CHAPTER e7

Atlas of Rashes Associated With Fever

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Given the extremely broad differential diagnosis, the presentation of a patient with fever and rash often poses a thorny diagnostic challenge for even the most astute and experienced clinician. Rapid narrowing of the differential by prompt recognition of a rash's key features can result in appropriate and sometimes life-saving therapy. This atlas presents high-quality images of a variety of rashes that have an infectious etiology and are commonly associated with fever.

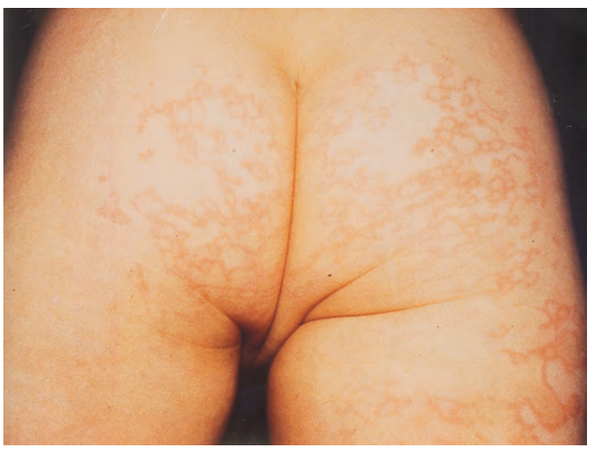

Figure e7-1 Lacy reticular rash of **erythema infectiosum** (fifth disease) caused by parvovirus B19.

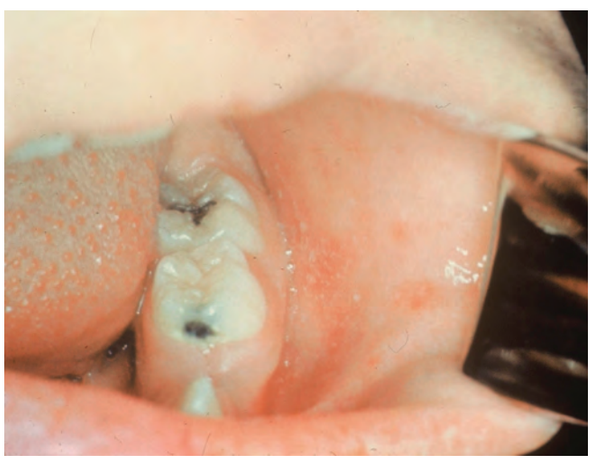

Figure e7-2 **Koplik's spots,** which manifest as white or bluish lesions with an erythematous halo on the buccal mucosa, usually occur in the first two days of measles symptoms and may briefly overlap the measles exanthem. The presence of the erythematous halo differentiates Koplik's spots from Fordyce's spots (ectopic sebaceous glands), which occur in the mouths of healthy individuals. *(Source: Centers for Disease Control and Prevention.)*

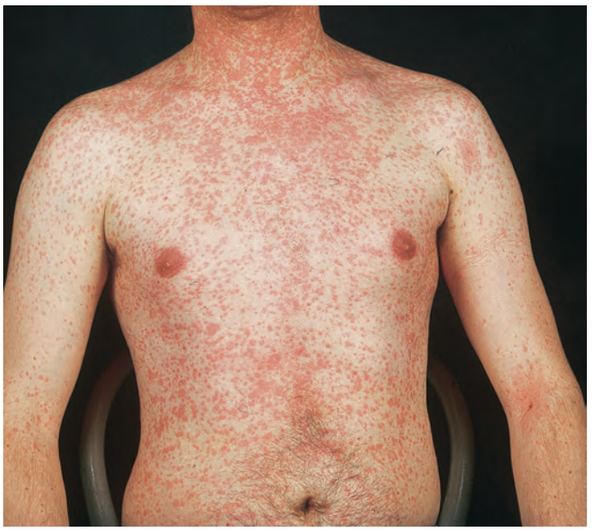

Figure e7-3 In **measles,** discrete erythematous lesions become confluent on the face and neck over 2–3 days as the rash spreads downward to the trunk and arms, where lesions remain discrete. *(Reprinted from K Wolff, RA Johnson: Color Atlas & Synopsis of Clinical Dermatology, 5th ed. New York, McGraw-Hill, 2005, p 788.)*

