Management of Truncal Acne Vulgaris: Current Perspectives on Treatment

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Acne vulgaris is one of the most common disorders encountered by dermatologists in the clinical setting. Although it is well recognized that the back and chest may be affected in many patients, little data exist regarding the prevalence, grading, and treatment of truncal acne vulgaris. Results of clinical studies suggest that as with facial acne vulgaris, combination therapy is optimal. This article discusses clinical challenges related to the management of truncal acne vulgaris, a system for rating disease severity, and recommendations regarding the use of topical and systemic therapies.

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How prevalent is truncal acne vulgaris?

In 2001, acne vulgaris accounted for approximately 5.5 million office visits to non-Federal dermatologists, representing 14.5% of all dermatology office visits.[1] Interestingly, literature is limited on the epidemiology, grading, and treatment of truncal acne vulgaris.[2-6] Preliminary data from an ongoing study indicate that of 300 consecutive patients presenting with a chief complaint of facial acne vulgaris (age range, 14–30 years), the prevalence of at least moderate truncal acne affecting the back and/or chest is 47%, with predominance in males (54% males vs 43% females)(J.Q.D., written communication, January 2006). Of those patients with truncal involvement, 78% indicated they were definitely interested in treatment, though truncal acne was mentioned by the patient only after directed inquiry.

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What classification system is used to rate the severity of truncal acne vulgaris?

Essentially all phase 3 pivotal trials, and subsequently performed phase 4 clinical studies, capture data on therapeutic outcomes collected from subjects treated for facial acne vulgaris. A methodology for severity rating, used in 2 recent studies evaluating the treatment of truncal acne vulgaris, is outlined in Table 1; the target area for assessment is depicted in the Figure.[4,6] The boundaries of this target area include the region bordered above by cervical vertebra C7, below by a horizontal line drawn from thoracic vertebra T7 through the bottom point of the scapula bilaterally, and laterally on each side by the peripheral edge of the shoulder and posterior axillary line. In Table 1, the term *grade* is used to describe each type of primary acne lesion, and each lesion type may be assigned an independent severity rating, which allows for a more precise verbal description of the true clinical presentation at the time of assessment.

Does treatment of truncal acne vulgaris present any unique challenges?

A major challenge when treating truncal acne vulgaris is the potential for extensive body surface area involvement.[4,5] This factor may complicate treatment with topical therapy. Certain vehicles, such as foams, lotions, and some water-based gels, may be more applicable for truncal application, provided the specific formulation exhibits ease of spreadability, rapid cutaneous penetration, effective drug delivery, and lack of residue.[4,5]

It also is important that applied medication, when in contact with clothes and linens, does not alter the color or quality of the fabric.[4] Because benzoyl

peroxide may bleach fabric, the cleanser formulation is commonly recommended for the treatment of truncal acne vulgaris, as opposed to a leave-on formulation such as a gel or cream.[7]

Scarring is not an uncommon sequela of truncal acne vulgaris. Although more likely to occur after resolution of deep inflammatory (nodular) acne lesions, scarring may occur in association with acne lesions of any type or severity. A form of acne scarring that occurs almost exclusively on the trunk and upper arms is follicular macular atrophy.[8] Many patients with scarring related to truncal acne vulgaris are bothered by the appearance of this form of atrophic scarring (J.Q.D., written communication, January 2006). Unfortunately, a consistently effective treatment regimen for truncal acne scarring is not available.

What data are available on the treatment of truncal acne vulgaris?

The management of truncal acne vulgaris warrants an approach similar to what is used for the treatment of facial acne.[4] It is important for the clinician to assess the extent and severity of the disease and correlate these findings with the selection of a rational treatment regimen. As with facial acne, a combination approach usually is required to achieve optimal therapeutic benefit in patients with truncal acne.[3,4] Ultimately, for the treatment regimen to be effective, individual factors that may impact patient adherence must be considered.

In severe cases of deep inflammatory acne, especially when characterized by multiple nodulocystic lesions, systemic therapy including oral isotretinoin often is warranted. Experience with oral isotretinoin has brought to light that severe truncal involvement may be less responsive to a standard course of therapy,

