

2024 Elevate-Derm East Clinical Insights

Day 1

Central Centrifugal Cicatricial Alopecia (Susan Taylor, MD)

- Occult vertex breakage may be a presenting and early sign of central centrifugal cicatricial alopecia.
- Subtypes of central centrifugal cicatricial alopecia include: classic, occipital/posterior vertex, frontal, patchy, temporal, and decreased hair density.
- A peripilar gray/white halo is a specific and sensitive dermatoscopic sign for diagnosing central centrifugal cicatricial alopecia.
- Consider using the Olsen scale to track the progression of central centrifugal cicatricial alopecia.
- Hair care practices are not causative of central centrifugal cicatricial alopecia and treatment recommendations based solely on hairstyle modifications are insufficient.

Vitiligo in Skin of Color (Susan Taylor, MD)

- It is important to know the signs of clinical activity in vitiligo; confetti lesions, trichrome lesions and koeber phenomenon.
- In patients with vitiligo, it is important to perform a thorough review of autoimmune comorbidities.
- For patients with a high body surface area of vitiligo (vitiligo universalis), you can consider depigmentation with monobenzone. Depigmentation treatment is not reversible.
- Use a Wood's lamp as a diagnostic tool for vitiligo.
- Use side lighting to see if hair has depigmented.
- For rapidly progressing vitiligo, treat with dexamethasone 2.5 - 4 mg/day, 2 days per week (Saturday and Sunday).

Challenging Inflammatory Cases (Peter Lio, MD)

- An escalating flare pattern in an atopic dermatitis patient is a red flag.
- Improving the skin barrier in atopic dermatitis patients can help prevent other comorbidities.
- Atopic Dermatitis Control Tool is a six question survey that is easily scored from 1-7. It is a validated and useful patient self-assessment tool. Can do it on an app.

Putting Skincare Products Under the Microscope (Chris Bunick, MD)

- Exposure to Benzene is associated with an increased risk of leukemia.
- Benzene is used as a solvent in chemical and pharmacological production.
- Benzoyl peroxide breaks down into benzene. This process is expedited by heat exposure.
- A safe amount of exposure to benzene should be zero.

An Integrative Approach to AD: A New Toolbar (Peter Lio, MD)

- Daily massage in children with atopic dermatitis can decrease anxiety, redness, scaling, lichenification, excoriations and pruritus. Massage with sunflower seed oil or coconut oil.
- Findings suggest that mindfulness and self-compassion training is an effective treatment option for adults with atopic dermatitis.
- Coconut oil, applied twice daily for four weeks, can decrease staphylococcus colonization by 95% in patients with atopic dermatitis.
- L-histidine supplementation may increase filaggrin formation and improve skin barrier function.

- L-Histidine taken orally (powder) daily for 4 weeks can decrease atopic dermatitis disease severity.
- Accupressure on certain pressure points can be effective in decreasing itch and disease severity of atopic dermatitis. It also has no side effects and is free!

Review of the Molecular Differentiation of Dermatologic Therapeutics (Chris Bunick, MD)

- Sarecycline is a narrow-spectrum, third generation tetracycline antibiotic effective for facial and truncal acne and does not affect the intestinal flora. And does not carry same risk for bacterial resistance as other tetracycline antibiotics
- An important property of the tetracycline class of antibiotics are its anti-inflammatory properties.
- Interleukin 13 drives barrier defects, inflammation, itch, and microbiome dysbiosis in skin.
- Topical roflumilast is stabilized in 3 key areas on the phosphodiesterase-4 molecule, increasing efficacy. It is now approved for atopic dermatitis in addition to psoriasis and seborrheic dermatitis.
- Weight gain can be seen with janus kinase 2 inhibitors because it can block postprandial signaling.

Atopic Dermatitis in 2024: Panel (Chris Bunick, MD, Peter Lio, MD)

- The shingles vaccine can be recommended in patients 18 years or older who are being considered for treatment with a janus kinase inhibitor in order to decrease the chance of zoster events.
- The mechanism of the memory component of atopic dermatitis is thought to be important in the development of future treatments focused on disease remission.
- If facial dermatitis develops while taking Dupilumab, consider seborrheic dermatitis, contact dermatitis, and topical steroid withdrawal.

