ENHANCING THE PRIMARY CARE PHYSICIAN’S ROLE WHEN ENCOUNTERING COMMON DERMATOLOGIC ISSUES

Stephanie Frisch M.D, F.A.A.D
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Down state Illinois Chapter ACP
Central Illinois Dermatology Peoria, IL
University of Illinois College of Medicine at Peoria
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Psoriasis and the associated cardiovascular and metabolic co-morbidities

Acne treatment and limiting oral antibiotic use

Methylisothiazolinone Allergic Contact Dermatitis
Psoriasis

- Between 1-2% of the US population has psoriasis
- Classic papulosquamous cutaneous disease
- Bimodal in age of onset, 20-30 and 50-60
- Mixed T helper 17 and T helper 1 disease
- 80% of patients have limited disease < 2% BSA
Effects of Interleukin-17 on Cell Functions and Its Role in the Pathophysiology of Diseases.

<table>
<thead>
<tr>
<th>Target-Cell Type</th>
<th>Products Released</th>
<th>Biologic Effect</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Macrophage, dendritic cell</td>
<td>Interleukin-1, TNF, Interleukin-6, CRP</td>
<td>Inflammation</td>
<td>Infections, Psoriasis, Graft rejection</td>
</tr>
<tr>
<td>Endothelial cell</td>
<td>Interleukin-6, Coagulation, MMP</td>
<td>Vessel activation</td>
<td>Reperfusion injury, Thrombosis, Atherosclerosis</td>
</tr>
<tr>
<td>Fibroblast</td>
<td>Interleukin-6, Chemokines, Growth factors, MMP</td>
<td>Matrix destruction</td>
<td>Multiple sclerosis, Crohn’s disease</td>
</tr>
<tr>
<td>Osteoblast</td>
<td>RANKL, MMP, Osteoclastogenesis</td>
<td>Bone erosion</td>
<td>Prosthesis loosening, Periodontal disease, Rheumatoid arthritis</td>
</tr>
<tr>
<td>Chondrocyte</td>
<td>MMP</td>
<td>Cartilage damage</td>
<td></td>
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Increased Cardiovascular Risk

- Myocardial Infarction
- Cerebrovascular disease
- Stroke
- Peripheral Vascular Disease
- Cardiovascular Mortality

In other words...

- 4- to 5-year younger mean age at death compared with those without psoriasis
- Additional 6.2% absolute excess risk of 10-year major adverse cardiovascular events, even after adjusting for age, sex, type 2 diabetes, hypertension, tobacco use, and hyperlipidemia.
- Framingham Risk Scores (FRSs) underestimated cardiovascular risk in 73% of low-risk and 53% of high-risk patients with psoriasis

Mansouri B et al. Comparison of Coronary Artery Calcium Scores Between Patients With Psoriasis and Type 2 Diabetes. JAMA Dermatol. Published online August 24, 2016. doi:10.1001/jamadermatol.2016.2907
An association between moderate to severe psoriasis and increased CAC

Psoriasis increases CAC scores to the extent of what is observed in type 2 diabetes independent of the effect of cardiovascular and cardiometabolic risk factors.


Mansouri B et al. Comparison of Coronary Artery Calcium Scores Between Patients With Psoriasis and Type 2 Diabetes. JAMA Dermatol. Published online August 24, 2016. doi:10.1001/jamadermatol.2016.2907
Improvement in psoriasis associated with significant reduction in coronary plaque burden as evidenced by coronary CT angiography.

Initiation of TNF inhibitors was associated with a lower incidence of first cardiovascular events in patients with psoriasis.

Metabolic Comorbidities

- Increased Risk of Developing type 2 diabetes
- Increased Risk of insulin resistance even in patients who are not diabetic
- Increased Risk of developing metabolic syndrome in dose response fashion
  - 22% mild, 56% moderate, 98% increase severe psoriasis
  - Obesity, raised triglycerides, raised serum glucose

Patients with moderate to severe psoriasis need to be evaluated for cardiovascular risk factors.

Patients with moderate and severe psoriasis necessitate more aggressive treatment as it can improve cardiovascular outcomes.

