The Cosmetic Treatment of Acne

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Disclosures

- Almirall (S)
- BioPharmX (I)
- Botana (I)
- Demira (A)
- Encore (A)
- Elfrisweht (A)
- Foamie (A)
- Gadermo (A,S)

1. Make the patient better
2. Keep the patient better
3. Prevent or get rid of the sequelae
4. Improve the appearance of their skin

- J&J (A)
- LaRoche-Posay (A, S)
- Novan (I)
- Ortho Dermatologics (A,1,5)
- Pfizer (I)
- Promius (A)
- Sal-Gel (A)
- Sun (A,S)

- 1

- 2

- 3
Acne is our bread and butter

Doing it well means:
* Taking your time
* Educating your patients
* Knowledge of what to use when in whom

Deciding what to use when and in whom

Seek the baggage!
All acne patients deserve a topical retinoid

- No other medication is comedolytic and anti-comedogenic
- BP weakly comedolytic
- Good anti-inflammatory drugs
- Good for both acute and maintenance therapy
- Reduces hyperpigmentation
- Prevents and reduces scars
- Reduces fine lines and wrinkles
- Microsphere formulations reduce shine

Topical retinoids alone

Baseline | Week 12
Tazarotene 0.1% Cream

Tazarotene .1% Cream Monotherapy

Baseline | Week 12
Tazarotene 1% Cream Monotherapy

Baseline Week 12

Tretinoin 0.05% Lotion (Altreno)

- N=1640, moderate to severe acne
- Vehicle contains hydrating agents and humectants
  - Hyaluronic acid, soluble collagen and glycerin
- Superior tolerability

Patients like to glow, not shine
Microsphere tretinoin is not degraded by BP and/or sunlight.

Microsphere formulation absorption in vitro.

Microsphere-Assisted Shine Control.
Real-World Shine Control

Before Treatment

After Treatment

Microparticles of methacrylate copolymer that imbibes and holds sebum within the molecules
Incorporates into the molecule, swells to many times original size
Once imbibed, cannot leak out
Controls oil/shine for up to 8 hours
Invisible on the skin

Methacrylate copolymer

Thiboutot Cosmetic Dermatology 2001:45-51
Should we wait to add a retinoid?

108 patients with mild-moderate acne
Clindamycin 1%/BP 5% QD X 3 mo
Randomized to receive:
Adapalene 0.1% Gel QD from day 1
Adapalene 0.1% Gel QD from day 30
Results at month 1:
Superior efficacy in adapalene group
No significant irritation differences
Earlier improvement gave hope, did not increase
irritation, improved compliance
Del Rosso J. 2007;6(6):616-22

NO!

Benzoyl Peroxide is the most effective antimicrobial

Ability to kill P. acnes

Benzoyl Peroxide should be used whenever topical and oral antibiotics are used

Benzoyl Peroxide kills faster and more effectively than topical antibiotics
Benzoyl peroxide alone significantly reduces both inflammatory and non-inflammatory acne
Benzoyl peroxide is not associated with antimicrobial resistance
Benzoyl peroxide can prevent the development of resistance to topical and oral antibiotics
Benzoyl peroxide can reverse resistance that has already occurred

Clindamycin should never be used as monotherapy.


Compliance With Topical Benzoyl Peroxide


Individual subjects' adherence to topical benzoyl peroxide ranged from 14% to 79% for the 6 weeks. No subject was considered "adherent to treatment" as defined by a mean adherence of ≥80%.

N=11

Adult female acne may be a different disease.
What Adult Females With Acne Expect From a Visit to Their Dermatologist

- Better understanding of the condition
- Involvement in treatment choices

Why were you dissatisfied with some elements of your visit to your dermatologist?

Respondents (N = 128)

- The examination was too quick: 56%
- The discussion of different treatment options was too short, not detailed enough: 48%
- The dermatologist did not look at my skin meticulously: 44%
- The dermatologist did not discuss different treatment options: 41%

Patient Factors to Consider when Treating Adult Female Acne

- Clinical aspects: lesion type and location
- Long duration - maintenance therapy crucial
- Potential of older skin to irritation
- Bypass the skin?
Spironolactone

- Anti-androgen, androgen-blocker
- Reduces masculine characteristics
- Excess hair, hair loss, acne
- Not FDA approved for skin issues (hypertension)
- Launched in 1950, having a renaissance
- Few side effects
  - Breast tenderness, menstrual irregularities
- No need to check potassium in women younger than 50 but...

