This continuing medical education activity is jointly provided by the North Carolina Dermatology Association and Southern Regional Area Health Education Center.

FRIDAY HANDOUTS
Medical and Diagnostic Pearls
Mark Lebwohl, MD

Sol and Clara Kest Professor
And Chairman
Department of Dermatology
The Mount Sinai School of Medicine

Mount Sinai gets dollars from:
• AbbVie
• Amgen
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• Dr. Reddy’s
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• Novartis
• Pfizer
• ViDac

Consultant
• Allergan
• Dr. Reddy

• Pruritus in the elderly
• Lichen planus
• Ostomies
• Raynaud’s phenomenon
• Optimal phraseology for patients
• Actinic Keratoses
• Local anesthesia alternatives
• Tool tips
• Management of bleeding
• Patient with hyperverbia profundia
• Ocular rosacea
• Gingival hyperplasia
• Drug sampling
• Lyme disease
• Defibrillators
• Nickel allergy
• Atopic dermatitis

Chronic eczematous eruptions of the elderly are associated with chronic exposure to calcium channel blockers: results from a case-control study.

[Lisinopril-induced erythroderma]
Schmutz JL, Barbaud A, Tréchot P.
ACE-I induced angioedema: a case report and review of literature.
Adebayo PB, Alebiosu OC.

Angiotensin-converting enzyme inhibitors as inducers of adverse cutaneous reactions.
Steckelings UM, Artuc M, Wollschläger T, Wiehstutz S, Henz BM.

Enalapril and vulvovaginal pruritus.
Heckerling PS.
Rash, eosinophilia, and hyperkalaemia associated with enalapril.
Barnes JN et al.

[Captopril-induced eruptions: occurrence over a 3-year period]
French
**FIRST-LINE THERAPIES**

- Topical corticosteroids
- Intralional corticosteroids
- Antihistamines

**SECOND-LINE THERAPIES**

- Metronidazole
- Systemic corticosteroids
- Isotretinoin, acitretin
- Narrowband or broad band UVB PUVA

**Oral metronidazole treatment of lichen planus.**
Büyük AY, Kavala M.

- Metronidazole 500 mg bid x 20-60 d.
- 15/19 (79%) improved
- 13/15 → complete clearing

- sulfasalazine up to 2.5g/d vs. placebo x 6w
- lesion improvement 82.6% vs. 9.6%
- pruritus improvement 91.3% vs. 14.3%
- side effects 30.7% - GI and HA

“Small fistula tracks … from which pus could be obtained on pressure.”


If you’re confident about a patient’s diagnosis and treatment, let them know you see a lot of this condition and know exactly how to deal with it.

- Mycosis fungoides/CTCL
- Perioral dermatitis

• Both work
• Diclofenac less irritating


imiquimod cream biw x 16w.

Composite LSR Scores\textsuperscript{a} Through Day57: Safety Population

Mean composite LSR scores peaked at day 4 and returned to baseline levels by day 15.

\textsuperscript{a}The composite LSR score represents the sum of the scores for the 6 specific types of LSRs graded from 0 to 4, with a maximum score of 24 at each study visit.

Pooled 016 and 025

Long-term follow-up of photodynamic therapy with a self-adhesive 5-aminolaevulinic acid patch: 12 months data.
Szeimies RM, et al

- PDT – 1 rx: 63% and 79% efficacy at 1 yr
- Placebo PDT: 9% and 25%
- Cryosurgery: 63%

A randomised study of topical 5% imiquimod vs. topical 5-fluorouracil vs. cryosurgery in immunocompetent patients with actinic keratoses: a comparison of clinical and histological outcomes including 1-year follow-up
Krawtchenko N, Roewert-Huber J, Ulrich M, Mann I, Sterry W, Stockfleth E.