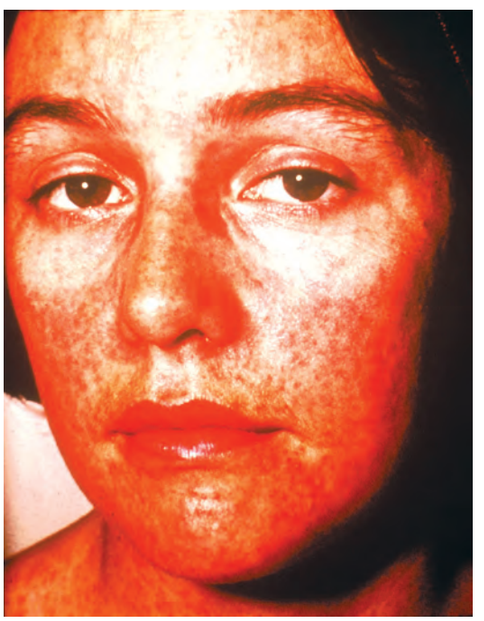

Figure e7-4 In **rubella,** an erythematous exanthem spreads from the hairline downward and clears as it spreads. *(Courtesy of Stephen E. Gellis, MD; with permission.)*

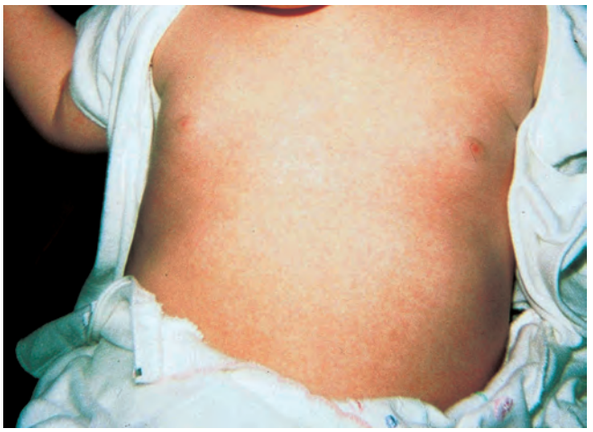

Figure e7-5 **Exanthem subitum** (roseola) occurs most commonly in young children. A diffuse maculopapular exanthem follows resolution of fever. *(Courtesy of Stephen E. Gellis, MD; with permission.)*

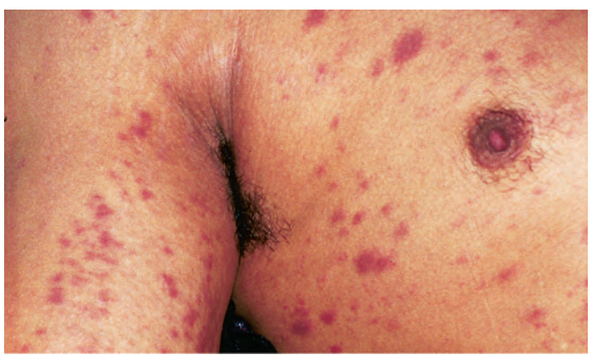

Figure e7-6 Erythematous macules and papules are apparent on the trunk and arm of this patient with **primary HIV infection.** *(Reprinted from K Wolff, RA Johnson: Color Atlas & Synopsis of Clinical Dermatology, 5th ed. New York, McGraw-Hill, 2005.)*

