Managing Two Challenging Presentations of Acne

Acne can be particularly challenging when it presents on the trunk or develops during pregnancy, but effective therapeutic approaches exist.

By Joseph Bikowski, MD

There is no question that acne can have a strong psychosocial impact on affected patients and that effective treatment of acne is associated with improvement in self-esteem, body image, and self-confidence and reduction in shame, embarrassment, and other psychosocial measures. For these reasons, dermatologists recognize the importance of early initiation of effective therapy for patients with acne. Yet, despite a wide range of treatment options available, there are some common instances in which management of acne remains challenging, and, despite the clinician’s desire to implement an effective therapy, efficient treatment is difficult. Two cases in particular come to mind: the treatment of truncal acne and the treatment of acne in pregnancy.

Back Acne

Back and chest acne are estimated to occur in 61 percent and 45 percent of acne patients, respectively. In one study, half of patients with facial acne also had truncal involvement, while three percent of patients had only truncal involvement. There is, surprisingly, some evidence that patients with truncal acne may not recognize that they have truncal involvement, suggesting that clinicians should be more attentive to truncal acne and specifically question patients about any evidence of acne on the chest, shoulders, or back.

Pathophysiologically, truncal acne is no different from acne on the face, although the chest, back, and shoulders may be more prone to “acne mechanica.” The effects of pressure, occlusion, friction, and heat produced by shoulder pads and other sports equipment may contribute to exacerbation of acne. In addition to targeted anti-acne therapies, strategies to minimize the mechanical forces of equipment should be instituted.

Acne on the back and chest is expected to respond to therapy just as acne on the face would. Yet, evidence suggests that dermatologists tend to emphasize oral therapies over topical interventions for truncal acne. Likely this reality is a reflection of the common assumption that it is more convenient to take an oral medication than to apply topical medications to large and potentially hard-to-reach body areas. The challenges of topical application of medication to the trunk, particularly the back, are obvious. Nonetheless, several topical therapies may be appropriate for application to the trunk.

Topical clindamycin has been a mainstay of acne therapy. One attempt to ease application to the back and improve compliance with topical antibiotic therapy is the ClindaReach (DUSA Pharmaceuticals) system, designed to aid application of clindamycin solution 1% via pledgets. Acne patients may purchase other implements from home-health catalogs that are intended to facilitate application of topical agents to hard-to-reach body sites (usually they are marketed to older patient for bathing or application of lotions).

Clindamycin phosphate foam 1% (Evoclin, Stiefel) is suitable for use on the trunk and hair-bearing skin. In clinical studies, clindamycin foam was superior to clindamycin gel or foam vehicle in reduction of total, inflammatory, and non-inflammatory acne lesion counts.

Antimicrobial washes, specifically those containing benzoyl peroxide, have been a convenient option to treat truncal acne for some time. They can be used alone or in combination with topical clindamycin or
oral antibiotics. Two benzoyl peroxide emollient foam formulations now available (5.3%, BenzeFoam and 9.8%, BenzeFoam Ultra; Onset Dermatologics) are suited to use on the trunk, especially hair-bearing areas.

In previous studies, benzoyl peroxide 5.3% emollient foam was shown to produce a 100-fold reduction in \( P. \text{acnes} \) colonization after two weeks of use.\(^7\) The newer 9.8% foam formulation also significantly reduced \( P. \text{acnes} \) counts, even when used as a short-contact therapy. A two-week open-label, single center study of short contact therapy involved 20 healthy subjects (>18 years old) all confirmed to be colonized with \( P. \text{acnes} \) on their backs (>10,000 colonies per cm\(^2\)).\(^8\) For two weeks, each subject applied BPO 9.8% foam to the dry back once daily and left it in place for two minutes before rinsing if off with water and wiping the area with a cloth. This protocol was performed under supervision at the study center during the week and unsupervised at home on the weekends.

Mean reduction of \( P. \text{acnes} \) counts on the back was 0.91 log per cm\(^2\) after one week of treatment, and 1.66 log per cm\(^2\) after two weeks of treatment with BPO 9.8% foam (p<0.0001)—equivalent to a 98.3 percent reduction in \( P. \text{acnes} \) counts. The two-minute contact time is longer than with a BPO wash applied to the back and rinsed off immediately, as is done conventionally. Emollient characteristics of the foam coupled with short duration of contact are expected to minimize BPO irritation while providing adequate antimicrobial effect.

**Acne in Pregnancy**

Many women develop acne during pregnancy, although prevalence data are lacking. For some, acne is mild and a temporary nuisance. Others develop conspicuous lesions that diminish self-confidence, and in some cases painful nodules occur. Given the need to ensure the safety of the developing fetus, treatment must proceed cautiously.

