

Standard Management Options for Rosacea, Part 1: Overview and Broad Spectrum of Care

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The standard management options were developed by a consensus committee and review panel of 26 experts to assist in providing optimal patient care based on the standard classification and grading systems for rosacea that were developed to perform research; analyze results and compare data from different sources; and provide a

common terminology and reference for the diagnosis, treatment, and assessment of results in clinical practice. We discuss standard management options for rosacea in 2 parts: (1) overview and broad spectrum of care, and (2) options according to subtype. The options are considered provisional and may be expanded and updated as appropriate.

Managing the various potential signs and symptoms of rosacea calls for consideration of a broad spectrum of care, and a more precise selection of therapeutic options may become increasingly possible as the mechanism of action of therapies are more definitively established.

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This article is the first of a 2-part series. The second part will appear in a future issue of *Cutis*®.

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Rosacea is well established as a chronic typology or syndrome, primarily affecting the convexities of the central face (ie, cheeks, nose, chin, forehead) and often affecting the eyes. In 2002, the National Rosacea Society Expert Committee on the Classification and Staging of Rosacea reported on a standard classification system that identified primary and secondary features of rosacea and described 4 common patterns of signs and symptoms designated as subtypes.¹ In 2004, the committee published a standard grading system for assessing the relative severity of rosacea to enhance the utility of the classification system for researchers and clinicians.²

Developed and reviewed by 21 experts worldwide, these standard systems are essential to perform research; analyze results and compare data from different sources; and provide a common terminology and reference for the diagnosis, treatment, and assessment of results in clinical practice. Because present scientific knowledge of the etiology of rosacea is

limited, these systems are considered provisional and are based on morphologic characteristics alone to avoid assumptions about pathogenesis and progression. They are intended to facilitate communication and ultimately the development of a research-based understanding of the disorder.

As a final step, the committee has developed standard management options based on these standard criteria to assist in providing optimal patient care. Because it is fundamental in the management of rosacea to consider the broad spectrum of potential therapies, the consensus committee and review panel have been expanded to include leading experts in dermatology, laser therapy, skin care, and ophthalmology. As with the standard classification and grading systems, the standard management options are considered provisional and may be expanded and updated as scientific knowledge increases and additional therapies become available.

Although rosacea encompasses various combinations of signs and symptoms, in most cases, some rather than all of these features appear in any given patient and often are characterized by remissions and exacerbations. Therefore, it is important to define the roles of respective treatment modalities as well as lifestyle management and skin care within the context of specific potential manifestations. In this way, an optimal management approach may be tailored for each individual patient.^{3,4}

The standard management options are intended to serve as a menu of options rather than a treatment protocol. Although there is no cure for rosacea, its various signs and symptoms may be reduced or controlled with a range of therapeutic modalities, even though their actions may not be fully defined by clinical data.⁵ It should be noted that clinical trials are rarely a reflection of clinical practice because they are typically intended to discern only the contribution of a specific treatment.⁶ In practice, clinicians rarely rely on a single mode of care alone, and in the case of rosacea, factors such as proper skin care and avoidance of exacerbating factors may substantially improve results. Thus, patients often may experience better outcomes than might be suggested by clinical studies designed to isolate the effect of a single therapy.

Part 1 of this 2-part series will review the patient evaluation process and respective modalities of care.

Medical History

In addition to clinical observation of potential primary and secondary features of rosacea (Table 1), a medical history is needed to identify features that may not be visually evident or present at the time

Table 1.

Primary and Secondary Features of Rosacea

Primary Features

Central facial flushing (transient erythema)

Nontransient erythema

Papules and pustules

Telangiectasia

Secondary Features

Burning or stinging

Plaques

Dry appearance

Edema

Ocular manifestations

Peripheral location

Phymatous changes

of the patient visit, to rule out alternative diagnoses, and to help identify potential environmental and lifestyle triggers. There is no laboratory test for rosacea and a biopsy is warranted only to rule out alternative diagnoses.