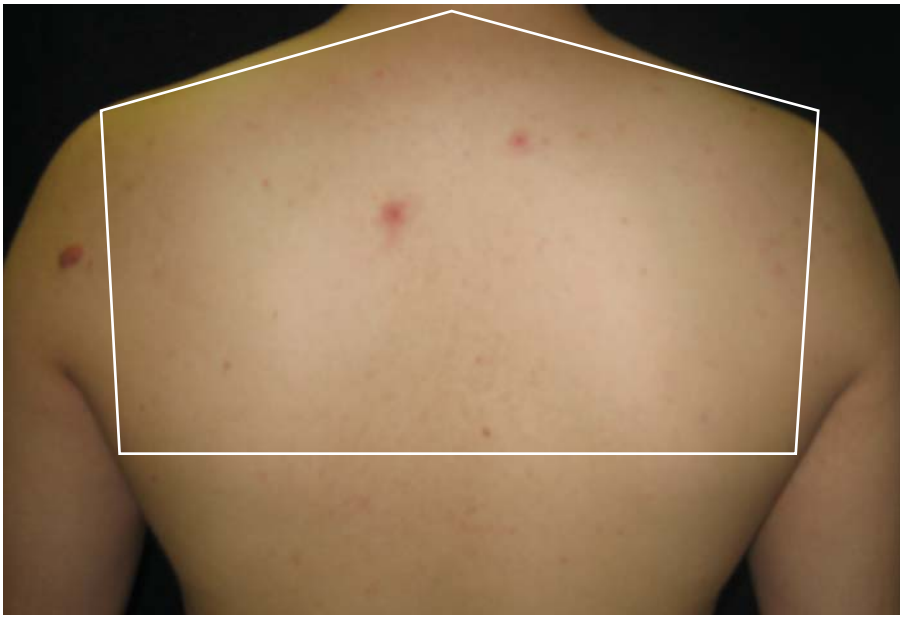
Table 1.

Rating System for Truncal Acne Vulgaris*†

Lesion Type
Grade 1, comedone
Grade 2, papule
Grade 3, pustule
Grade 4, nodule
Lesions, n
Mild, 1–10
Moderate, 10–20
Severe, >20

*Severity rating based on target area used in trial. A severity rating may be assigned for each lesion grade.

†Severity rating is determined for inflammatory acne by adding no. of papules (grade 2 lesions) and pustules (grade 3 lesions).



Target area for severity rating and efficacy assessment of truncal acne vulgaris.

Table 2.

Efficacy Results*†[6]

Treatment	Mean Total Lesion Count Reduction, %	Investigator Global Assessment, Patients
Group 1, Mild Truncal Acne (n=20)		
Benzoyl peroxide 8% creamy wash qd	73.3	60% completely clear or near clear 80% at least markedly clear 100% at least moderately clear
Placebo wash qd	23.0	10% moderately clear or better
Group 2, Moderate Truncal Acne (n=24)		
Clindamycin phosphate 1% foam and benzoyl peroxide 8% creamy wash qd	68.0	24.99% completely clear or near clear 58.32% at least markedly clear 91.65% at least moderately clear
Clindamycin phosphate 1% foam and placebo wash qd	50.0	16.66% completely clear or near clear 33.32% at least markedly clear 74.98% at least moderately clear
Group 3, Severe Truncal Acne (n=20)		
Benzoyl peroxide 8% creamy wash qd and oral doxycycline monohydrate 100 mg bid	69.6	20% completely clear or near clear 80% at least markedly clear 90% at least moderately clear
Placebo wash qd and oral doxycycline monohydrate 100 mg bid	53.3	0% completely clear or near clear 50% at least markedly clear 80% at least moderately clear

*Placebo wash was a gentle liquid skin cleanser.
†Qd indicates once daily; bid, twice daily.

sometimes necessitating repeated treatment.[2] In cases of mild to moderate truncal acne severity, a topical regimen alone or a combination of topical and systemic antibiotic therapy may be sufficient.

In truncal acne of moderate severity, it may be possible to use a topical combination therapy with a benzoyl peroxide cleanser and a topical antibiotic to achieve considerable improvement. The ability of some benzoyl peroxide cleanser formulations to reduce colony counts of *Propionibacterium acnes* and to markedly contribute to reduction of acne lesions has been demonstrated.[7,9-11] In a 12-week study of patients with facial acne vulgaris, a combination of benzoyl peroxide 6% cleanser and tretinoin microsphere 0.1% gel, both used once daily, produced a 58.5% inflammatory lesion reduction at study endpoint versus a 29.8% reduction with tretinoin microsphere 0.1% gel used alone once daily.[10]

Information is limited regarding the treatment of truncal acne vulgaris, especially with topical therapies including benzoyl peroxide wash formulations. Many dermatologists believe that truncal acne vulgaris warrants use of systemic antibiotic therapy, which may not necessarily be the case, especially in patients presenting with mild to moderate acne severity.[4-6] In an open-label, randomized, 8-week trial of subjects with moderate truncal acne vulgaris (N=40), a brand benzoyl peroxide wash formulation used once daily (either benzoyl peroxide 8% creamy wash or benzoyl peroxide 9% cleanser) in combination with clindamycin phosphate 1% foam applied once daily was shown to produce at least moderate clearance in 37 subjects (92.5%), marked clearance in 24 subjects (60%), and near or complete clearance in 12 subjects (30%).[4]