• Cryo 20-40 sec per lesion x 1-2 sessions
• 5FU bid x 4w.
• Imiquimod tiw x 4 w. x 1-2 courses

Clinical Evaluation:
Comparison of All Treatment Groups

![Clinical Evaluation Chart]

Histological Confirmation: Comparison of All Treatment Groups

![Histological Confirmation Chart]
Sustained Clearance of Initially Cleared Lesions in All Patients

Twelve months after end of treatment:

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Patients (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imiquimod (n=26)</td>
<td>73%</td>
</tr>
<tr>
<td>5-FU (n=24)</td>
<td>60%</td>
</tr>
<tr>
<td>Cryotherapy (n=25)</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>0%</td>
</tr>
</tbody>
</table>

Out of all treated patients (including in the denominator also those not cleared at end of therapy)


p<.01

Severe refractory fingertip ulcerations in a patient with scleroderma: successful treatment with sildenafil.

Statins: Potentially useful in therapy of systemic sclerosis-related Raynaud’s Phenomenon and digital ulcers.

- Atorvastatin 40/d vs placebo x 4 mos
- new ulcers: 1.6 vs 2.5
- RP, pain and severity of ulcers, endothelial damage markers
Botox therapy for ischemic digits.
Neumeister MW et al.

- 100 unit botulinum toxin vial diluted in 2cc preservative-free saline
- 50-100 U of toxin injected into palm around neuromuscular bundles at MCP

- pain relief was immediate
- ulcers healed within 2 months
- Doppler showed increased blood flow within 30 minutes
- pain relief persisted in 12/19 at 13-59 months

Management of vasospastic disorders with botulinum toxin A.
Van Beek AL et al.

- 11 patients, painful Raynaud’s, digital ulcerations.
- Failed vasodilators, anti-platelet agents, and IV prostacyclin.
Botox 100 U at 8-10 sites, perivascular digital and palmar.

- Temporary hand weakness in 3 patients.
- All patients improved:
- Less frequent and less severe vasospasm and cyanosis within 48 hours.

PreRx scores: 9-10
PostRx: 0-2


Tip # 8

Increased sensitivity to thermal pain and reduced subcutaneous lidocaine efficacy in redheads.

Anesthetic requirement is increased in redheads.
**Alternative Local Anesthetics**

- **Diphenhydramine**
  - 50mg/mL (5%) Dilute 1:5 (1%)
  - Lasts ~20 minutes
  - Risk of necrosis and delayed sedation

- **Bacteriostatic saline w/0.9% benzyl alcohol**
  - Sufficient volume and pressure
  - Lasts ~2 minutes

---

**Injectable sodium chloride as a local anesthetic for skin surgery.**

Weiner SG

"parallel scalpel technique, razor technique, or curettage... punch biopsies and electrocautery techniques"

---

**Diphenhydramine versus lidocaine as a local anesthetic.**

Dire DJ, Hogan DE.

- No significant differences btwn 1% lidocaine and 1% diphenhydramine injections for local anesthesia.
Lidocaine versus diphenhydramine for anesthesia in the repair of minor lacerations.

- 1% diphenhydramine more painful than 1% lidocaine, but anesthesia is equivalent

Reasons to Become a Registry Investigator

- Contribute to education/clinical knowledge of the psoriasis community
- Opportunity to establish a database of your patient population
- Academic recognition and publication opportunities
- Supplement existing insurance fee schedules
  - Site compensation is $400 (including $20 for patient) per Enrollment visit and $300 (including $20 for patient) per biannual Follow Up visit

If you are interested in participating in the Psoriasis Registry as a research investigator, please email psoriasis@corrona.org or visit www.corrona.org or call 508.408.5432
LIFE CHANGING MEDICATIONS

• New psoriasis therapies
  • Dupilumab
  • Omalizumab
  • Vismodegib/Sonidegib
  • Penetration enhancers that improve topical therapy
  • JAK inhibitors
  • New vitiligo therapies

Drugs for Psoriasis and Psoriatic Arthritis

• ETANERCEPT
• ADAHMUMAB
• INFLIXIMAB
• CERTOLIZUMAB
• GOLIMUMAB
• USTEKINUMAB
• SECUKINUMAB
• IXEKIZUMAB
• APREMILAST
• METHOTREXATE
• CYCLOSPORINE
• ACTRETIN