It may be difficult to clinically distinguish between the effects of chronic actinic damage on sun-sensitive skin (heliodermatitis) and subtype 1 (erythematotelangiectatic) rosacea. In some individuals, there may be overlapping features. A medical history may be especially useful in differentiating between erythematotelangiectatic rosacea and isolated photodamage. For example, any patient whose occupation or lifestyle has involved extensive sun exposure may experience chronic actinic damage, whereas patients with a history of flushing alone may be more likely to have rosacea. In addition, in the case of rosacea, erythema and telangiectasia tend to present with a central facial distribution.⁷ Other differential diagnoses include seborrheic dermatitis, lupus erythematosus, polycythemia vera, and carcinoid syndrome, with flushing mimicking rosacea.

A medical history also may be relevant for treatment purposes in distinguishing between dry

flushing, which often is caused by exogenous or endogenous vasoactive agents, and wet flushing, which is accompanied by sweating that is regulated by the autonomic nervous system. Flushing can be further divided according to causes such as physical exertion, heat, or emotional reaction.⁸

Importantly, a medical history can uncover ocular involvement that may not be currently present or readily apparent from clinical observation as well as identify physical discomfort such as burning or stinging that may substantially affect quality of life for many patients.

Because rosacea affects facial appearance, its presence also may have considerable impact on an individual patient's psychologic well-being and ability to interact socially or professionally. An assessment can help guide the physician toward providing an appropriate level of care.

Drug Therapy

The papules and pustules of rosacea, as well as nodules, plaques, or perilesional erythema, can be effectively treated in most patients with drugs that have been extensively studied in clinical trials and approved by the US Food and Drug Administration for rosacea, such as topical metronidazole, topical azelaic acid, and oral controlled-release doxycycline 40 mg, all approved for the treatment of inflammatory lesions of rosacea. In addition, the efficacy of topical sodium sulfacetamide-sulfur is supported by many years of clinical experience in treating rosacea, though it was allowed to be marketed for rosacea prior to more stringent modern requirements for clinical studies and US Food and Drug Administration review. Options for the use of approved medications as well as off-label use of other medications such as oral tetracycline are reviewed in detail in part 2 of this series.⁹

Several oral antibiotics commonly are prescribed on an off-label basis for subtype 4 (ocular) rosacea. Moreover, when appropriate, the off-label use of other medical therapies may be administered to treat flushing and background erythema, which will be discussed in detail in part 2 of this series.⁹ The committee encourages further drug research aimed to improve the treatment of background erythema, which represents a great unmet clinical need in rosacea therapy.¹⁰

In all cases, physicians should review the package insert for prescribing information. This document is not intended to suggest the monitoring and actual dosing practices for drugs.

Laser and Light Therapy

The efficacy of laser therapy for the treatment of telangiectasia has been well established in clinical

practice,¹¹⁻¹⁶ and limited studies also have suggested that it may reduce erythema and flushing.^{11,15,17} Most lasers used to treat vascular components of rosacea have wavelengths in the 500 to 600 nm range and are known as nonablative (they do not destroy tissue). Recent developments using long-pulsed pulsed dye lasers,¹³ a technique of stacking pulses,¹⁸ or 532-nm potassium-titanyl-phosphate lasers¹⁹ may produce excellent improvement in erythema and telangiectasia without purpura.¹³

Polychromatic light-emitting devices such as intense pulsed light devices (515–1200 nm) also have been found to be effective in reducing erythema and telangiectasia.^{15,20}

Ablative lasers, such as the 2.94-nm erbium:YAG or 10,600-nm CO₂ lasers, destroy tissue and may be used to treat subtype 3 (phymatous) rosacea.^{3,12,21}

Lifestyle Management

Signs and symptoms of rosacea often appear to be triggered by environmental or lifestyle factors, most related to flushing. Some of the most common rosacea triggers include sun exposure, emotional stress, hot or cold weather, wind, heavy exercise, alcohol consumption, hot baths, spicy foods, humidity, indoor heat, certain skin care products, heated beverages, certain cosmetics, medications, medical conditions, and certain foods (Table 2).²² However, triggers that may affect one patient may not affect another, and avoidance of every potential factor may be unnecessary as well as impractical.