Interesting Cases/Lessons Learned in Managing Immunobullous Disorders (Brittney Schultz, MD)

- Immune checkpoint inhibitors can cause cutaneous eruptions such as bullous pemphigoid which has a more delayed onset (approximately 14 weeks).
- Rituximab is FDA-approved first line therapy for pemphigus vulgaris.
- There are increased rates of psoriasis in patients with pemphigus.
- Screen all patients with pemphigoid for mucosal involvement as they require more aggressive treatment.
- A new blistering eruption should be evaluated in-office to rule out viral etiology prior to initiating therapy.
- Hepatitis B virus reactivation can occur in patients on rituximab so it is imperative to check triple serologies.

Immunofluorescence/Immunobullous work-up Tips & Tricks (Brittney Schultz, MD)

- Direct immunofluorescence detects *in vivo* bound immunoglobulin G using patient's skin. Indirect immunofluorescence detects circulating immunoglobulin G using patient's serum.
- Immunofluorescent dermal salt split Laminin 332 is associated with malignancy in mucous membrane pemphigoid, typically adenocarcinoma. This warrants further workup.
- Direct immunofluorescent biopsy should be done perilesionally for blistering diseases. The biopsy should be taken 0.5 cm away from the lesion unless ruling out dermatitis herpetiformis, which should be biopsied 1 cm away.

Day 2

Updates in Immunobullous Disorders (Brittney Schultz, MD)

- Pemphigus can be induced by drugs, vaccines, infections, nutrition, pregnancy, stress, and trauma.
- Pemphigus vulgaris is associated with autoimmune diseases; thyroid disease and myasthenia gravis.
- Patients with bullous pemphigoid are at two times increased risk of venous thromboembolism.
- Mucous membrane pemphigoid is challenging to diagnose so multiple biopsies are helpful. Consider direct immunofluorescence of normal buccal mucosa or skin even if there is no evidence of oral or cutaneous involvement.

Melanoma Updates 2024 (Rebecca Hartman, MD)

- The American Academy of Pediatrics recommends avoiding sunscreens with Oxybenzone in children since it may be an endocrine disruptor.
- Depth is the most important staging feature of melanoma, so try to obtain complete staging information when doing a biopsy.
- Genetic testing should be recommended to any patients with three or more primary invasive melanomas and/or pancreatic cancer among first- or second-degree relatives on the same side of the family.
- Total body photography is helpful for monitoring patients who are at high risk for melanoma or have a melanoma history.

When to Put Down the Scalpel: Non-Surgical Therapies for Skin Cancer (Rebecca Hartman, MD)

- 5-fluorouracil and Imiquimod are both topical treatments that are FDA approved for treatment of superficial basal cell carcinomas.
- It is reasonable to consider active surveillance in patients with limited life expectancy who can follow-up clinically and have small, asymptomatic, non-aggressive basal cell carcinomas in low risk locations.
- Think twice about using low-risk therapeutic approaches in the treatment of keratinocyte carcinomas in patients with large or aggressive tumors, patients who are organ transplant recipients, patients with chronic lymphocytic leukemia or small lymphocytic lymphoma, patients with HIV or patients on long term immunosuppressive therapy.
- 5-Fluorouracil is toxic to dogs.
- For eruptive squamous atypia on legs, treatment with intralesional 5-fluorouracil resolved the majority of lesions with monotherapy. 33% of lesions required additional treatment.

Acne, Rosacea, Cosmeceuticals #1 (Josh Zeichner, MD)

- Cutibacterium acnes is part of the normal skin flora. Patients with acne may have an overactive host immune response to this bacteria.
- A diet rich in high glycemic index foods, skim cow's milk, vitamin B12 and whey protein may contribute to the development of acne.
- Simple acne treatment regimens have been shown to yield better results and patient adherence. Consider prescribing fixed dose combination creams when possible.
- Trifarotene is a fourth-generation retinoid that not only helps with acne clearance but also helps treat acne scarring.

- Applying a ceramide moisturizer prior to a prescription acne topical can help maximize acne treatment outcome.
- Isotretinoin should be prescribed twice daily. Isotretinoin drug exposure is more efficacious if taken twice a day than once a day dosing.