A more recent investigator-blinded, randomized, 8-week trial evaluated treatment of mild, moderate, and severe truncal acne vulgaris (N=64).[6] Although superficial inflammatory lesions (papules and pustules) were the predominant lesion type in subjects from all study arms, none of the enrolled subjects presented with more than 2 nodules in the mild or moderate study groups, or more than 5 nodules in the severe group. A major objective of this trial was to evaluate efficacy and assess the correlation between the therapeutic regimen and the severity of disease observed at study entry. The acne severity rating system and target area for assessment are shown in Table 1 and the Figure, respectively. Subjects with mild truncal acne were treated with either benzoyl peroxide 8% creamy wash or a gentle liquid skin cleanser (placebo wash) once daily. Subjects with moderate severity were treated once daily with clindamycin phosphate 1% foam in combination with either benzoyl peroxide 8% creamy wash or a gentle liquid skin cleanser. Patients were instructed on proper application of foam to the trunk; back application was completed with the assistance of a spouse or family member. In the severe group, patients used either benzoyl peroxide 8% creamy wash or a gentle liquid skin cleanser once daily in combination with oral doxycycline monohydrate 100 mg twice daily. Efficacy results from this trial are outlined in Table 2. In the same trial, the investigator global assessment rating system was based on gradations of improvement in mean percentage reduction of total acne lesions and is depicted in Table 3. Subject assessments of truncal acne clearance mirrored what was reported by the investigators.[6]

Table 3.

Investigator Global Assessment Rating System[6]

Gradation of Improvement	Mean Total Lesion Count Reduction at Endpoint
Completely clear	0%
Near clear	≥75%
Markedly clear	50%–74%
Moderately clear	25%–49%
Minimally clear	1%–24%
Not clear	No change from baseline
Worsening	Increase vs baseline

What safety concerns are related to the treatment of truncal acne vulgaris?

The medications that are utilized to treat truncal acne vulgaris essentially are the same as those used for facial disease. Safety profiles of these agents, such as benzoyl peroxide, topical clindamycin, and oral tetracycline antibiotics, are well established and favorable overall. In 2 studies completed with patients with truncal acne vulgaris, no major safety issues or serious adverse reactions were noted, and local cutaneous side effects were minimal in all study groups.[4,6]

A consideration with truncal application of a topical antibiotic for acne vulgaris relates to the extent of systemic absorption that theoretically may occur after widespread application. Interestingly, in vitro 24-hour permeation studies using split thickness human skin have demonstrated a more rapid rate of cutaneous penetration and a greater quantity of drug delivered into the skin with clindamycin phosphate 1% foam versus a brand aqueous gel.[12] To determine if a greater rate and extent of cutaneous penetration translates into increased plasma levels of clindamycin, the systemic absorption of clindamycin was compared after application of clindamycin phosphate 1% foam versus aqueous gel in an open study (N=24; subjects aged ≥12 years). Each subject self-administered 4 g of study drug to the face and other sites affected with acne (ie, neck, upper trunk) once daily for 5 days.[4] Negligible

systemic absorption was noted with no statistically significant differences in mean plasma levels of clindamycin observed between the foam (C_{max}=1.70 ng/mL) and aqueous gel (C_{max}=2.22 ng/mL).[4] As an additional comparison, the mean plasma levels achieved after oral ingestion of clindamycin hydrochloride 150 mg were 2000 to 3000 ng/mL.[4,12] Thus, systemic exposure to clindamycin after topical application of the foam or aqueous gel formulations to the face, neck, and/or trunk appears to be negligible and of minimal or no risk.

Comment

Studies evaluating the management of truncal acne vulgaris are long overdue. This article serves to provide recommendations that are clinically useful. Importantly, a correct diagnosis must be made; clinical simulants of acne that demonstrate a propensity for truncal involvement include bacterial folliculitis, *Pityrosporum* folliculitis, and hot tub folliculitis.

As with facial acne vulgaris, medical treatment of truncal acne requires selection of therapy based on clinical severity of disease. In cases of mild to moderate severity, topical therapy may be sufficient. A combination of topical and systemic treatment is likely in patients presenting with moderate to severe involvement. Benzoyl peroxide cleanser/wash formulations are highly applicable and convenient when treating truncal acne. The foam formulation of clindamycin phosphate allows for ease of use for acne involving the trunk because of spreadability, rapid penetration upon gentle application, lack of a residue, and lack of fabric bleaching. An adequate trial of a prescribed treatment regimen and patient adherence are vital to the success of the program. Both truncal acne studies discussed in this article were completed over a duration of 8 weeks.[4,6] It is likely that a longer course of treatment would have demonstrated greater efficacy. Additional studies are warranted.

Finally, it is possible that other agents available for the treatment of facial acne vulgaris also may be potentially effective for truncal disease; however, data are limited or nonexistent. Other agents include topical azelaic acid, topical sulfacetamide with or without sulfur, and, in select female patients, oral spironolactone and oral contraceptives.

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