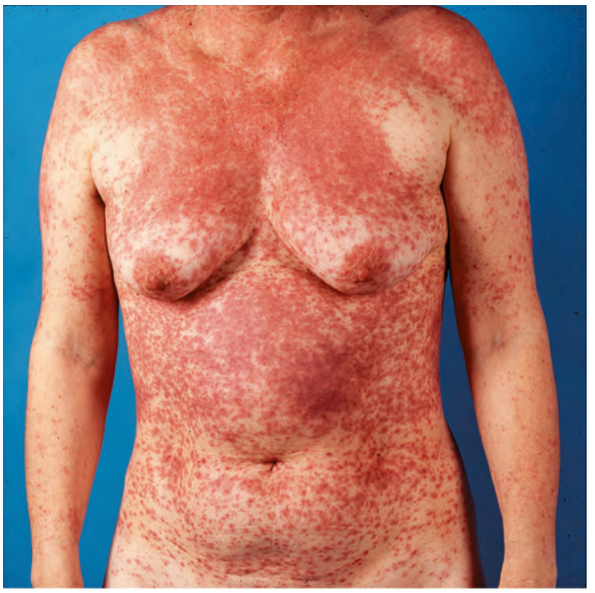

Figure e7-7 This **exanthematous, drug-induced eruption** consists of brightly erythematous macules and papules, some of which are confluent, distributed symmetrically on the trunk and extremities. Ampicillin caused this rash. *(Reprinted from K Wolff, RA Johnson: Color Atlas & Synopsis of Clinical Dermatology, 5th ed. New York, McGraw-Hill, 2005.)*

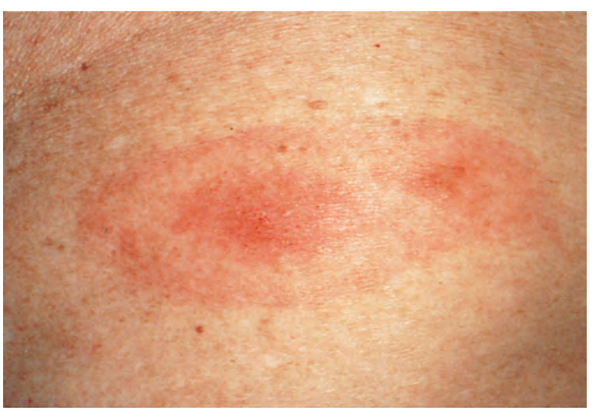

Figure e7-8 **Erythema migrans** is the early cutaneous manifestation of Lyme disease and is characterized by erythematous annular patches, often with a central erythematous papule at the tick-bite site. *(Courtesy of Yale Resident's Slide Collection; with permission.)*

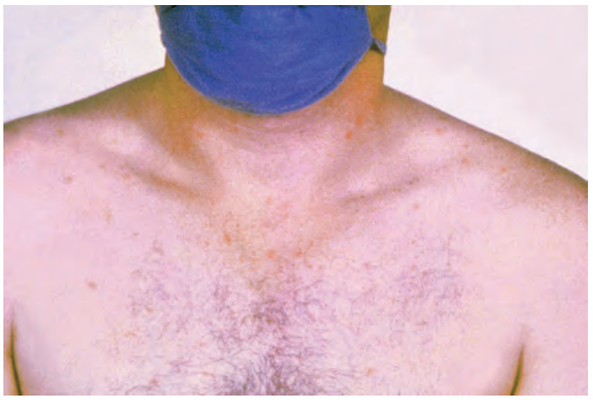

Figure e7-9 **Rose spots** are evident as erythematous macules on the trunk of this patient with **typhoid fever.** *(Source: Centers for Disease Control and Prevention.)*

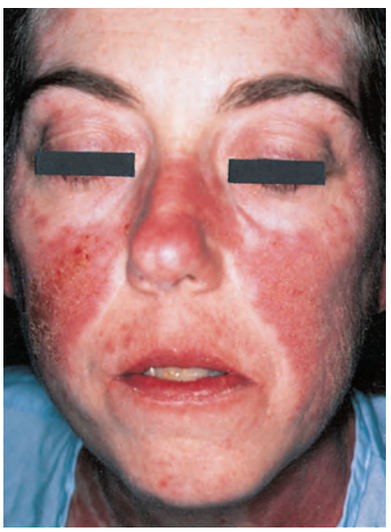

Figure e7-10 **Systemic lupus erythematosus** showing prominent, scaly, malar erythema. Involvement of other sun-exposed sites is also common.

