.
Calcipotriol-Betamethasone Diproprionate for the Treatment of Morphea - a Case Report

Patricia Ting;1 Marlene Dytoc;2

1. University of Alberta, Edmonton, AB; 2. Department of Dermatology & Cutaneous Sciences, University of Alberta, Edmonton, AB

**Introduction:** Morphea is characterized by localized fibrosis mediated by pro-fibrogenic cytokines, in particular, transforming growth factor beta (TGF-β) and connective tissue growth factor (CTGF). Current topical treatments include corticosteroids, vitamin D analogs and phototherapy. Dovobet™ ointment (LEO Pharm) is a topical compound of vitamin D analog calcipotriol 50 g/g and corticosteroid betamethasone dipropionate 0.5 mg/g.

**Methods:** A 26-year-old otherwise healthy Caucasian man presented with a 9-month history of a biopsy-proven 42 x 8 cm indurated hyperpigmentated morphea plaque on the right arm and a small poorly demarcated lesion on the right chest. He was not on any medications nor did he have cardiac or pulmonary symptoms. The patient was instructed to apply calcipotriol-betamethasone dipropionate ointment once to twice daily to affected areas. Dyspigmentation-induration-erythema-telangectasia (DIET) score and photographs were obtained at the initial and follow-up clinic visits.

**Results and Conclusion:** Initial DIET scores were 6 (i.e. 2,1,1,1) for the arm and 4 (i.e. 1, 1, 1, 1) for the chest. Baseline blood work was normal except for positive antinuclear antibodies (ANA). Extractable nuclear antibody (ENA) and anti topoisomerase I (anti-Scl-70) were both negative. At 3-month follow-up the patient had noticeable clinical improvement of the right arm lesion with a DIET score of 1 (i.e. 1, 0, 0, 0) for the arm and 4 (i.e. 1, 1, 1, 1) for the chest. The patient subsequently requested to discontinue treatment. There was no evidence of steroid-induced atrophy in areas to which calcipotriol-betamethasone dipropionate was applied. The action of calcipotriol-betamethasone dipropionate is likely two-fold as both components act as cytokine immunomodulators and inhibit fibroblast activity and proliferation resulting in decreased inflammation and fibrosis. Betamethasone dipropionate may also decrease the irritative side effects of calcipotriol. This case report highlights the potential use of calcipotriol-betamethasone dipropionate in the management of morphea.

Information Adequacy of In-patient Dermatology Consult Requests at Ottawa Hospitals

Anh Tran; Raed Alhusayen; Harvey Finkelstein, University of Ottawa, Ottawa, ON

**Introduction:** Providing adequate information in the referral letter saves time for clinicians and patients, assists in judging the urgency of the consult, helps to avoid consulting service dissatisfaction, and shows respect to the consulted service. Our study is the first of its kind, aiming to quantify and to evaluate the information adequacy of inpatient consultations to Dermatology service at the Ottawa Hospital.

**Methods:** 76 consults were collected. Each consult was evaluated and given a total score out of 6, one for each criteria met. The criteria were A-sex, B-age, C-reason for admission, D-history of skin problem, E-reason for referral, and F-past medical history. History of skin problem was defined as duration and description and/or distribution. The frequency of each total score and the percentage of total consults that met criteria A, B, C, D, E and F were calculated. The results were graphed and interpreted.

**Results and Conclusions:** Of the 76 consults in the study, slightly more than 60% provided the sex, age and reason for consult. Over 40% provided the reason for admission and proper history of the skin presentation. Only 12% provided the patient’s past medical history. There were six consults that scored 0, and 4 with total score of 6. The majority scored between 1 to 5, and 3 was the mode. Our result showed that majority of inpatient requests for Dermatology consults failed to provide adequate information. Clear and thorough communication is essential in preventing issues addressed above. It should be required of all services to provide the sex, age, reason of admission, history of skin problem, reason for consult and past medical history when seeking Dermatology service.