All oral contraceptive pills (OCPs), including low-estrogen formulations, are classified as pregnancy category X by the FDA and are contraindicated for use by pregnant women. Isotretinoin is also category X, and obviously, is also strictly contraindicated in pregnancy.

Among oral antibiotics, tetracycline is a category D drug and should not be taken by women after the sixteenth week of gestation or during lactation because of its potential for suppressing fetal and neonatal calcification and bone growth. Oral clindamycin and erythromycin are considered relatively safe during pregnancy (category B). However, they typically are used for moderate to severe inflammatory acne, which may not account for a majority of pregnant patients with acne.

Because of the anticipated low rate of systemic absorption and associated reduction of risks, topical agents would seem to be preferred for treatment of acne in pregnant women. However, it is essential to recognize that topical agents are not all appropriate for use by pregnant women. Tazarotene is rated category X and should never be used in this population. Similarly, tretinoin and adapalene are rated category C and should not be prescribed to pregnant women.

Of note, if a pregnant woman is inadvertently exposed to tretinoin—that is, if she uses tretinoin without realizing she is pregnant—dermatologists can assure the patient that there appears to be minimal, if any, risk. Even when alltrans-retinoic acid is applied daily, the absorbed dose is below 0.015mg/kg—more than 30-fold lower than the lowest teratogenic dose of isotretinoin in the human. Furthermore, topical alltrans-retinoic acid does not appreciably alter endogenous plasma retinoid levels.\(^9\)

Two publications in the *Lancet* actually showed a lower rate of fetal abnormalities among women exposed to tretinoin during the first trimester of pregnancy compared to non-exposed women.\(^10\) In one of these publications, a prospective study, the relative risk estimate for having a baby with a major congenital anomaly for exposed versus nonexposed women was 0.7 (95% CI 0.2-2.3).\(^10\)

High doses of oral salicylic acid have been associated with birth defects,\(^11\) but topical salicylic acid is generally considered safe for acne treatment in pregnant women. Benzoyl peroxide is rated Category C but is nonetheless prescribed by some dermatologists for pregnant women. Other women may obtain the agent over-the-counter without seeking physician guidance.

The apparent safety of topical erythromycin and clindamycin, both rated category B, make them attrac-
tive options for pregnant women, but they are not optimal treatments. Their benefit is limited by the fact that current guidelines suggest that, in order to reduce the risk of bacterial resistance, these agents should be used only in conjunction with topical benzoyl peroxide—which, as noted above, is questionable for use by pregnant women.

Azelaic acid (AzA) has emerged as a worthwhile treatment option for pregnant women. A saturated dicarboxylic acid found naturally in wheat, rye, and barley, azelaic acid is present in foods and has no known fetal effects. It is rated Category B. It has antimicrobial, anti-inflammatory, and antikeratinizing properties. A 20% cream formulation (Azelaic, Allergan) is indicated in the US for the treatment of acne; the 15% gel formulation (Finacea, Intendis) is indicated in the US for treatment of rosacea but is approved in many European countries to treat acne.

One benefit of the gel formulation over the cream appears to be enhanced absorption into the skin. In in vitro studies, 25.3 percent of azelaic acid in the gel vehicle penetrated into viable skin as compared with only 3.4 percent in the cream vehicle. Controlled clinical trials in Europe have found AzA 15% gel to be as effective as benzoyl peroxide and topical clindamycin in reducing facial papules and pustules and significantly more effective than clindamycin in reducing closed and open comedones (P=0.031). It appears to reduce comedonal and papulopustular lesions of acne with similar efficacy to oral tetracycline.

AzA is bacteriostatic against S. epidermidis and P. acnes, and does not appear to promote bacterial resistance. It appears to have antioxidant and anti-inflammatory effects, as it decreases the generation of reactive oxygen species by neutrophils.

Twice-daily application of topical azelaic acid, though off-label, is a safe and effective treatment for acne vulgaris in pregnant women.

**Know the Options**

Data continue to confirm the detrimental impact of acne on patients’ quality of life. Recent evidence suggests that the impact increases as the patient ages. Regardless of site of involvement, acne has been shown to have a more significant impact on the self-consciousness of individuals age 20 or older compared to those age 16 to 19. Given that most cases of acne in pregnancy involve women in their 20s and 30s, this may influence the presentation’s significant impact.

Managing acne of the trunk or acne in pregnancy is challenging. However, effective treatment options exist. Foam-based benzoyl-peroxide with or without clindamycin represents a patient-friendly treatment option. Foam vehicles are associated with improved usability, better adherence and, consequently, improved therapeutic results. For the pregnant woman with acne, topical azelaic acid offers good efficacy and safety.

14. Data on file, Intendis