UPDATES IN LICHEN PLANOPILARIS & FRONTAL FIBROSING ALOPECIA & PARTNERING WITH HAIR STYLISTS

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AAD Summer Conference – Chicago, IL – July 28, 2018
1) Lichen Planopilaris
2) Frontal Fibrosing Alopecia
3) Public Health in Dermatology: Partnership with Hairstylists
Pathogenesis of Cicatricial Alopecia

- Inflammation in upper follicle: infundibulum
- Stem cells located in bulge region: responsible for hair follicle renewal & sebaceous glands
A New Model for the Pathogenesis of Primary Cicatricial Alopecia

- Sebaceous gland dysfunction: loss of PPAR gamma*/mitochondrial dysfuntion**
- Abnormal lipid metabolism and cholesterol biosynthesis
- Buildup of toxic lipids
- Inflammation
- Fibrosis/Scarring


Photo Credit: Dr. Paradi Mirmirani
LICHEN PLANOPILARIS

- Peri-follicular erythema & hyperkeratosis
- Lonely Hair sign
- LPPAI (score 1-10)
  - numeric score that allows quantification of the symptoms and signs of the condition for statistical comparison
- Role of PPAR gamma
Retrospective Case Analysis

The use of oral pioglitazone in the treatment of lichen planopilaris

Natasha Atanaskova Mesinkovska MD, PhD a, b, c, Alejandra Tellez MD a, Danyelle Dawes MD b, Melissa Piliang

• N=22 Pioglitazone
  • Complete response 0 (0)
  • Marked improvement 16 (73%)
  • Stable 5 (23%)
  • Progression 1 (4%)
    • 2 patients (9%) experienced relapse after discontinuation of pioglitazone

• Adverse Events
  • Lower extremity edema 11 (50%)
  • Weight gain 9 (41%)
  • Dizziness 1 (5%)
  • Resistant hypertension 1 (5%)
  • Mild transaminitis 1 (5%)

• N=22 Pioglitazone 15 mg > 1mo (median 10.5 mo, Follow up: 15.5 mo)

• Refractory to prior
  • Topical CS 22 (100%)
  • IL CS 19 (86%)
  • Tetracycline 18 (82%)
  • Hydroxychloroquine 7 (32%)
  • Mycophenolate mofetil 2 (9%)
  • Cyclosporine 1 (5%)
Effectiveness of low-level laser therapy in lichen planopilaris

N=8, 5 women 3 men

• Baseline LPPAI 3.35 (2.5-4.5)
  • Mean decrease 0.87 after 6 mo (p=0.012)
• Terminal thickness 71.1 um
  • After treatment 111 um (p=0.018)
Four sessions of PRP three weeks apart.
Frontal Fibrosing Alopecia

• First described in 1994 in 6 Post-menopausal women
• Same as LPP on Histopathology
• Band-like cicatricial alopecia along frontal & temporal hair lines
• Hormonal, genetic, autoimmune, inflammatory and environmental factors are thought to contribute to pathophysiology
• Ddx: Traction Alopecia (fringe sign)
• Men: sideburn loss
• World-wide epidemic: increased 10-fold over the past decade
• Role of topical leave-on moisturizers & sunscreen?

FRONTAL FIBROSONG ALOPECIA

Photo Credit: Dr. Lynne Goldberg
COMPARISON: TRACTION ALOPECIA VS FFA

Fringe Sign in Traction Alopecia vs Complete Loss of Hairline in FFA
10-fold increase in FFA reports suggesting implication of yet unidentified environmental factors.

Several questionnaire studies have pointed out that leave-on facial skin care products, especially sunscreens, could be implicated in FFA.

Case report: Detection of titanium dioxide along the hair shafts of a 73 y/o woman presenting with FFA.

PMH was unremarkable, but she reported daily application of a sunscreen containing nanoparticles of TiO2 during the last ten years.

To date, there are no available data concerning the impact of TiO2 cutaneous exposure on hair growth.

Detection of TiO2 along the hair shafts of a patient with frontal fibrosing alopecia raises the question of a possible implication of TiO2 in FFA pathogenesis via an allergic process.

Hypothesis based on LP can be a consequence of metal sensitization, especially for oral LP in association with dental implants containing nickel, iron or zinc.
1-year h/o frontotemporal and eyebrow hair loss, skin atrophy, prominent vessels

Current medications included: hydroxychloroquine 200 mg clobetasol oint daily, IL TAC 5mg Q6-weeks x10 mos.

For concomitant AGA: spironolactone 100 mg & minoxidil 1 mg->increased mid-frontal density

After 12 mos FFA progressed: Cyclosporin 25 mg was initiated, d/c'ed after 10mos-only mild improvement, hydroxychloroquine was d/c'ed. Dutasteride, minoxidil and spironolactone were continued.

Was advised to d/c sunscreen after prior study published. Within 6 mos, noticeable hair regrowth along the anterior hairline.