• BRODALUMAB
• GUSELKUMAB
• TILDRAKIZUMAB
• RISANKIZUMAB
• LY3074828
<table>
<thead>
<tr>
<th>Drugs for Psoriasis and Psoriatic Arthritis - PSA</th>
<th>Drugs for Psoriasis and Psoriatic Arthritis - FAST</th>
</tr>
</thead>
<tbody>
<tr>
<td>- ETANERCEPT</td>
<td>- BRODALUMAB</td>
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<tr>
<td>- ADA LIMUMAB</td>
<td>- GUSELKUMAB</td>
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<tr>
<td>- INF LIXIMAB</td>
<td>- TILDRAKIZUMAB</td>
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<tr>
<td>- CERTOLIZUMAB</td>
<td>- RISANKIZUMAB</td>
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<tr>
<td>- GOLIMUMAB</td>
<td>- LY3074828</td>
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<tr>
<td>- USTEKINUMAB</td>
<td></td>
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<tr>
<td>- SECUKINUMAB</td>
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<td>- IXEKIZUMAB</td>
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<tr>
<td>- APREMLAST</td>
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<tr>
<td>- METHOTREXATE</td>
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<tr>
<td>- CYCLOSPORINE</td>
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<tr>
<td>- ACITRETIN</td>
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</tbody>
</table>
Dupilumab Phase 2b Study: Proportion of Patients Achieving 75% Improvement From Baseline in EASI (EASI-75) Over 16 Weeks

**Percentage of patients achieving EASI-75 (%)**

- Placebo
- Dupilumab 100 mg q4w
- Dupilumab 300 mg q4w
- Dupilumab 200 mg q2w
- Dupilumab 300 mg q2w
- Dupilumab 300 mg weekly

*P < 0.05 vs placebo, Weeks 2–3 and P ≤ 0.0001 vs placebo, Weeks 4–16

**Dupilumab SOLO 1 & 2: Proportion (%) of Patients Achieving EASI-75 at Week 16**

**SOLO 1**
- Placebo
- Dupilumab 300 mg q2w
- Dupilumab 300 mg qw

**SOLO 2**
- Placebo
- Dupilumab 300 mg q2w
- Dupilumab 300 mg qw

*P < 0.0001.*

EASI: Eczema Area and Severity Index; EASI-75: 75% improvement in EASI; q2w: every 2 weeks; qw: weekly.

**Dupilumab SOLO 1 & 2: Proportion (%) of Patients with IGA 0 or 1 and ≥ 2-point Reduction From Baseline at week 16**

**SOLO 1**
- Placebo
- Dupilumab 300 mg q2w
- Dupilumab 300 mg qw

**SOLO 2**
- Placebo
- Dupilumab 300 mg q2w
- Dupilumab 300 mg qw

*P < 0.0001.*

IGA: investigator’s global assessment; qw: weekly; q2w: every 2 weeks.

**Dupilumab SOLO 1 & 2: Proportion (%) of Patients With IGA 0 or 1 at Week 16**

**SOLO 1**
- Placebo
- Dupilumab 300 mg q2w
- Dupilumab 300 mg qw

**SOLO 2**
- Placebo
- Dupilumab 300 mg q2w
- Dupilumab 300 mg qw

*P < 0.0001.*
Dupilumab SOLO 1 & 2: Percent (%) Change From Baseline to Week 16 in EASI Score

SOLO 1
- Placebo
- Dupilumab 300 mg q2w
- Dupilumab 300 mg qw

SOLO 2
- Placebo
- Dupilumab 300 mg q2w
- Dupilumab 300 mg qw

Percent change from baseline in EASI score

SOLO 1
- Placebo: 38%
- Dupilumab 300 mg q2w: 72%
- Dupilumab 300 mg qw: 72%

SOLO 2
- Placebo: 31%
- Dupilumab 300 mg q2w: 67%
- Dupilumab 300 mg qw: 69%

*P < 0.0001.

EASI: Eczema Area and Severity Index; qw: weekly; q2w: every 2 weeks.

Dupilumab CHRONOS: Proportion (%) of Patients with IGA 0 or 1 and ≥ 2-point Reduction From Baseline at Week 52

Patients achieving IGA ≤ 1 (%)
- Placebo + TCS: 12.5%
- Dupilumab 300 mg q2w + TCS: 36%
- Dupilumab 300 mg qw + TCS: 40%

*P < 0.0001

IGA: investigator’s global assessment; q2w: every 2 weeks; qw: weekly; TCS: topical corticosteroid.