An appropriate management strategy identifies and avoids only those lifestyle factors that trigger or exacerbate rosacea symptoms in each individual patient. To help identify a patient's individual rosacea triggers, the patient can record daily contact with the most common rosacea triggers and other possible factors and then match them to flare-ups of signs and symptoms. In unscientific surveys of patients with rosacea who identified and avoided their personal rosacea triggers, more than 90% reported that their condition had improved in varying degrees.²³

Adjunctive Care

Skin Care Products—Because patients with rosacea often have skin that is sensitive and easily irritated, causing redness, inflammation, and stinging, skin care is an important component of rosacea management.^{21,24} The goal of everyday skin care for patients with rosacea is to maintain the integrity of the skin barrier while avoiding agents that cause inflammation or flushing.

Complicating skin care is the typical heightened neurosensory response in many patients with

Table 2.

Common Rosacea Flare-up Triggers^a

Trigger	Patients Affected, %
Sun exposure	81
Emotional stress	79
Hot weather	75
Wind	57
Heavy exercise	56
Alcohol consumption	52
Hot baths	51
Cold weather	46
Spicy foods	45
Humidity	44
Indoor heat	41
Certain skin care products	41
Heated beverages	36
Certain cosmetics	27
Medications	15
Medical conditions	15
Certain fruits	13
Marinated meats	10
Certain vegetables	9
Dairy products	8

^aData based on an unscientific survey by the National Rosacea Society of 1066 patients with rosacea.²²

rosacea who may experience stinging and burning from minor irritants more frequently than the general population. Patients may therefore be advised to select cleansers and moisturizers that do not irritate their skin.

Sunscreens or sunblocks effective against the full spectrum of UVA and UVB radiation can be especially important for patients with rosacea whose facial skin may be particularly susceptible to actinic damage and consequent rosacea flare-ups.

A sun protection factor of 15 or higher is recommended, and physical blocks utilizing zinc or titanium dioxide may be effective if chemical sunscreens cause irritation.

A useful rule of thumb may be to select products for patients with rosacea that contain no sensory provoking ingredients, no volatile substances, no minor irritants or allergens, minimal botanical agents, and no unnecessary ingredients.

Cleansing Regimen—Patients should be informed that compliance with instructions on facial cleansing and topical medication application may be critical to avoiding irritation, burning, and stinging. They may be advised to wash the face gently with a nonirritating cleanser, avoiding the use of abrasive materials such as washcloths and loofahs. They also may be advised to blot, not rub, the face dry with a soft towel and wait up to 30 minutes for the face to completely dry before applying topical medication or other products, as stinging most often occurs when the skin is wet.^{6,8}

After this routine is established and the face is not irritated, the patient can reduce the amount of time waiting to dry by 5 minutes every day to determine the shortest waiting time necessary for the individual patient.

Cosmetics—Cosmetics, especially those with a green or yellow tint, may be effective in reducing the appearance of redness. However, as with skin cleansers and moisturizers, care should be taken to minimize irritation.

Patients should be advised to avoid any products that cause burning, stinging, itching, or other discomfort. They also may be advised that waterproof cosmetics may be difficult to remove, requiring the use of harsh agents that may induce irritation.

New cosmetics should be regularly purchased to minimize microbial contamination and degradation. Brushes are preferred over sponges to avoid abrasion and because brushes can be easily cleaned to decrease bacterial contamination.²⁴

Conclusion

Managing the various potential signs and symptoms of rosacea calls for consideration of a broad spectrum of care, and a more precise selection of therapeutic options may become increasingly possible as their mechanisms of action are more definitively established. Until the etiology and pathogenesis are more completely understood, however, the classification of rosacea by its morphologic features and grading by severity may serve as an appropriate guide for its effective management.

As with the standard classification and grading systems, the options described here are provisional

and subject to modification with the development of new therapies, increase in scientific knowledge, and testing of their relevance and applicability by investigators and clinicians. Also, as with any consensus document, these options do not necessarily reflect the views of any single individual and not all comments were incorporated.

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