Low-sodium processed foods
- Coconut water/milk (600 mg/cup)

Severe inflammatory acne

Therapeutic options
- Isotretinoin
- Isotretinoin
- Isotretinoin

Baseline

5 MONTHS
Unnecessary consequences
- Scarring

Dreno et al. 2014 poster presented EADV

Risk factors for developing scars
- Brazil
- France
- USA

Time elapsed between acne onset and 1st effective treatment:
≥ 3 years vs < 3 years
1.6 [1.4 – 1.8] 2.8 [2.4 – 3.3] 2.8 [2.4 – 3.2]

Likelihood of acne scarring increases with delays in treatment

Treat Early
Treat Aggressively
Adapalene 0.3%/BP 2.5% vs Vehicle
Percent Change From Baseline - Total Atrophic Scar Count

The difference in the mean percent change in scars after 24 weeks was 29.9%

Dreno et al. Poster, Winter Clinical, Maui HI, 2018

Tretinoin and scars

- Improves existing scar cosmesis 10,11,12,13
- Specifically acne scars 14
- Prevents development of scars by accelerating speed of healing and reepithelialization after:
  - Dermabrasions 15
  - Chemical peels 16

Unnecessary Consequences - Hyperpigmentation

Stop picking!
Topical retinoids
Hydroquinone
Chemical peels
Laser
Azelaic acid
Retinoids and dyspigmentation

- Established treatment for existing dyspigmentation
- 0.05% tretinoin lotion showed decreased PIH
- Reduces development of dyspigmentation
- Specifically acne-induced PIH
- Synergy with HQ


New isotretinoin data

Absorica® and Accutane®
Fasting vs fed conditions

- Open-label, single-dose, randomized, 4-treatment, crossover, comparative bioavailability study
- 60 patients enrolled; 57 completed the study
- 4 arms separated by 21 day washout period:
  - 40 mg Absorica® or Accutane®
  - 10 hour fast or FDA high-fat meal
Sample FDA High Fat Diet

- 2 eggs fried in butter
- 2 strips of bacon
- 2 slices of toast with butter
- 4 oz hash brown potatoes
- 8 oz whole milk

TWICE A DAY!!
Lidose formulation isotretinoin vs. food-dependent isotretinoin

- Open-label, single-arm 20 week (active) study, N=163
- Twice daily without food
- Cumulative dose of 120–150 mg/kg
- Treatment after Week 20 was not permitted
- 2 year post-treatment observation phase
  - IGA, lesion counts, Acne-QoL

Lidose formulation isotretinoin in fasting state

- IGA improved significantly from baseline to week 20
- Change from baseline was maintained in the 2 year post-therapy period (P<0.0001)
- Conclusion: Lidose-ISO taken without food, clinical efficacy and improved QoL were sustained for 120 weeks
Re-treatment rates in post-therapy phase:

Historical relapse rate:
- 10-22% at 1 mg/kg/d
- 20-53% at 0.5 mg/kg/d

2) Cunliffe W, Norris J. Dermatologica. 1987;175(Suppl 1):133-137

Should we give treatment after successful course of isotretinoin?

- Recurrence of acne requiring additional isotretinoin courses is uncommon
- Occurrence of some severity of acne after isotretinoin use is common
- Disturbing to patients
- Unpredictable at the time if they are relapsing

Pilot study (N=20), randomized, double-blinded, vehicle-controlled of RAM 0.04% QD immediately after successful isotretinoin course
- 38.7% lower lesion count versus vehicle


Spironolactone during last month of isotretinoin

- Many AFA will flare after isotretinoin discontinuation
- Second course of isotretinoin
- Women with PCOS
- Start spironolactone 50 mg during last month
- Continue indefinitely
Beneficial Effects of Cosmetics

- Used to fard
- Camouflage, contour and conceal
- Response to acne therapy too slow for most
- Chronic relapsing condition
- Enhance oil control
- Adorn
- Create a sense of well-being
- Improve the quality of life

1) OED – to paint the face with cosmetics so as to hide blemishes

Decorative cosmetics improve QOL

- 23 patients with disfiguring facial conditions including acne (8) and rosacea (9)
  - Taught to use cosmetics by professionals
  - DLQI baseline and 2 weeks
  - Improvement in all, acne p=0.0078
- 18 patients with acne treated and taught to use cosmetics
  - Improvement of acne and improved QOL at 2/4 weeks


Concomitant procedures during acne therapy improve the quality of life

- Comedone extraction
- Chemical peels, MDA
- Laser and light
  - Acne, PIE, PIH, Scars
- Microneedling

Chilicka et al. Patient Preference and adherence. 2017, Aug 4