Current screening guidelines may not identify psoriasis patients at risk.
What’s new in Acne

- Consensus Group Guidelines for Acne Treatment
- Duration of Oral Antibiotic Use
- Adapalene 0.1% FDA approved for over the counter use!
Acne Pearls

- For face limited mild to moderate acne
  - Topical retinoids +/- topical clindamycin with BP

- For face and truncal acne that is mild, moderate or severe
  - Topical retinoids +/- topical clindamycin with BP
  - Oral antibiotics

- Moderate to Severe acne especially truncal often requires isotretinoin
Maximize topical therapies

Limit oral antibiotic use to 3 to 6 months

Consider isotretinoin earlier

FROM THE ACADEMY

Guidelines of care for the management of acne vulgaris

Work Group: Andrea L. Zenglein, MD (Co-Chair), Arun L. Pathy, MD (Co-Chair), Bethanee J. Schlosser, MD, PhD, Ali Alikhan, MD, Hilary E. Baldwin, MD, Diane S. Berson, MD, Whitney P. Bowe, MD, Emmy M. Graber, MD, Julie C. Harper, MD, Sewon Kang, MD, Jonette E. Keri, MD, PhD, James J. Leyden, MD, Rachel V. Reynolds, MD, Nanette B. Silverberg, MD, Linda F. Stein Gold, MD, Megha M. Tollefson, MD, Jonathan S. Weiss, MD, Nancy C. Dolan, MD, Andrew A. Sagan, MD, Mackenzie Stern, Kevin M. Boyer, MPH, and Reva Bhushan, MA, PhD

Hershey and Philadelphia, Pennsylvania; Centennial, Colorado; Chicago and Schaumburg, Illinois; Cincinnati, Ohio; New York, New York; Boston, Massachusetts; Birmingham, Alabama; Baltimore, Maryland; Miami, Florida; Detroit, Michigan; Rochester, Minnesota; and Atlanta, Georgia
The take away is a 3 month (maybe 6 month) limit to oral antibiotic use!!
Duration of oral tetracycline-class antibiotic therapy and use of topical retinoids for the treatment of acne among general practitioners (GP): A retrospective cohort study

John S. Barbieri, MD, MBA, Ole Hoffstad, MA, and David J. Margolis, MD, PhD
Philadelphia, Pennsylvania

Background: Guidelines recommend limiting the duration of oral antibiotic therapy in acne to 3 to 6 months and prescribing concomitant topical retinoids for all patients.

Objective: We sought to evaluate the duration of therapy with oral tetracyclines and the use of topical retinoids among patients with acne treated primarily by general practitioners in the United Kingdom.

Methods: We conducted a retrospective cohort study using the Health Improvement Network database.

Results: The mean duration of therapy was 175.1 days. Of antibiotic courses, 62% were not associated with a topical retinoid; 9% exceeded 6 months in duration. If all regions were to achieve uses similar to the region with the shortest mean duration of therapy, approximately 3.3 million antibiotic days per year could be avoided in the United Kingdom.

Limitations: The Health Improvement Network does not include information on acne severity and clinical outcomes.

Conclusions: Prescribing behavior for oral antibiotics in the treatment of acne among general practitioners is not aligned with current guideline recommendations. Increasing the use of topical retinoids and considering alternative agents to oral antibiotics when appropriate represent opportunities to reduce antibiotic exposure and associated complications such as antibiotic resistance and to improve outcomes in patients treated for acne. (J Am Acad Dermatol http://dx.doi.org/10.1016/j.jaad.2016.06.057.)
Resistance to P. acnes is associated with decreased treatment efficacy

The use of antibiotics for acne has been associated with a shift in the gastrointestinal flora and an approximately 3-fold increase in the incidence of pharyngitis and upper respiratory infections.

Topical retinoids are a mainstay of acne treatment and are used in comedonal and inflammatory lesions

Never prescribe oral or topical antibiotics as a monotherapy

Always use a benzoyl peroxide product in conjunction with oral or topical antimicrobials to decrease P. acnes resistance
FDA approves Differin Gel 0.1% for over-the-counter use to treat acne

First retinoid approved for over-the-counter use

For Immediate Release

July 8, 2016
Aller
genic Contact Dermatitis

- Allergen exposed to previously sensitized skin
- Delayed type hypersensitivity
- Persons may be exposed to allergens for years before finally developing hypersensitivity. Once sensitized, however, subsequent outbreaks may result from extremely slight exposure.
Methylisothiazolinone! (MI)

Even some hypoallergenic and frequently recommended products can contain preservatives and other ingredients that provoke allergic reactions, according to Dr. Warshaw. A chief culprit is methylisothiazolinone (MI), a preservative that came into common use as formaldehyde has been gradually phased out.