Source: Data on file

Dupilumab CHRONOS: Proportion (%) of Patients Achieving EASI-75 at Week 52

Patients achieving EASI-75 (%)
- Placebo + TCS: 22%
- Dupilumab 300 mg q2w + TCS: 65%
- Dupilumab 300 mg qw + TCS: 64%

*P < 0.0001

EASI: eczema area and severity index; q2w: every 2 weeks; qw: weekly; TCS: topical corticosteroid.

Source: Data on file
Omalizumab treatment reduced mean weekly Itch Severity Score by Week 1

- Rapid-onset, dose-response, sustained efficacy at Wk 24 compared with Wk 12

Maurer M, et al. EADV 2013: FC09.1. Sponsored by Genentech, Inc. and Novartis

Mean change from baseline

<table>
<thead>
<tr>
<th>Placebo</th>
<th>Omalizumab 75 mg</th>
<th>Omalizumab 150 mg</th>
<th>Omalizumab 300 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.83</td>
<td>-6.46</td>
<td>-6.66</td>
<td>-9.40</td>
</tr>
<tr>
<td>p=0.0010</td>
<td>p=0.0012</td>
<td>p&lt;0.0001</td>
<td></td>
</tr>
</tbody>
</table>

Mean change from baseline in weekly ISS at Wk 12

p values derived from least-squares mean of the differences between each of the omalizumab groups and placebo group using ANCOVA controlling for baseline weekly ISS (<13 vs ≥13) and baseline weight (<80 kg vs ≥80 kg). Baseline observation forward imputation was used for missing values.

Maurer M, et al. EADV 2013: FC09.1. Sponsored by Genentech, Inc. and Novartis
Inhibition of the hedgehog pathway in advanced basal-cell carcinoma.
Von Hoff DD et al.

- 33 patients – metastatic or advanced BCC
- GDC – 044a 16 partial and 2 complete responses
- fatigue, hyponatremia, muscle spasm, afib

Randomized, double-blind study of sonidegib (LDE225) in patients with locally advanced or metastatic basal-cell carcinoma
J Clin Oncol 32:5s, 2014 (suppl; abstr 9009a*)
MR Migden, et al.

SONIDEGIB

Absorption  Azelaic acid

Azelaic acid is most commonly formulated as a 20% cream, as a 15% gel and a 15% foam. There is some published data absorption.

- Percutaneous absorption of azelaic acid into human skin from the 20% cream formulation is 3.6% of the dermally applied dose.
- The 15% gel formulation probably delivers higher amounts of azelaic acid to the skin, as studies on mice showed an 8-fold higher delivery (25.3% versus 3.4%) into viable skin for the gel than the cream.

With both formulations the majority of the applied azelaic acid

Topical corticosteroid compounding: effects on physicochemical stability and skin penetration rate.
Krochmal L, Wang JC, Patel B, Rodgers J.
Dependence of corticosteroid penetration on the vehicle.

Topical steroid formulation selected to balance skin penetration and retention, while minimizing percutaneous absorption

- Test formulation F-10 demonstrated optimal penetration–permeation balance
- High epidermal and dermal concentrations of betamethasone dipropionate with minimal receptor fluid levels
- Sernivo selected for further clinical development

F-C = oleyl alcohol

Penetration of steroid into various skin layers
Permeation of steroid into retention fluid
Supersaturation of calcipotriene and betamethasone dipropionate in a novel aerosol foam formulation for topical treatment of psoriasis provides enhanced bioavailability of the active ingredients.

Lind M et al.