Effect of Smoking on Skin Manifestations and Damage in Systemic Lupus Erythematosus

Irina Turchin; Ann E. Clarke; Sasha Bernatsky; Yvan St-Pierre; Christian Pineau, McGill University, Montreal, QC

**Aim:** To evaluate the association between cigarette smoking and dermatological manifestations and damage in patients with Systemic Lupus Erythematosus (SLE).

**Methods:** Patients with ACR criteria for SLE have been enrolled at the time of their first clinic visit and followed prospectively with annual assessments. Data from the last assessment performed between 01/2001 and 05/2006 was used for analysis. The outcomes examined included skin manifestations as recorded within the SLE Disease Activity...
Ingredients in the Same Vehicle

Scalp Psoriasis Compared to its Active Ingredients in the Same Vehicle

**P van de Kerkhof,**1 A Anstey;2 L Barnes;3 C Bolduc;4 K Reich;5 S Saari;6 S Segaert;7 L Vaillant;8 V Hoffmann;9 1. Deptment of Dermatology, University Hospital, Nijmegen, Netherlands; 2. Royal Gwent Hospital, Newport, Wales, UK; 3. St. James’s Hospital, Dublin, Ireland; 4. Innovaderm Research Inc., Quebec City, QC; 5. Department of Dermatology, University of Götingen, Götingen, Germany; 6. Polyclinic of Dermatology, Medical Reception Centre, Pulssi (Lääkärisema Pulssi), Turku, Finland; 7. University Hospital St Rafael, Leuven, Belgium; 8. Service de Dermatologie Hôpital Trouseau, Tours, France; 9. LEO Pharma, Ballerup, Denmark

**Methods:** The efficacy and safety of LEO80185 (calcipotriene 50 mcg/g plus betamethasone 0.5 mg/g as dipropionate, compounded in a new scalp formulation) in scalp psoriasis was assessed in two pivotal phase III studies. In Study 2, the efficacy and safety of LEO80185 was compared to betamethasone dipropionate 0.5 mg/g as dipropionate (BD) in the same vehicle, and to calcipotriene 50 mcg/g (C) in the same vehicle.

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**Conclusions:** Current cigarette smoking is associated with increased lupus disease activity or cumulative damage as measured by the SLEDAI or SLAM, or with higher total skin damage as measured by the DI. Adverse events mainly comprised local skin reactions. The adverse event profiles for all groups were similar with a tendency to slightly more skin irritation reported for the C group.

**Conclusions:** LEO80185 was significantly more effective in scalp psoriasis than the active ingredients in the same vehicle.

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**Assessment of the Long-term Safety of Efalizumab for Plaque Psoriasis: Design and Early Results of the RESTORE Study**

Ronald B. Vender;1 Vincent C. Ho;2 Richard G. Langley;1 Yves Poulin;4 Neil H. Shear;5 Kim A. Papp;9

1. Dermatials Research, Hamilton, ON; 2. University of British Columbia, Vancouver, BC; 3. Dalhousie University; Queen Elizabeth II Health Science Centre, Halifax, NS; 4. Laval University and Centre Dermatologique, Quebec City, QC; 5. University of Toronto, Sunnybrook & Women’s College, Toronto, ON; 6. Probity Medical Research, Waterloo, ON

**Introduction:** Plaque psoriasis is a chronic disease, however, long-term treatment with nonspecific systemic drugs is limited by toxicity. Biologicals that target specific elements of the immune response underlying psoriasis pathogenesis may offer more effective and safer treatment alternatives for continuous therapy in the long term. Efalizumab is a humanized immunoglobulin G1 monoclonal antibody that binds to CD11a sites on T-cells, thus preventing T-cell migration to the skin and interaction with keratinocytes. Because of its immune-specific and T-cell sparing effects, efalizumab may be safer than older systemic therapies for psoriasis. Clinical trial data from randomized placebo-controlled and open label phase 3 studies have demonstrated that efalizumab is safe and effective for continuous care for at least 36 months in adult patients with moderate to severe psoriasis. This study further addresses the long-term safety profile of efalizumab.
**Methods**: The Raptiva Evaluation of Safety and Treatment Optimization Registry (RESTORE) is an observational, prospective study of patients who initiate or continue treatment with efalizumab. RESTORE will assess the safety of long-term treatment with efalizumab in 900 adult subjects with moderate to severe plaque psoriasis enrolled from centers across Canada. The primary objectives of the study include determination of the incidence of serious or unexpected adverse events and the identification of comorbidities, concomitant medications, or other risk factors for these events.