“If there’s anything I could emphasize from this talk, it’s MI, MI, MI. This is the major epidemic of our time in the contact dermatitis world,” Dr. Warshaw said. Upcoming publications, she added, will place MI in the top five most common contact allergens. “MI is in everything, including things you would think would be hypoallergenic,” she said. She recommended looking at ingredient labels with a keen eye when making testing decisions.

Despite MI’s status as a frequent culprit, it’s not an allergen that appears on common test kits, Dr. Warshaw pointed out. For example, it’s absent from one of the most commonly used test kits, the Thin-Layer Rapid Use Epicutaneous Patch (T.R.U.E. test).
cosmetics and personal hygiene products (rinse-off and leave-on) such as soaps, gels, shampoos, leave-on products for scalp care, sunscreens, deodorants, moisturizing creams, baby wipes, and makeup remover wipes, cleaning products such as washing up liquid, detergents, stain removers, window cleaning solution, grease remover, and air fresheners.
**Clean & Clear® daily pore cleanser**

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**DIRECTIONS:** Wet your face and squeeze Daily Pore Cleanser into the palm of your hand. Mixing cleanser with water, massage into a lather. Cleanse face with gentle massaging motion. Rinse thoroughly. Pat dry with towel. Recommended for daily use.

**CAUTION:** For external use only. Avoid contact with the eyes. If contact occurs, flush thoroughly with water. Keep out of reach of children.

**INGREDIENTS:** Water, Propylene Glycol, Sodium Lauryl Sulfate, Cocamidopropyl Betaine, Jojoba Esters, Sodium Laurylethoxyde, Disodium Lauramidoisocitrate, Lauryl Methyl Gluconolactone, Sodium Chloride, Sodium Carborner, Glycol Distearate, PEG-120 Methyl Glucose Dioleate, Laureth-4, Lactic Acid, Fragrance, Tetrasodium EDTA, Polysorbate 20, Methylchloroisothiazolinone, Methylisothiazolinone

**Sunburn Alert:** This product contains an alpha hydroxy acid (AHA) that may increase your skin's sensitivity to the sun and particularly the possibility of sunburn. Use sunscreen, wear protective clothing, and limit sun exposure while using this product and for a week afterwards.

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Ingredients: Water (Aqua), Cetearyl Alcohol, Dimethicone, Stearamidopropyl Dimethylamine, Glycerin, Behentrimonium Chloride, Fragrance (Parfum), Dipropylene Glycol, Lactic Acid, Amodimethicone, Potassium Chloride, Gluconolactone, Trehalose, Disodium EDTA, Peg-7 Propylheptyl Ether, Cetrimonium Chloride, Hydrolyzed Keratin, C10-40 Isalkylamidopropyl Ethyldimonium Ethosulfate, Sodium Sulfate, Taraxacum Officinale, Methylchloroisothiazolinone, Methylisothiazolinone.

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Isaksson, Marlene and Persson, Lena. ‘Mislabelled’ make-up remover wet wipes as a cause of severe, recalcitrant facial eczema. *Contact Dermatitis; 73*(1), July
Eyelid, genital, or hand dermatitis make sure to ask patients about what kind of products they are using with specific attention to eye make remover wipes, baby wipes, and soaps and moisturizers.

- Aveeno Baby Eczema and Vanicream brands lack MI

- Consider sending to derm or allergy for patch testing
Thank you!

Question everything


- Mehta NN, Azfar RS, Shin DB, Neimann AL, Troxel AB, Gelfand JM. Patients with severe psoriasis are at increased risk of cardiovascular mortality: cohort study using the General Practice Research Da


Dave J, Ahlman MA, Lockshin BN, Bluemke DA, Mehta NN. Vascular inflammation in psoriasis localizes to the arterial wall using a novel imaging techniq