- Rapid evaporation of solvents leaves the calcipotriene and BD in a supersaturated state.
- Crystals form with other formulations of Cal/BD (ointment, topical suspension) but do not form after dispensing of the foam.
- Both Cal and BD, fully dissolved in the DME and butane solvents, do not form crystals.
In vitro skin penetration data for BDP

Penetration of BDP (in CBD ointment and LEO 90100) into skin at different time points

Receptor fluid
CBD ointment, 2h
CBD ointment, 6h
CBD ointment, 21h
LEO 90100, 2h
LEO 90100, 6h
LEO 90100, 21h

In vitro skin penetration data for calcipotriol

Penetration of calcipotriol (in CBD ointment and LEO 90100) into skin at different time points

Receptor fluid
CBD ointment, 6h
CBD ointment, 2h
CBD ointment, 21h
LEO 90100, 2h
LEO 90100, 6h
LEO 90100, 21h

Primary Response Criterion
Subjects (%) with Controlled Disease by the IGA at Week 4

Full analysis set (LOCF)

Note: Graph illustrates observed values at each visit.
Crisaborole Topical Ointment, 2%: A Nonsteroidal, Topical, Anti-Inflammatory Phosphodiesterase 4 Inhibitor in Clinical Development for the Treatment of Atopic Dermatitis.


Primary Efficacy Endpoint: Percentage of Patients Achieving Success in ISGA (Clear [0] or Almost Clear [1] with ≥2-Grade Improvement From Baseline)

<table>
<thead>
<tr>
<th>Study Day</th>
<th>Crisaborole (AD-301; n = 503)</th>
<th>Crisaborole (AD-302; n = 513)</th>
<th>Vehicle (AD-301; n = 256)</th>
<th>Vehicle (AD-302; n = 250)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-26</td>
<td>22%</td>
<td>29%</td>
<td>15%</td>
<td>21%</td>
</tr>
<tr>
<td>0-29</td>
<td>30%</td>
<td>37%</td>
<td>25%</td>
<td>30%</td>
</tr>
</tbody>
</table>

* Primary endpoints at Day 29: 301, p=0.038; 302, p<0.001

Comparison of tofacitinib vs ETN or PBO in moderate to severe chronic plaque psoriasis: Phase 3 RCT

<table>
<thead>
<tr>
<th>Week</th>
<th>PBO (N=107)</th>
<th>Tofa 5 mg BID (N=329)</th>
<th>Tofa 10 mg BID (N=330)</th>
<th>ETN 50 mg BIW (N=335)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>100%</td>
<td>92.7%</td>
<td>91.2%</td>
<td>90.0%</td>
</tr>
<tr>
<td>12</td>
<td>68.2%</td>
<td>76.5%</td>
<td>74.3%</td>
<td>72.6%</td>
</tr>
</tbody>
</table>

% patients achieving a PASI 75 response through Week 12 (NRI)

<table>
<thead>
<tr>
<th>Week</th>
<th>PGA response (SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>100%</td>
</tr>
<tr>
<td>12</td>
<td>68.2%</td>
</tr>
</tbody>
</table>

% patients achieving a PGA response through Week 12 (NRI)

<table>
<thead>
<tr>
<th>Week</th>
<th>PASI90 response (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>21.0%</td>
</tr>
</tbody>
</table>

% patients achieving a PASI 90 response through Week 12 (NRI)
Oral ruxolitinib induces hair regrowth in patients with moderate-to-severe alopecia areata.


Reversal of Alopecia Areata Following Treatment With the JAK1/2 Inhibitor Baricitinib

Tofacitinib Citrate for the Treatment of Vitiligo: A Pathogenesis-Directed Therapy.
Craiglow BG, King BA.
JAMA Dermatol. 2015;151:1110-2

Preliminary clinical activity of a topical JAK1/2 inhibitor in the treatment of psoriasis.
Punwani N, et al.
The efficacy of afamelanotide and narrowband UV-B phototherapy for repigmentation of vitiligo.

Grimes PE, Hamzavi I, Lebwohl M, Ortonne JP, Lim HW.
Male infant with coarse white hair and dark tips

- Saggy, pudgy cheeks
- Saggy, wrinkly skin
- Pili torti
Menkes Disease

- X-linked recessive neurodegenerative disorder
- Copper transporter mutation
- Copper depletion occurs after delivery
- Disease manifestations develop after 2-3 months of age
- Hair reflects copper depletion over time

Hair that is distally darker

Saggy skin and floppy baby
Menkies Pearls

- Why the down face?
- History of copper dilution reflected in hair

PEDIATRIC DERMATOLOGY PHOTOQUIZ

STRIKING ANNULAR PLAQUES IN A NEWBORN

Jared N. Frome, M.B.A., Nael G. Hadad, M.D., and Kerrie A. Prisco, M.D.