Cases from the Clinic! (Josh Zeichner, MD, Vaneeta Sheth, MD)

- Isotretinoin should be taken with a high-fat, high-calorie meal for optimal absorption. Per FDA guidelines, the meal should total 800-1000 calories with 50% of the calories being derived from fat.
- Routine potassium monitoring is typically unnecessary for healthy women on Spironolactone. However, you should check for hyperkalemia in older patients, patients with renal, cardiac or liver disease, and patients on a higher dosage of spironolactone (200mg/day).
- If a patient on isotretinoin is not improving as expected, consider compliance, absorption, and hormonal irregularities.
- Take a biopsy to rule out deep fungal infections or malignancy prior to initiating immunosuppressants for treatment of pyoderma gangrenosum.
- Congenital adrenal hyperplasia is a rare cause of abrupt, recalcitrant acne.
- Patients on testosterone supplements may benefit from low-dose, long-term isotretinoin.

Acne, Rosacea, Cosmeceuticals #2 (Josh Zeichner MD)

- Cosmeceuticals are not subject to pre-market FDA approval.
- Cosmetics are products that beautify or cleanse the skin while topical drugs affect the structure or function of the skin.
- Daily sunscreen use alone improves clinical parameters of skin aging.
- Petrolatum is different from petroleum (crude oil). Crude oil contains impurities and can be carcinogenic. Pure white petrolatum is safe for use on the skin.
- Cleansing with water alone removes sixty five percent of dirt and oils from the skin.

Cosmeceutical Updates in Skin of Color (Vaneeta Sheth, MD)

- There is no difference in the number melanocytes in varying skin tones. Melanosomes are more numerous and larger in skin tones with higher melanin content.
- Azelaic acid has anti-tyrosinase activity and antioxidant activity and can be effective in the treatment of melasma and post inflammatory hyperpigmentation.
- Bakuchiol is a plant-derived retinol analog that may help pigmentary disorders through inhibition of melanogenesis.
- Skin of color patients, being seen for acne, may be more concerned about the post inflammatory hyperpigmentation of their skin rather than the active acne lesions.
- Visible light induces pigment darkening in Fitzpatrick skin types IV-VI that is more long-lasting and intense than that induced by UVA1. Tinted sunscreens containing iron oxide protect against visible light and ultraviolet light.
- Silymarin, derived from milk thistle, is an antioxidant and comedolytic available over-the-counter. It has been shown to decrease acne lesion counts, sebum secretion and pigmentation.

Day 3

Update on Alopecia Areata (Jerry Shapiro, MD)

- Alopecia areata can involve any hair bearing surface, such as beard, eyebrow, eyelash, axillary, or pubic area.
- Exclamation point hairs are indicative of active alopecia areata.
- Alopecia areata targets dark hairs and spares gray hairs. Pitted nails may or may not be seen in alopecia areata.
- Ophiasis alopecia areata is characterized by hairloss in the back of the head and it can be more refractory to treatment.
- The Severity of Alopecia Tool (SALT) score is a scale that measures the percentage of scalp hair loss. A score of greater or equal to fifty percent hair loss is necessary for insurance to cover a Janus Kinase inhibitor.
- Deuruxolitinib is a Janus Kinase 1/Janus Kinase 2 pathway inhibitor that was just approved for the treatment of alopecia areata.

Who Cares about Conference Posters? Your Patients Do! (Douglas DiRuggiero, PA-C)

- Abstracts from posters often get reprinted. Once an abstract is printed it becomes a publication, which can advance your reach as an advanced practice provider.
- Posters are not expensive and can yield many benefits to the medical community.
- A recent poster from apremilast showed that delaying systemic treatment in psoriasis patients leads to delayed quality of life improvement and exacerbated psoriasis flares.
- A poster discussing generalized pustular psoriasis (GPP) suggests that untreated GPP negatively affects patients even in the absence of a flare event and that treatment with sepesolimab at 300mg every four weeks can prevent flare ups.

It Still Exists! A Hansen's Disease Primer for the Non-Leprologist (Adam Lipworth, MD)

- Hansen's disease is still prevalent worldwide and present in the United States. It is hard to diagnose and diagnosis is often delayed.
- Delayed diagnosis of Hansen's disease can lead to severe and permanent morbidity.
- 95% of people are naturally immune to Hansen's Disease.
- In tuberculoid leprosy, there is only one or a few lesions and plaques are anaesthetic and anhidrotic. There are thickened nerves near the plaques.
- In lepromatous leprosy, there are many diffuse lesions that have normal sensation, but there is symmetric neuropathy from larger nerve damage.
- Diagnosis World Health Organization Criteria (consider a diagnosis of Hansen's disease if 2 out of 3 are present):
 1. Definite anesthesia of hypopigmented or reddish patch.
 2. Thickened/enlarged peripheral nerve w/neuropathy of region supplied by the nerve.
 3. Acid fast bacilli on slit-skin smear.

