



**FIGURE 71-7 Acne vulgaris.** An example of acne vulgaris with inflammatory papules, pustules, and comedones. (Courtesy of Kalman Watsky, MD; with permission.)

or hair preparations), or chronic topical exposure to certain industrial compounds may elicit or aggravate acne. Glucocorticoids, topical or systemic, may also elicit acne. Other systemic medications such as oral contraceptive pills, lithium, isoniazid, androgenic steroids, halogens, phenytoin, and phenobarbital may produce acneiform eruptions or aggravate preexisting acne. Genetic factors and polycystic ovary disease may also play a role.

#### TREATMENT ACNE VULGARIS

Treatment of acne vulgaris is directed toward elimination of comedones by normalizing follicular keratinization, decreasing sebaceous gland activity, decreasing the population of *P. acnes*, and decreasing inflammation. Minimal to moderate pauci-inflammatory disease may respond adequately to local therapy alone. Although areas affected with acne should be kept clean, overly vigorous scrubbing may aggravate acne due to mechanical rupture of comedones. Topical agents such as retinoic acid, benzoyl peroxide, or salicylic acid may alter the pattern of epidermal desquamation, preventing the formation of comedones and aiding in the resolution of preexisting cysts. Topical antibacterial agents (such as azelaic acid, erythromycin, clindamycin, or dapsone) are also useful adjuncts to therapy.

Patients with moderate to severe acne with a prominent inflammatory component will benefit from the addition of systemic therapy, such as tetracycline in doses of 250–500 mg bid or doxycycline in doses of 100 mg bid. Minocycline is also useful. Such antibiotics appear to have anti-inflammatory effects independent of their antibacterial effects. Female patients who do not respond to oral antibiotics may benefit from hormonal therapy. Several oral contraceptives are now approved by the FDA for use in the treatment of acne vulgaris.

Patients with severe nodulocystic acne unresponsive to the therapies discussed above may benefit from treatment with the synthetic retinoid isotretinoin. Its dose is based on the patient's weight, and it is given once daily for 5 months. Results are excellent in appropriately selected patients. Its use is highly regulated due to its potential for severe adverse events, primarily teratogenicity and depression. In addition, patients receiving this medication develop extremely dry skin and cheilitis and must be followed for development of hypertriglyceridemia.

At present, prescribers must enroll in a program designed to prevent pregnancy and adverse events while patients are taking isotretinoin. These measures are imposed to ensure that all prescribers are familiar with the risks of isotretinoin; that all female patients have two negative pregnancy tests prior to initiation of therapy and a negative pregnancy test prior to each refill; and that all patients have been warned about the risks associated with isotretinoin.



**FIGURE 71-8 Acne rosacea.** Prominent facial erythema, telangiectasia, scattered papules, and small pustules are seen in this patient with acne rosacea. (Courtesy of Robert Swerlick, MD; with permission.)

#### ACNE ROSACEA

Acne rosacea, commonly referred to simply as rosacea, is an inflammatory disorder predominantly affecting the central face. Persons most often affected are Caucasians of northern European background, but rosacea also occurs in patients with dark skin. Rosacea is seen almost exclusively in adults, only rarely affecting patients <30 years old. Rosacea is more common in women, but those most severely affected are men. It is characterized by the presence of erythema, telangiectases, and superficial pustules (Fig. 71-8) but is not associated with the presence of comedones. Rosacea rarely involves the chest or back.

There is a relationship between the tendency for facial flushing and the subsequent development of acne rosacea. Often, individuals with rosacea initially demonstrate a pronounced flushing reaction. This may be in response to heat, emotional stimuli, alcohol, hot drinks, or spicy foods. As the disease progresses, the flush persists longer and longer and may eventually become permanent. Papules, pustules, and telangiectases can become superimposed on the persistent flush. Rosacea of very long standing may lead to connective tissue overgrowth, particularly of the nose (*rhinophyma*). Rosacea may also be complicated by various inflammatory disorders of the eye, including keratitis, blepharitis, iritis, and recurrent chalazion. These ocular problems are potentially sight-threatening and warrant ophthalmologic evaluation.

#### TREATMENT ACNE ROSACEA

Acne rosacea can be treated topically or systemically. Mild disease often responds to topical metronidazole, sodium sulfacetamide, or azelaic acid. More severe disease requires oral tetracyclines: tetracycline, 250–500 mg bid; doxycycline, 100 mg bid; or minocycline, 50–100 mg bid. Residual telangiectasia may respond to laser therapy. Topical glucocorticoids, especially potent agents, should be avoided because chronic use of these preparations may elicit rosacea. Application of topical agents to the skin is not effective treatment for ocular disease.

#### SKIN DISEASES AND SMALLPOX VACCINATION

Although smallpox vaccinations were discontinued several decades ago for the general population, they are still required for certain military personnel and first responders. In the absence of a bioterrorism attack and a real or potential exposure to smallpox, such vaccination is contraindicated in persons with a history of skin diseases such as AD, eczema, and psoriasis, who have a higher incidence of adverse events associated with smallpox vaccination. In the case of such exposure, the risk of smallpox infection outweighs the risk of adverse events from the vaccine (Chap. 261e).