University of Iowa Hospitals and Clinics, Iowa City, IA.

An 8-day-old girl presented to the hospital for acute-onset rash of 1-day duration that had started on the face and spread to the trunk and extremities. She was born at 35 weeks and 4 days gestation by spontaneous vaginal delivery with premature rupture of membranes and Apgar scores of 8 and 9. The pregnancy was complicated by heparin-induced thrombocytopenia, anemia, and lupus anticoagulant disorder. Family history was remarkable for systemic lupus in maternal and paternal first-degree relatives. Physical examination revealed normal vital signs and an infant who was feeding and urinating regularly. There were serpiginous and annular erythematous patches on the cheeks and

Annular erythema in an 8 day old

Spongiosis, perivascular inflammation, no interface component: annular erythema of infancy (AEI)
Annular Erythema of Infancy

Annular erythema of infancy

**Scaly**
- Neonatal lupus until proven otherwise
- ENA
- Cardiology evaluation

**Not-scyly**
- Consider autoinflammatory disease (NOMID)
- Articular disease
- Neurologic disease
- Fever
- ESR, CRP, CBC
- Ophthalmology evaluation
- Immunology evaluation

Neonatal lupus

- Face
- Telangiectasia
- Atrophy

LupusImages.com
Annular Erythema in Neonates Pearls

- Always consider neonatal lupus and autoinflammatory disease
- Refer to cardiology if you have any suspicion for neonatal lupus
  - Even if biopsy and serologies are negative
- www.autoinflammatory-search.org
Pearly white lesion on the left nipple

Nipple Bump Differential

**Children**
- Milia
- Milia-like Syringoma
- Trichoepithelioma
- Fibroma
- Milia-like Idiopathic Calcinosis Cutis
- Neonatal Fibroadnexal Polyp

**Neonate**
- Milia
- Neonatal Fibroadnexal Polyp

Neonatal Nipple Pearl

- Isolated pearly bumps on neonates will self-resolve within a year
A previously well 9-year-old boy presented to our department with a 10-month history of brownish nipple discharge of the left breast. There was no associated pain or history of trauma. The parents related no previous breast manipulation or stimulation. No hormonal treatments or infection were reported. The patient was otherwise healthy and was developing normally. On physical examination, the patient had a small palpable soft mass underneath the left nipple (<1 cm in diameter), with no signs of infection. During the physical examination, bloodstained discharge of the left nipple was noticed (Fig. 1). The remainder of the

Bloody discharge in a 9-year-old boy

Worrisome signs:
- Unilateral
- Persists longer than 9 months
- Spontaneous discharge

Reassuring signs:
- Centered on the nipple
- Preadolescent

Biopsied after 10 months persistence

Mammary duct ectasia
- Brown-colored mass with bloodstained fluid
Work-up of discharge in infants and young children

- Gram-stain and culture of discharge
- Serum prolactin, estradiol, and thyrotropin
- Ultrasound of the affected breast
- If the above is normal and ultrasound consistent with mammary duct ectasia, consider a biopsy if the lesion lasts longer than 9 months

Pediatric Nipple Discharge Pearls

- Work-up of masses that last longer than 9 months
- Culture
- Ultrasound
- Pituitary work-up (prolactin, TSH, estriol)
- Biopsy males if really needed

Plaque-Like Myofibroblastic Tumor of Infancy: A New Case Report and Literature Review
18 month old with a slow growing plaque

Pathology c/w dermatofibroma

Plaque-like myofibroblastic tumor of infancy

- Appear in infancy and early childhood
- Lower back and hip
- Large plaque
- Histology similar to dermatofibroma
- Positive for factor XIIIa and SMA, negative for S-100 and CD34