Hair Disorders - How I Treat the Hard Stuff (Jerry Shapiro, MD)

- Trichoscopic evaluation for Lichen planopilaris shows a loss of follicular ostia, pigment incontinence (blue-gray dots) and perifollicular scaling.
- Scarring alopecia subtypes include lymphocytic, neutrophilic, and mixed.

- There may be an association between chemical sunscreen use and frontal fibrosing alopecia. Recommend sunscreens with zinc oxide and avoid chemical sunscreens.
- Mesotherapy with Dutasteride is an option in the treatment of androgenetic alopecia and has minimal side effects.
- Pioglitazone is an oral medication that can be used to treat lichen planopilaris. It normalizes cholesterol synthesis within the sebaceous gland of the follicle allowing for the creation of a more functional hair shaft.
- Central Serous Chorioretinopathy, which is the accumulation of fluid under the retina, can occur after intralesional triamcinolone injections in the scalp.

Lab Monitoring Requirements in Injectable Biologic/Small Molecule Patients (G. Michael Lewitt, MD)

- Though no lab testing is required with janus kinase inhibitors, it is advisable to check a full lipid panel and liver function tests at week 6-8 and annually thereafter in addition to an annual tuberculosis test.
- Providers need to use judgment when screening/monitoring patients on biologics. There are not detailed lab requirements for many of the biologic medications.
- Be mindful about patients that may be on combination therapies with a "traditional immunosuppressant" like methotrexate that require additional or more frequent lab testing.

Treating Psoriasis in Special Populations (G. Michael Lewitt, MD)

- All FDA-approved biologics package inserts recommend/require a baseline tuberculosis screening.
- Latent tuberculosis in the biologic patient: TNF- α and IL-12/23 inhibitors can be used after one month of prophylaxis.
- Interruption of antipsoriatic oral and biologic therapies is generally not necessary for patients receiving non-live vaccines. Temporary interruption of oral and biologic therapies before and after administration on live vaccines is recommended in most cases.
- Tumor necrosis factor alpha (TNF- α) inhibitors can reactivate hepatitis B virus. Consult hepatology in patients with a history of hepatitis B for potential prophylaxis prior to starting a biologic.
- Patients on abatacept, a CTLA-4 fusion protein used to treat patients with severe rheumatoid arthritis, are at increased risk of developing melanoma.
- Discontinuation of biologics is recommended for two to three half lives of the medication before and after live vaccinations.

Roadblock: Challenges of Obtaining a Biologic/Small Molecule drug (G. Michael Lewitt, MD)

- Dermatology providers are disproportionately affected by prior authorizations due to price advances in biologic medications and previous inexpensive generic medications.
- Be sure to document appropriate rating scales (Investigator's Global Assessment, Body Surface Area, Eczema Area and Severity Index, Psoriasis Area and Severity Index, etc.) and affected special areas in chart notes to help get medications covered by insurance.
- Communicate tips/tricks to get medications covered with colleagues.

Mechanisms of Chronic Urticaria (Aaron Ver Heul, MD)

- The key feature of urticarial lesions is evanescence (lasts less than 24 hours and does not leave scars or discoloration).
- Beware of urticarial lesions that are primarily painful or do not itch. If that happens consider a diagnosis of urticarial vasculitis or autoinflammatory diseases.
- Alpha-gal syndrome is a food allergy to mammalian meat that develops from a tick bite (lone star tick). It can be different from other food allergies because the allergic reaction can be delayed.
- If urticarial lesions are lasting more than 48 hours, a biopsy can be helpful to rule out urticarial vasculitis or an early bullous pemphigoid.
- Mas-related G protein-coupled receptor X2 or MRGPRX2 is a receptor found on mast cells that plays a role in host defense and allergic inflammation. Its activation can trigger mast cell degranulation, chemotaxis and cytokine release. It is involved in chronic urticaria.

