

Acne Management in today's teens: Facts vs. Fads

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Disclosures

- I have no relevant financial relationships with the manufacturer(s) of any commercial product(s) and/or provider(s) of commercial services discussed in this CME activity
- I will mention off-label use

Learning objectives

- Understand trends in acne treatment
- Review the evidence behind “alternative” therapies
- Know the gold standard treatments for acne

Acne trends

- Getting harder to keep up with teenage trends
 - Teens are getting advice from each other and from social media
 - Virtual acne treatment becoming more available
- Lots of acne systems on the market
 - Do these work?
- Lots of “natural” treatments circulating
 - Which are helpful and which might be harmful?
- The public has implicated diet as an underlying factor in many conditions

Fact or Fad: OTC acne systems?

- First well-known acne system came on to the market in 1995
 - created by 2 young dermatologists: Katie Rodan and Kathy Fields
 - catchy name
 - celebrity endorsements
- Subscriptions with monthly shipments
- Countless mimics now available

Fact or Fad: OTC acne systems?

- Tend to be costly
- Most are combinations of Benzoyl Peroxide and Salicylic acid
 - Some have sulfur
 - Washes
 - Leave-on products
 - Toners / astringents
 - Toss these! No role for these in acne care
- **Bottom line: They may work for mild acne! But consider teaching your patients about less costly versions of the same products**

Benzoyl peroxide

- Anti bacterial
 - No *p acnes* resistance
- Mildly comedolytic
- Available in 2.5-10% strengths
 - Wash or leave-on products
 - Can be irritating, can bleach towels and clothing
- Can be monotherapy for mild acne
- Studies show that this can rival oral antibiotics
- **Bottom line: a great product as monotherapy or combination therapy**

Salicylic Acid

- Keratolytic
- Less evidence to support use than BPO
- Tends to be less irritating
- Avoid harsh scrubs: over scrubbing can worsen acne

- **Bottom line:**
 - Use in patients who don't tolerate BPO
 - Consider as a “first step” for very mild acne in younger patients

Topical antibiotics

- Antiinflammatory and antibacterial effects
- *P. acnes* is now resistant to topical erythromycin so less preferred
- Clindamycin 1% gel or solution is preferred
 - But need to combine with benzoyl peroxide wash or topical to reduce risk of antibiotic resistance
 - Can prescribe separately or as a combination agent
 - Clinda 1%/BP 5% or Clinda 1%/ BP 3.5%
- **Bottom line: Don't use topical antibiotics as monotherapy**

Update on antibiotics

- Oral antibiotics:
 - Tetracycline class still first line (doxycycline and minocycline)
 - For moderate to severe acne or those recalcitrant to topical therapy
 - Limit duration to 3 months if possible
 - Use a topical BPO product at the same time to decrease antibiotic resistance
- Proceed to hormonal treatments or isotretinoin if needed

Fact or Fad: the role of diet in acne

- Emerging data (RTC) suggests that high glycemic index diets may be associated with acne
- Limited retrospective data suggests that some types of dairy may influence acne
 - Skim milk in particular
- Antioxidants: oral zinc, fish oil: evidence not strong enough

Bottom line: diet may play a very limited role in acne

Fact or fad: probiotics in acne

- Hot topic, stay tuned
- Current studies fail to show benefit
- **Bottom line: Existing evidence is not strong enough to support recommendation for this indication**

Which of the following alternative therapies has some evidence suggesting efficacy for acne treatment?

A) acupuncture

B) cupping

C) tea tree oil

D) lavender oil

“natural” treatments for acne

- By definition, these are “alternative” because they lack high quality evidence to become mainstream

Charcoal soap and masks

Essential oils (tea tree, others)

Apple cider vinegar

Aloe Vera

Alternative therapies

- Mostly fad!
- Little to no evidence that they work in acne
- Essential oils are volatile compounds that shouldn't be put directly onto the skin
 - Low quality evidence shows that tea tree oil can lower acne lesion count
- Patients tend to be proud of their routines so be careful not to criticize
 - My strategy: “set aside for now”
- **Bottom line: other than tea tree oil, alternative therapies lack evidence to support use**

Fact or Fad: light therapy mask for acne?