Previous meds: Dutasteride 0.1 mg daily & novasone 0.1% cream
N=7 LPP & Lichen Planus Pigmentosus

- LPP dx confirmed by histopathology
- LPPigmentosus dx on characteristic color, morphology and location
  - Uncommon variant of LP, primarily affects young to middle aged individuals with Fitzpatrick skin types III-V
  - Slate gray to brown macules & patches, on sun-exposed or flexural areas, in diffuse or reticulated patterns.
  - FFA with concomitant LPPigm is rare with just a few reports in the literature
  - Three (43%) diagnosed with LPPigm prior to the onset of FFA, with a mean lag interval between LPPigm and FFA development of 4.3 years.
### Prognosis, treatment, and disease outcomes in frontal fibrosing alopecia: A retrospective review of 92 cases

Lauren C. Strazzulla BA a, Lorena Avila MD a, Xiaoxue Li PhD b, c, Kristen Lo Sicco MD a, Jerry Shapiro MD a, b, c

**N=92**

<table>
<thead>
<tr>
<th>Topical treatments</th>
<th>Hydroxychloroquine</th>
<th>Antibiotics</th>
<th>Finasteride/Dutasteride</th>
<th>Pioglitazone</th>
<th>Methotrexate</th>
<th>Mycophenolate mofetil</th>
<th>Spironolactone</th>
<th>Prednisone</th>
<th>Systemic treatments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minoxidil (5%)</td>
<td>62 (67%)</td>
<td>65 (71%)</td>
<td>24 (26%)</td>
<td>6 (6.5%)</td>
<td>6 (6.5%)</td>
<td>3 (3.2%)</td>
<td>2 (2.2%)</td>
<td>2 (2.2%)</td>
<td>Hydroxychloroquine</td>
</tr>
<tr>
<td>Hydrocortisone butyrate 0.1% soln</td>
<td>50 (54%)</td>
<td></td>
<td></td>
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<td></td>
<td>Antibiotics</td>
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<tr>
<td>Tacrolimus, 0.3% in Cetaphil cleanser</td>
<td>38 (41%)</td>
<td></td>
<td></td>
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<td>Finasteride/Dutasteride</td>
</tr>
<tr>
<td>Clobetasol 0.05% &amp; Betamethasone</td>
<td>22 (23.9)</td>
<td></td>
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<td>Pioglitazone</td>
</tr>
</tbody>
</table>

**Adverse Events**

- Doxycycline: 9 (nausea, reflux, lightheadedness)
- Tetracycline: 5 (nausea, candida, esophagitis)
- Hydroxychloroquine: 4 (hyperpigmentation, allergic rxn)
- Pioglitazone: 2 (muscle pain, nausea)
• N=4 LPP, Naltrexone 3mg
  • Decreased pruritus
  • Decreased clinical signs of inflammation
  • Decreased disease progression
  • Improvement with Naltrexone 3mg within 1-2 months but was given with concomitant tx
    • Pioglitazone & Clobetasol BID (Case 1)
    • Pioglitazone & Doxycycline (Case 2)
    • Pioglitazone & Doxycycline (Case 3)
    • Pioglitazone (Case 4)
  • No adverse events

• Naltrexone-opioid antagonist, FDA approved for substance addiction tx
  • Naltrexone at Doses <5 mg - acts paradoxically -> increase in endogenous opioids (beta endorphins) -> anti-inflammatory properties
  • Mice: Liposaccharide induced septic shock
    Naltrexone -> block TNFα
  • Antagonistic effect on Toll-like receptor 4 on macrophages & microglia -> mediates inflammation and neuropathic pain
  • Efficacy as adjunctive tx in multiple autoimmune d/o (Crohn’s & MS)
Public Health in Dermatology: Partnership with Hairstylists
• 1992-1995: Cosmetology training
• 1995-1999: Did hair in College
• 2000-2004: Univ MD Medicine
• AAD Minority Student Mentorship
• 2007-2010: Dermatology training BU/Tufts

MY INTEREST
FOCUS ON EARLY DIAGNOSIS & PREVENTION:

SALON PROJECT
- 1st presentation 2008 in Boston
- 15 stylists
- Stylists demonstrated increased knowledge on pre & post tests

Salon Owners
FOCUS ON EARLY DIAGNOSIS & PREVENTION: SALON PROJECT

- 2\textsuperscript{nd} presentation 2009 in Boston
  - 13 stylists
- Earlier presentation in those referred by stylists
FOCUS ON EARLY DIAGNOSIS & PREVENTION:
PROJECT H.A.I.R.

- 3rd presentation in Springfield, MA
- 25 stylists
- Increased knowledge on pre & post tests
- Main referral source
FOCUS ON EARLY DIAGNOSIS & PREVENTION: PROJECT H.A.I.R.

- Educated 150 stylists & cosmetology students in MA, CT, MD
  - Dr. Yolanda Lenzy (Boston, Springfield, MA, Hartford)
  - Dr. Chesahna Kindred (Baltimore)
  - Dr. Kimberly Salkey (Norfolk, VA)
  - Dr. Janelle Ricketts (Hartford, CT)
- Publish findings
  - Over 1500 women reached through the 150 stylists serving average of 10 clients/week
A TEAM APPROACH

**Cosmetologist/Trichologist**

**Dermatologist**

**Patient/Client**
Getting to the Root of Hair Loss Academy

• An in-depth 12 week continuing education program:
  • Week 1: The medical approach to a hair loss consultation
  • Week 2-5: Treatments for non-scarring alopecias 1-6
  • Week 6: Live Q&A call with Dr Lenzy
  • Week 7-10: Treatments for scarring alopecias 1
  • Week 11: Live Q&A call with Dr Lenzy
  • Week 12 ***Bonus Treatment of "Dry Scalp" Disorders: Seborrheic Dermatitis & Psoriasis

• Private Facebook Group
• 6 hours clinical training in my Office! (new this cycle)
• Affiliate Program: $500 for referrals who join
• LunchNLearn with Dr Yolanda on FB/Periscope/Twitter: @dryolandalenzy
• LenzyDerm.com/course

www.LenzyDerm.com