



New Strategies and Best Practices in the Management of Pediatric Facial and Truncal Acne

Acne Overview

Acne is the most common skin condition in the United States, affecting approximately 50 million patients annually including 85% of patients 12-24 years of age¹ and 40% of patients age 7-11 years². Acne results in 14% of primary care visits and 27% of dermatology visits annually.² Acne often persists for many years, so working with patients to manage lesions in the short term and prevent sequelae is an essential component of care.

Acne Impact on Quality of life

Dermatologic conditions have been associated with increased odds of anxiety, depression, and suicidal ideation.³ Patients with acne have been shown to have increased risk of major depressive disorder in the 5 years following acne diagnosis.⁴ Patients with acne also report reduced self-esteem, and patients with truncal acne are more likely to avoid activities or clothing that will reveal their acne. They also report feeling a loss of independence due to assistance required to apply topical treatments.⁵

Acne Physiology

The 4 main physiologic pathogenic factors of acne are increased sebum production, follicular hyperkeratinization, skin bacterial colonization with *Cutibacterium acne*, and inflammations. These serve as the targets for acne pharmacotherapy.⁶ Multiple can be targeted simultaneously to optimize treatment outcomes.

	Follicular plugging	Inflammation	<i>C. acnes</i>	Sebum
Topicals:				
Retinoids	✓	✓		
Benzoyl peroxide		✓ (indirectly)	✓	
Topical antibiotics		✓	✓	
Dapsone		✓		
Azelaic acid	✓	✓	✓	
Clascoterone		✓		✓
Orals:				
Antibiotics		✓	✓	
Isotretinoin	✓	✓	✓ (indirectly)	✓
Spironolactone		✓		✓
Oral Combination Contraceptive pills		✓		✓

Acne Treatment

The Personalizing Acne Consensus of Experts recommends the following treatment goals: 1) clear/almost-clear skin with minimal adverse effects; 2) prevent sequelae; and 3) improve quality of life/reduce disease burden. To achieve these goals, the following is recommended: 1) early intervention to prevent sequelae; 2) early aggressive therapy with combination regimens targeting acne pathophysiology; and 3) use of topical retinoids for every patient to prevent scarring.⁷ The 2016 American Academy of Dermatology guidelines provide treatment recommendations based on disease severity (Table 1).⁸ Although there are numerous grading systems there is no agreed upon standard. Acne is generally classified as mild, moderate, or severe based on the number, type of lesions, and the amount of skin involved.⁶



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Table 1

	Mild	Moderate	Severe
First line	BP or topical retinoid -or- Combination therapy	Combination therapy -or- Oral antibiotic + topical retinoid + BP -or- Oral antibiotic + retinoid + BP + topical antibiotic	Oral antibiotic Plus combination therapy -or- Isotretinoin
Alternate	Add topical retinoid or BP if not already on - or- Consider alternate retinoid -or- Consider topical dapsone	Alternate combination therapy -or- Change oral antibiotic -or- Add combined oral contraceptive or spironolactone in females -or- Isotretinoin	Change oral antibiotic -or- Add combined oral contraceptive or spironolactone in females -or- Isotretinoin
Additional Considerations			
	Combination therapy • BP + antibiotic or • Retinoid + BP or • Retinoid + BP + antibiotic Commercially available fixed combination preferred	Oral antibiotics Preferred: doxycycline, minocycline, sarecycline If allergic, < 8 yr, pregnant or other CI: azithromycin, TMP, TMP/SMX	Additional adjunctive therapies Azelaic acid Clascoterone
BP, Benzoyl peroxide; TMP, trimethoprim; SMX sulfamethoxazole			
Zaenglein AL, Pathy AL, Schlosser BJ, et al. Guidelines of care for the management of acne vulgaris. <i>J Am Acad Dermatol.</i> 2016;74(5):945-73.e33. doi:10.1016/j.jaad.2015.12.037			

Antibiotic Use and Resistance

While antibiotic-sparing regimens are recommended for some patients, particularly those with mild acne, an antibiotic is prescribed for one-quarter of patients during their initial visit,⁹ while more than half are treated with antibiotic therapy for more than 28 days.¹⁰ Additionally, patients may experience prolonged antibiotic courses prior to initiation of isotretinoin.¹¹

Antibiotic resistance can be minimized by minimizing duration of antibiotic therapy.¹² Another approach is to avoid antibiotic monotherapy and administer benzoyl peroxide concurrently for patients receiving topical or oral antibiotics.^{13,14} Strategies to reduce antibiotic use may include early use of isotretinoin for appropriate patients and to transition to an antibiotic-sparing regimen, once clear or almost-clear skin has been achieved, utilizing a retinoid-based maintenance regimen.

Improving Patient Outcomes

The vast majority (94%) of patients with acne report wanting more information about their disease and its management.¹⁵ Patient education about treatment expectations is especially important to promote treatment adherence (Table 2).

Table 2

Goals	Patient Educational Points
Clear/almost-clear skin	<ul style="list-style-type: none"> Highlight that improvement may only be observed in the long term (weeks to months)
Minimal adverse effects	<ul style="list-style-type: none"> Optimize retinoid tolerance Appropriate return instructions
Prevent sequelae	<ul style="list-style-type: none"> Emphasize the role of modifiable risk factors (eg, lesion excoriation, adherence to medication) in reducing the risk of developing sequelae Emphasize the need for control of active acne to reduce the risk of developing sequelae
Simplify medication regimens	<ul style="list-style-type: none"> Use of combination products Once daily regimens



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