**Results and Conclusions**: RESTORE will provide additional data on the long-term safety profile for efalizumab as well as information on patient persistence on therapy and long-term efficacy. Baseline demographic data will be presented.

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**Granulomes cutanés et Déficit Immunitaire Commun Variable**

Caridad Vera; Edmond Rizcallah; Chantal Lemire; Dominique Hanna; Bruno Maynard, CHUS, Sherbrooke, QC

**Introduction**: Le déficit immunitaire commun variable (DICV) est un syndrome hétérogène caractérisé par une hypogammaglobulinémie, des infections bactériennes récurrentes et une réponse humorale inadéquate. Le diagnostic n’est souvent évident qu’à l’âge adulte. Environ 12% des patients présentent une maladie granulomateuse qui peut affecter les poumons, les ganglions lymphatiques, la rate et la peau.

**Observation**: Une patiente de 35 ans présentait depuis l’âge de l’adolescence une plaque érythémateuse asymptomatique au bras droit qui s’ulcéra quelques années plus tard. Le reste de l’examen physique et le bilan paraclinique étaient normaux.

L’étude histopathologique démontra une réaction granulomateuse de type tuberculoïde dans l’hypoderme. Les colorations spéciales et les cultures bactériennes, fongiques et mycobactériennes furent négatives.

Un traitement de corticoïdes intralésionnels et d’hydroxychloroquine fut tenté sans succès. Une corticothérapie générale mena à la régression des lésions.

Quelques années plus tard, un bilan sanguin démontra une lymphopénie et une hypogammaglobulinémie qui mena à un diagnostic de DICV. Dès lors, elle fut traitée avec des immunoglobulines intraveineuses.

**Discussion**: Les granulomes cutanés sans cause infectieuse ont souvent été décrits chez les patients avec un DICV et le granulome non casseux serait la lésion la plus fréquemment rencontrée.

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**Psoriasis Patients Who Do Not Respond to One Biologic Therapy May Respond to Another**

Norman Wasel, Stratica Medical and University of Alberta, Edmonton, AB

**Introduction**: An inappropriate immune response mediated by T-cells is thought to underlie the pathogenesis of psoriasis. The biological drugs efalizumab and etanercept are immunomodulators that are effective treatments for psoriasis, but they differ in their mechanism of action. Efalizumab is a recombinant humanized monoclonal antibody directed towards the CD11a site on leukocyte function associated antigen-1 proteins on T-cells. Binding of efalizumab to CD11a inhibits T-cell activation, reactivation, and trafficking. Etanercept is a tumor necrosis factor-alpha (TNF) binding fusion protein that inhibits the cytokine TNF from binding to its receptor and transmitting inflammatory signals. Both drugs are approved for the treatment of psoriasis in adults, and a significant percentage of patients respond well to these agents, however, not all patients respond to any one agent or type of agent. Some patients treated with etanercept may experience lack of efficacy or loss of efficacy, or they may need to discontinue therapy due to adverse events. In these circumstances, patients discontinuing therapy with etanercept may benefit from switching to efalizumab.

**Methods**: Case reports are presented that document difficult-to-treat patients who are switched from etanercept to efalizumab treatment.

