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 \textit{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
  - \textbf{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 x-rays 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!
References


