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Treatment of Acne Rosacea Reviewed CME/CE

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September 11, 2009 — Treatment options for acne rosacea seen in the family practice setting are reviewed in an article published in the September 1 issue of *American Family Physician*.

"Rosacea is a common skin condition with characteristic symptoms and signs, including symmetric flushing, stinging sensation, inflammatory lesions (papules and pustules), and telangiectasias on the face," write Constance Goldgar, MS, PA-C; David J. Keahey, MSPH, PA-C; and John Houchins, MD, from the University of Utah Physician Assistant Program in Salt Lake City. "Phymatous changes include thickened skin and large pores. Clinical findings represent a spectrum of disease with one or several predominating characteristics, including a pattern of exacerbations and relative inactivity."

Rosacea is a chronic, and sometimes progressive, dermatosis, typically presenting with central facial erythema involving the nose, forehead, chin, and perioral areas. However, it may also cause inflammation of the eyes and eyelids. Regardless of location, rosacea adversely affects quality of life.

Estimated US prevalence of rosacea is 14 million. Although it occurs more commonly in women and in whites, it can affect other ethnic groups. Typical age of onset is in the 30s.

The differential diagnosis of facial rosacea includes acne vulgaris, systemic lupus erythematosus, polymyositis, sarcoidosis, photodermatitis, drug eruptions (especially from iodides and bromides), skin granulomas, and perioral dermatitis. For ocular rosacea, the differential diagnosis may include staphylococcal and seborrheic blepharokeratoconjunctivitis, and sebaceous gland carcinoma.

Identifying the specific subtype of rosacea allows tailoring treatment to the individual patient, which is most likely to result in effective control. According to the National Rosacea Society, there are 4 subtypes: erythematotelangiectatic, papulopustular, phymatous, and ocular, but these are further classified by severity based on the number of papules/pustules and plaques.

In addition to rosacea classification, other factors determining optimal choice of pharmacotherapy include rosacea severity and response to previous treatment regimens. The quality of studies evaluating rosacea treatments is generally poor, according to a 2005 Cochrane review.

The initial treatment strategy for rosacea, especially for the erythematotelangiectatic and papulopustular subtypes, is to avoid known triggers or exacerbating factors whenever possible.

For patients with mild rosacea, topical metronidazole, sulfacetamide/sulfur, and azelaic acid are usually effective and carry less risk for adverse events, drug interactions, and antibiotic resistance vs systemic treatments.

The first-line choice for moderate papulopustular rosacea is combination therapy with oral tetracyclines and topical agents. Treatment with metronidazole or other topical agent may help patients maintain remission.

Treatment with long-term oral antibiotics and metronidazole gel may be necessary for patients with ocular involvement. For patients who have ocular rosacea with ophthalmic complications, severe or recalcitrant rosacea, or phymatous changes, referral to a subspecialist is required.

Specific clinical recommendations for practice, and their accompanying level of evidence rating, are as follows:

- Rosacea classification, severity, and response to previous therapeutic regimens should determine choice of pharmacologic treatment (level of evidence, C).
- To reduce rosacea flares, the following measures may be helpful:
  - Using emollient, noncomedogenic moisturizers and mild, fragrance-free, soap-free cleansers with nonalkaline or neutral pH;
  - Protecting against sun exposure with use of broad-spectrum sunscreen containing zinc oxide or titanium dioxide, and wide-brimmed hats; and
  - Avoiding astringents and other skin care products containing alcohol, menthol, eucalyptus oil, clove oil, peppermint, witch hazel, or sodium lauryl sulfate (level of evidence, C).
- For background erythema and telangiectasia, dermatologic laser therapy may be considered (level of evidence, C).
- For mild rosacea, initial pharmacotherapy should include appropriate topical regimens, such as antibiotics, immunomodulators, or retinoids. First-line topical regimens, such as metronidazole, azelaic acid, or sulfacetamide/sulfur, should be applied to affected areas once or twice daily (level of evidence, A).
- For moderate to severe rosacea, first-line pharmacotherapy should include orally administered drugs or combined topical and oral therapy. Tetracycline, doxycycline, and minocycline are among the first-line oral medications. Clinicians should consider subantimicrobial dosing (level of evidence, B).
- Once-daily doxycycline administered at a subantimicrobial dose may reduce inflammatory lesions when given alone or in combination with metronidazole therapy (level of evidence, B).
- Eyelid hygiene with hot compresses, eyelid cleansing, and other appropriate measures, as well as topical agents, should be used to treat mild ocular rosacea (level of evidence, C).
- Oral drug therapy with agents from the tetracycline class should be used to treat moderate ocular rosacea (level of evidence, C).