3 of 5 initially diagnosed as dermatofibromas by a great dermatopathologist.
<table>
<thead>
<tr>
<th>Table</th>
<th>Title: Differential Diagnosis of Pigmented Malignant Tumor (Pigmented Malignant Melanoma Type of Melanoma)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Diagnosis</td>
</tr>
<tr>
<td>Basal Cell Carcinoma</td>
<td>Young, outdoors exposed</td>
</tr>
<tr>
<td>Keratoacanthoma</td>
<td>Young, fair-skinned</td>
</tr>
<tr>
<td>Skin Adenocarcinoma</td>
<td>Middle-aged, smokers</td>
</tr>
<tr>
<td>Schwannoma</td>
<td>Young, males, postural</td>
</tr>
<tr>
<td>Lipoid Xanthoma</td>
<td>Elderly, fair-skinned</td>
</tr>
</tbody>
</table>

**Notes:**
- Basal cell carcinoma is the most common skin cancer.
- Keratoacanthoma is a benign lesion that can resemble skin cancer.
- Skin adenocarcinoma is a rare type of skin cancer.
- Schwannoma is a tumor of nerve tissue.
- Lipoid xanthoma is a benign lesion associated with hyperlipidemia.

**Treatment:**
- Wide local excision is the preferred treatment for all of these lesions.

**Histopathological Features:**
- Superficial nests of atypical melanocytes in the epidermis.
Plaque-like Myofibroblastic Tumor Pearls

• Pathologist may diagnose as a dermatofibroma if you don’t provide enough information

• Does not recur after excision
• Reassess diagnosis if it recurs after excision

Contact Burn with Blister Formation in Children Treated with Sennosides

Kimberly Coply, M.S.N., M.B.A., Ambra Esposito, M.D., Catalina Cerra, M.D., and Luis De la Torre-Montero, M.D., T.A.A.P., T.A.F.P.A.

Children’s Center for Children, Children’s Hospital of Pittsburgh, Pittsburgh, Pennsylvania

- 8 Patients
- 6 days to 18 months after initiation of sennosides
- All bowel movements occurred overnight
- Chemical burn noticed during diaper change
Laxative-associated contact dermatitis

- Only in non-toilet-trained children
- Prevent by giving Senna products at a time of day the allows for bowel movements to occur during the day (and not overnight)
  - 6-10 hours after ingestion

Irritant diaper dermatitis pearls

- Can clean feces with Vaseline soaked gauze instead of wipes
- Quantity of barrier cream (one-half golf ball per diaper change) is more important than type of barrier cream
- Add an antifungal for any diaper dermatitis that lasts longer than 72 hours
Eosinophilic Pustular Folliculitis in Children after Stem Cell Transplantation: An Eruption Distinct from Graft-Versus-Host Disease

Martin Tschöe, M.D.,*,† Vikash S. Goz, M.D.,‡ Etio F. Mathis, M.D.,§,¶ Christopher C. Doan, M.D.,† Timothy H. McCullough, M.D.,*,‡‡ Jon Yeh, M.D., Ph.D.,*,**, Robert Sahely, M.D., M.P.H.,†‡ and Kelly M. Cerbone, M.D.,§,¶

*Department of Pediatric Dermatology, University of California, San Francisco, California; †Department of Dermatology, University of California, San Francisco, California; ‡Department of Pediatrics, Division of Hematology, St. Jude Children's Research Hospital, Memphis, Tennessee; ¶Department of Pediatrics, Division of Hematology, St. Jude Children's Research Hospital, Memphis, Tennessee; ‡‡Department of Pediatrics, Division of Hematology, St. Jude Children's Research Hospital, Memphis, Tennessee; §Department of Pediatrics, Division of Hematology, St. Jude Children's Research Hospital, Memphis, Tennessee; ¶¶Department of Pediatrics, Division of Hematology, St. Jude Children's Research Hospital, Memphis, Tennessee; **Department of Pediatrics, Division of Hematology, St. Jude Children's Research Hospital, Memphis, Tennessee; ††Department of Pediatrics, Division of Hematology, St. Jude Children's Research Hospital, Memphis, Tennessee; ‡‡‡Department of Pediatrics, Division of Hematology, St. Jude Children's Research Hospital, Memphis, Tennessee; †††Department of Pediatrics, Division of Hematology, St. Jude Children's Research Hospital, Memphis, Tennessee; ‡‡‡‡Department of Pediatrics, Division of Hematology, St. Jude Children's Research Hospital, Memphis, Tennessee;