Fact.

- Red and Blue light reduce inflammation and *p. acnes*
- Attached activator has limited number of uses so there is ongoing cost for the device and plastic waste
- **Bottom line: can be recommended for mild acne**

Fact or Fad: OTC retinoids?

- Anti-wrinkle creams contain Retinol
 - not as strong as retinoids
- As of 2016, adapalene 0.1% gel available over the counter
 - Cost about \$20
 - Covered by some insurances
 - More drying than the cream

Bottom line: adapalene 0.1% gel is a cost-effective alternative to prescription retinoids but may not be strong enough for some patients

Topical Retinoids

- Vitamin A derivatives: adapalene, tretinoin, tazarotene
- The core treatment for acne! Most FDA approved 12 and older
- Antiinflammatory, comedolytic and prevent microcomedone precursors
- Start low strength and work your way up
- Choose vehicle carefully:
 - gels more drying than creams
 - Lotions and foams more costly
- Take a few minutes to counsel re: use:
 - Pea size for the face
 - Not a spot treatment
 - Start every other night
 - Wear lotion with SPF

Treatment of severe acne

- Systemic medication
 - Oral antibiotics
 - Oral contraceptive pills
 - Isotretinoin

Acne: OCPs

- Typically reserved for females > 2 years post menarche
- OCPs with FDA approval for acne:
 - Ortho-Tri-Cyclin
 - Estrostep
 - Yaz
 - Beyaz
- Consider "continuous use" to keep hormones at a steady state
- Progesterone-only birth control can worsen acne

Which is true about isotretinoin?

- A) new data suggests longer treatment courses result in less rebound acne
- B) it has been conclusively linked to development of inflammatory bowel disease
- C) patients should be counseled that he/she may not reach full potential height
- D) depression is an absolute contraindication to its use

Isotretinoin

- Very effective medication for acne
- Used for severe nodular acne, treatment-resistant moderate acne, or acne causing scarring and/or psychosocial distress
- Requires periodic lab monitoring
- Patients and provider must adhere to iPLEDGE program requirements
 - Females of child-bearing age need contraceptive counseling

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Isotretinoin: length of therapy

- Previously we aimed for a goal dose of 120-150 which is a 4-6 month course
- New data suggests that a higher goal dose / longer course may result in less rebound
 - larger studies needed

Isotretinoin and inflammatory bowel disease

- Earlier studies suggested a link between isotretinoin and IBD
 - But oral antibiotic use also associated
 - Could severe acne be a marker for development of IBD?
- 2016 meta-analysis: no increased risk of IBD

Isotretinoin: Bony effects?

- Theoretical risks based on findings of Chronic Vit A toxicity: diffuse skeletal hyperostosis, osteophyte formation, premature epiphyseal closure
- Potential with retinoids depends on dose and duration
- JAAD 2004: single course of isotretinoin had no effect on bone mineral density or development of cervical hyperostosis
- 2 case reports of premature epiphyseal closure
- Carefully consider risks and benefits if starting in a preadolescent
- No role for xrays or DEXA in absence of symptoms or prolonged treatment course

Isotretinoin and depression

- Literature shows anxiety improves, suggestive that depressive symptoms improve too
- Sporadic reports of depression, suicidal ideation and suicide
 - Media attention: 2000 suicide of a 17 year old son of a Congressman
- No studies to suggest an evidence-based link
- Consider getting clearance from psychiatrist prior to treating a patient with known depression

Conclusions

- Benzoyl peroxide and salicylic acid useful for mild acne
- Don't use topical or oral antibiotics as monotherapy
- Topical retinoids are a gold standard treatment
- Most alternative therapies lack evidence to support use in acne
 - Tea tree oil and red/blue light effective in mild acne
- Diet plays a limited role in acne
- No evidence to prove probiotics help acne
- Oral contraceptive pills can be effective for acne
- Isotretinoin is safe and effective for severe acne

Thanks for your attention!

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