"Evidence for using oral antibiotics to treat rosacea is limited and is often based on clinical experience or older, low-quality studies instead of on well-designed RCTs [randomized controlled trials," the review authors write. "Initial therapy for moderate to severe rosacea should include oral treatment or a combination of topical and oral treatments. Because rosacea is a chronic disease, the long-term use of antibiotics can lead to adverse effects....One potential management strategy is to taper the dosage of oral antibiotics after six to 12 weeks of successful treatment, transitioning to topical agents only."

The review authors have disclosed no relevant financial relationships.

Am Fam Physician. 2009;80:461-468. Abstract

Additional Resource

More information on rosacea can be found on The National Rosacea Society Web site.

Clinical Context

Rosacea is characterized by symmetric flushing of the face, inflammatory lesions such as papules and pustules, a stinging sensation, and telangiectasias. According to the authors of the current review, it is more common

among white persons vs other ethnicities and is slightly more common among women. Symptoms usually begin among adults in their 30s, although rosacea may be found in younger patients as well.

The majority of the current review highlights treatment options for rosacea. The authors' findings are summarized in the "Study Highlights" section.

Study Highlights

- The most basic treatment of rosacea is avoidance of sun exposure. Sunscreen products that contain zinc oxide or titanium dioxide may be better tolerated by patients with rosacea. Astringents may exacerbate rosacea, and patients should use emollient, noncomedogenic moisturizers.
- Topical treatments are the first-line therapy for mild papulopustular rosacea. Metronidazole and azelaic acid have been approved in the treatment of rosacea. Two trials comparing the 2 treatments demonstrated that azelaic acid was comparable or superior to metronidazole in improving erythema, nodules, papules, and pustules. Azelaic acid is not effective in improving telangiectasias.
- Limited data suggest that sulfacetamide/sulfur cream and benzoyl peroxide/antibiotic gels are effective in the treatment of rosacea.
- Adapalene may improve papules and pustules in cases of rosacea, but not erythema or telangiectasia.
- There is limited evidence regarding the best use of systemic therapy for rosacea. One potential treatment strategy is to use oral antibiotics for 6 to 12 weeks and then transition to topical agents alone.
- The dose of oral tetracyclines for rosacea should be lower than its indication for bacterial infection. Once-daily doxycycline is sufficient.
- 3 to 4 weeks of treatment with oral tetracyclines are required before substantial improvement occurs. The relapse rate of rosacea 6 months after the termination of tetracycline treatment was 60% in 1 study.
- The study quality of trials with oral clarithromycin and azithromycin for rosacea is poor, but both treatments may be effective.
- Isotretinoin can reduce symptoms of rosacea, including rhinophyma. However, it is unknown whether isotretinoin leads to permanent remission of rosacea.
- In 1 trial comparing topical clindamycin lotion vs oral tetracycline, the topical treatment was superior in eradicating pustules. In another trial, oral tetracycline was similarly effective as metronidazole cream.
- Nearly 60% of patients with rosacea have ocular involvement, and eye symptoms may precede dermatologic symptoms. Physicians caring for patients with ocular rosacea should consider referral to an ophthalmologist.
- Mild ocular rosacea can respond to local treatment with topical agents, such as metronidazole gel, plus warm compresses. Moderate ocular rosacea requires treatment with oral therapy.
- Vascular lasers can improve resistant telangiectasias and erythema of rosacea. Rhinophyma may respond to mechanical dermabrasion.

Clinical Implications

- Rosacea is characterized by symmetric flushing of the face, inflammatory lesions such as papules and pustules, a stinging sensation, and telangiectasias. It is more common among white persons vs other ethnicities and is slightly more common among women. Symptoms of rosacea usually begin among adults in their 30s.
- The primary therapy for mild rosacea is topical treatment with medications such as metronidazole or azelaic acid.

CME/CE Test

Which of the following statements is characteristic of acne rosacea?

- It is usually asymptomatic
- Most patients have inflammatory lesions and telangiectasias
- It is most common among African Americans
- It usually begins in childhood

Which of the following treatments is first-line therapy for mild rosacea?

- Adapalene gel
- Oral doxycycline
- Oral metronidazole for 4 weeks only
- Topical metronidazole

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CME/CE Information

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Target Audience

This article is intended for primary care clinicians, dermatologists, ophthalmologists, and other specialists who care for patients with rosacea.

Goal

The goal of this activity is to provide medical news to primary care clinicians and other healthcare professionals in order to enhance patient care.

Learning Objectives

Upon completion of this activity, participants will be able to:

1. Describe the diagnosis and epidemiology of rosacea.
2. Treat rosacea effectively.

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