**Results and Conclusions**: Patients inadequately controlled or intolerant to etanercept may benefit from transitioning to efalizumab. The management of these patients will be discussed in detail. These case reports complement clinical trial data that demonstrate the efficacy of efalizumab in difficult-to-treat patients.
Case Study: Treatment with Concurrent Imiquimod and 5-Fluorouracil of an Elderly Gentleman with Gorlin’s Syndrome and Many Recurrent Basal Cell Epitheliomas

Anna J. Williams, Hawkesbury, ON

Introduction: An 84 year old farmer of Celtic origin was transferred to this practice in June 2005, following the retirement of his previous dermatologist. He has jaw cysts and palmar pits. One son and granddaughter inherited the condition. He had his first tumor at 25. Over his lifetime, he developed a huge number of basal cell epitheliomas treated surgically.

He presented large rodent ulcers on both cheeks, on a background of scar tissue. Bilateral ectropia were noted. Several 10 cm plaques of superficial spreading basal cell carcinoma with ulceration and oozing were noted on the scalp and thorax.

Methods: A section 8 request was submitted for imiquimod and OHIP agreed to pay for it from August 2005 to August 2006. Whilst waiting for permission for payment, 5-fluorouracil was prescribed to apply twice daily to various lesions with poor results. After imiquimod became affordable, it was applied to the lesions once daily with 5-fluorouracil applied to the same lesions once daily, often with Saranwrap occlusion. The patient’s wife was in charge of applications. Miniscule quantities of imiquimod were used, both because of nausea, and because of the couple’s Scottish background.

Results: The rodent ulcers on the face regressed. The ectropia relaxed. The background scar tissue appeared more pliable and of better quality. The large superficial spreading basal cell carcinomas became much thinner, and stopped oozing so that the patient no longer required continuous dressings to prevent soiling of his shirts.

The patient is very pleased with the results, joking “you just want to make me look good in my coffin!”

Conclusions: Combining imiquimod with 5-fluorouracil amplifies its effectiveness and greatly reduces the cost. It is non-threatening and not particularly painful. Treating selected tumors in this way improves quality of life, particularly in elderly patients. It improves the interactions with their neighbors, relatives and care-givers.

Although the goal was palliative rather than microscopic cure, the results were better than anticipated.

Acneiform Eruption Associated with Epidermal Growth Factor Receptor Tyrosine Kinase Inhibitor Use: A Case Report

Peter J. Green,1 Jordan T. Zacny,2

1. Division of Dermatology, Dalhousie University, Halifax, NS; 2. Dalhousie Medical School, Halifax, NS

Introduction: Lung cancer is the commonest cause of cancer-related death in men and women. Treatment advances have included the use of epidermal growth factor receptor (EGFR) tyrosine kinase inhibitors. Erlotinib, an EGFR tyrosine kinase inhibitor, has been found to prolong survival in non-small cell lung cancer (NSCLC) patients after first line chemotherapy. Erlotinib is indicated as monotherapy for NSCLC (EGFR positive) after at least one other chemotherapy regimen has failed. Use of this agent may cause a significant acneiform eruption; one study noted an acneiform eruption in 78% of patients. Awareness of this entity and its treatment is paramount to correct diagnosis and management.

A Case Report: A 72-year-old male with NSCLC was referred to dermatology for a monomorphic erythematous papular-pustular eruption on the face and chest that appeared approximately one week after starting erlotinib 150 mg once daily. The eruption improved with stopping erlotinib but recurred more severely with re-exposure to the drug. The referring oncologist had prescribed clobetasol propionate ointment 0.05% and 50 g had been used with limited effect. Dermatology assessed and diagnosed an acneiform eruption associated with EGFR tyrosine kinase inhibitor use. Minocycline HCl 100 mg twice daily was prescribed and clobetasol propionate was discontinued. Six weeks later the acneiform component had almost completely resolved and minocycline HCl was continued. The patient was able to continue erlotinib.

Conclusion: Studies have documented an acneiform eruption associated with the use of EGFR tyrosine kinase inhibitors. This case report documents the clinical features and proposed mechanism of acneiform lesions associated with tyrosine kinase inhibitors. Oral tetracyclines appear to treat this eruption rapidly and successfully, thus enabling patients to continue the agent for its prescribed purpose. Dermatologists and other specialists are likely to see patients with this eruption given the increased use of tyrosine kinase inhibitors in patients with malignancy.
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