Managing Chronic Urticaria: How I do it (Aaron Ver Heul, MD)

- Allergy testing is appropriate if there is a consistent, rapid reaction after an exposure to a substance.
- Without a clinical history used for targeted allergy testing (especially for food allergy), the specificity of a positive test is approximately 0.5.
- All second generation antihistamines have been proven safe to be taken up to four times daily.
- The prevalence of autoimmune diseases in patients with chronic spontaneous urticaria increases over time, suggesting chronic spontaneous urticaria might precede the development of other autoimmune diseases.
- Omalizumab has a risk of paradoxical anaphylaxis, which is why chronic spontaneous urticaria is often managed by an allergist.

Cases from my Career: Lessons Learned from my Itchy Patients (Aaron Ver Heul, MD)

- Medications that can cause itching include calcium channel blockers, hydrochlorothiazide, and opioids.
- In the United States, prurigo nodularis is defined as a distinct clinical disease defined by the presence of chronic pruritus and multiple localized or generalized, elevated, firm and nodular lesions.
- Look for clues of histaminergic response/mast cell-mediated etiology even when not a classical presentation of chronic spontaneous urticaria.
- If a patient is sensitized to an allergen, they will have a positive serum IgE. If the serum IgE is negative but the patient still reacts, it's considered an intolerance.

Infectious-Disease Dermatology Management Update: Complex Choices for Common Conditions Part 1 (Adam Lipworth, MD)

- If bullous impetigo is the suspected diagnosis, aspirate fluid from bullae to use for gram stain to confirm diagnosis. Gram positive cocci should be seen in clusters if diagnosis is bullous impetigo.
- For furunculosis greater than one centimeter diameter, treat with incision and drainage and consider an anti-staphylococcus antibiotic.
- Tenderness is the most sensitive characteristic of cellulitis.

Infectious-Disease Dermatology Management Update: Complex Choices for Common Conditions Part 2 (Adam Lipworth, MD)

- Retiform purpura comes from occlusion of the perforating arterioles and has a characteristic appearance of purpuric patches with jagged edges.
- It is prudent to recognize retiform purpura, as it is an early indicator of a systemic, generally malignant process.
- If a tick with black legs (most consistent with appearance of a deer tick) has been embedded on a patient for at least 36 hours (engorged appearance), remove the tick and then prescribe doxycycline 200mg to take once to prevent tick borne disease.

Day 4

Diagnosis and Management of Infantile Hemangiomas (Jennifer Huang, MD)

- Infantile hemangiomas are the most common benign soft tissue tumor of childhood.
- Hemangiomas grow over the first year of life and then involute over several years. Most hemangiomas do not require intervention.
- Work-up for underlying and vascular anomalies should be performed for any hemangiomas larger than five centimeters in diameter.
- Use Vaseline to diaper area hemangiomas at every diaper change (about every 3 hours)
- The peak growth of hemangiomas occurs at around 6-7 weeks of age, much earlier than we used to think. Treatment of problematic hemangiomas should occur at around 6-7 weeks of age.

Don't Miss It! Important Skin Conditions in Children. (Jennifer Huang, MD)

- Non-infectious causes of neonatal blistering are genetic (epidermolysis bullosa, incontinentia pigmenti, bullous forms of ichthyosis) or autoimmune (pemphigoid gestationes, bullous pemphigoid).
- In neonates with blisters, always rule out infection.
- Bone (80%) followed by skin (33%) are the most common organs involved in Langerhans cell histiocytosis.
- In children with diaper rash consider zinc deficiency if plaques are confluent, erosive and involve acral and perioral regions. Consider Langerhans histiocytosis if lesions are hemorrhagic and involve the scalp.
- Red flags for malignant tumors in children are if the tumor was present since birth, the tumor is rock hard, the tumor has growth past 6-9 months of age or the tumor has rapid growth.
- If you see blisters around the nails in a neonate, consider junctional epidermolysis bullosa.

Reducing Diagnostic Error in Dermatology: A Bayesian Approach (Adam Lipworth, MD)

- Bayes Theorem is a means of determining conditional probabilities. It is the likelihood of what you want to know (hypothesized diagnosis) given data that you have available.
- When inferring information from data, prior probabilities are critically important.
- Confirmation bias occurs when we allow the patient's history to influence how we perceive the exam, which should be independent.