- 7 month old with this eruption 3 months after transplantation
- Started upon tapering tacrolimus
- Biopsy of neck revealed EPF
- Cleared with triamcinolone 0.1% ointment

- 8 yo boy with pruritic macules and papules 2 months after transplantation
- Biopsy c/w EPF
- Cleared with 5 months of betamethasone dipropionate ointment
Eosinophilic pustular folliculitis

- Recurrent crops/clusters of erythematous papules and pustules with an eosinophilic infiltrate on the biopsy
- Four types
  - Classic EPF
  - Immunosuppression/HIV-associated EPF
  - Infantile EPF
  - HSCT EPF

EPF-HSCT

- Pruritic, follicular, erythematous papules and pustules
- Head, upper extremities, and trunk
- 2-3 months after HSCT
- Resolves in several months

Infantile EPF

Hyper-IgE Syndrome?
Burkhart Pearl: Bad red rashes in the first month of life are either:
1. Eczema
2. Immunodeficiency
3. Infection (candida or syphilis)

Consider an immunology workup for eczematous rashes that start in the 1st month of life. Don’t worry about infantile EPF.

Pediatric Eosinophilic Pustular Folliculitis Pearls

• Treat symptomatically with steroids

• HSCT EPF resolves within months

• Infantile EPF resolves within years

• Base hyper-IgE workup on timing of eruption and health of infant rather than EPF
Start Slow

Phase 1: Dermatoscope as a magnifying glass
• Get a dermatoscope
• Keep it in your pocket
• Look at everything before you biopsy it

Phase 2: Test tumor identification accuracy
• Commit on your pathology form
  • BCC vs. SCC
  • Melanocytic vs. non-melanocytic
• Do the introduction to dermoscopy course next year

Start Slow

Phase 3: Iterative learning
• Attend the advanced dermoscopy course
• Photograph everything
• Review your clinical impression, photographs, and images
Data organization
- Organized folders
  - Year/Month/Clinic date
- Diagnosis spreadsheet
- Patient privacy/security

Dermoscopy Overview
- Melanocytic: benign vs malignant
- Non-melanocytic
  - AK, SCC
  - BCC
  - SK
- Special sites
  - Facial
  - Acral
  - Unknowns

Practical Use of Dermoscopy
- Ugly Duckling (clinical)
- Ugly Duckling (dermoscopic)
- Individual lesion (dermoscopic)
- Pattern recognition
3 point check list

- Asymmetry
- Atypical Network
- Blue-white structures

Soyer et al. Three Point Checklist of Dermoscopy: Dermatology 2004;208:27–31

<table>
<thead>
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Sensitivity: true positive rate; if the test is highly sensitive and it is negative, you can be nearly certain that they don’t have the condition, Sn(out)

Specificity: true negative rate; if the test is highly specific and it is positive, you can be nearly certain that they do have the condition, Sp(in)

The three point check list helps you rule out melanoma. If the three point check list is positive, it doesn’t mean that it certainly is melanoma; your clinical intuition is more reliable.
Pattern Recognition

- Reticular
- Globular
- Homogenous
- Organized
- Disorganized

Special Sites

- Facial
  - Asymmetrical pigmented openings
- Slate grey structures
- Acral
  - Furrows are fine
  - Ridges are wrong

Ink test: furrows are fine, ridges are wrong

Acral structure

Fibrillar
Parallel furrow
Lattice
Acral algorithm

First step:
- 1/a (1a): Acquired verruca plana
- 1/b (1b): Acquired verruca plana
- 1/c (1c): Acquired verruca plana

Second step:
- 2/a (2a): Acquired verruca plana
- 2/b (2b): Acquired verruca plana

Third step:
- 3/a (3a): Change
  - 3/b (3b): Change
  - 3/c (3c): Change
  - 3/d (3d): Change

Follow-up:
- 4/a (4a): Follow-up
- 4/b (4b): Follow-up
- 4/c (4c): Follow-up
- 4/d (4d): Follow-up

4/e (4e): Biopsy for histopathologic evaluation