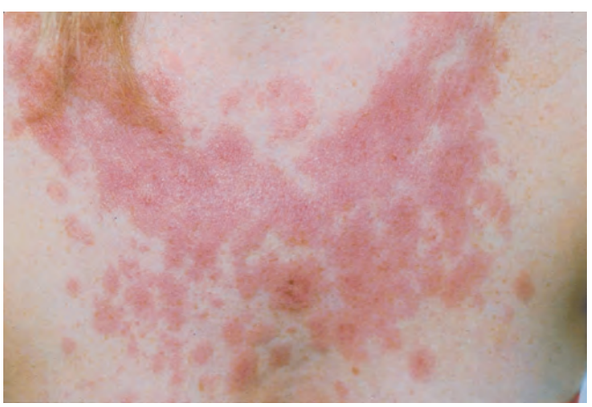

Figure e7-11 **Acute lupus erythematosus** on the upper chest, with brightly erythematous and slightly edematous coalescent papules and plaques. *(Courtesy of Robert Swerlick, MD; with permission.)*

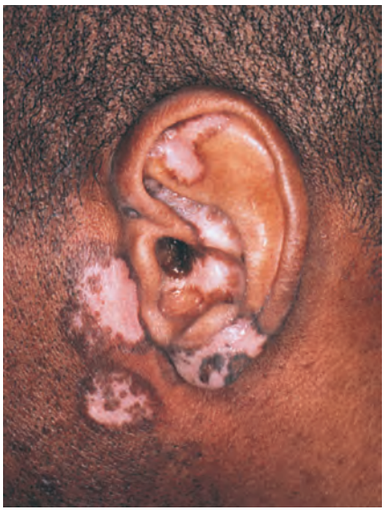

Figure e7-12 **Discoid lupus erythematosus.** Violaceous, hyperpigmented, atrophic plaques, often with evidence of follicular plugging (which may result in scarring), are characteristic of this cutaneous form of lupus. *(Courtesy of Marilynne McKay, MD; with permission.)*

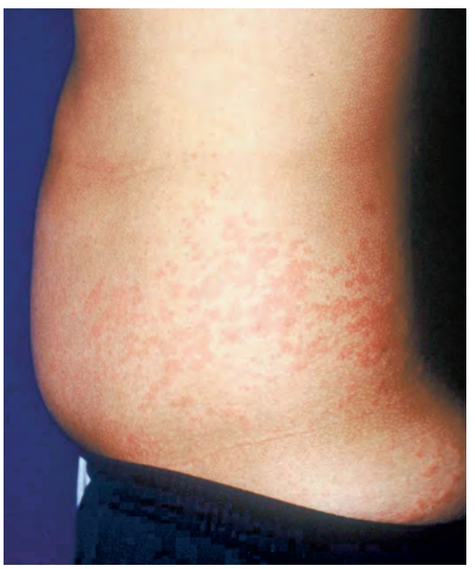

Figure e7-13 The rash of **Still's disease** typically exhibits evanescent, erythematous papules that appear at the height of fever on the trunk and proximal extremities. *(Courtesy of Stephen E. Gellis, MD; with permission.)*

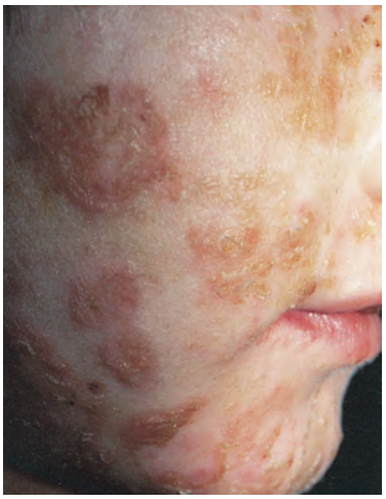

Figure e7-14 **Impetigo** is a superficial group A streptococcal or *Staphylococcus aureus* infection consisting of honey-colored crusts and erythematous weeping erosions. Occasionally, bullous lesions may be seen. *(Courtesy of Mary Spraker, MD; with permission.)*

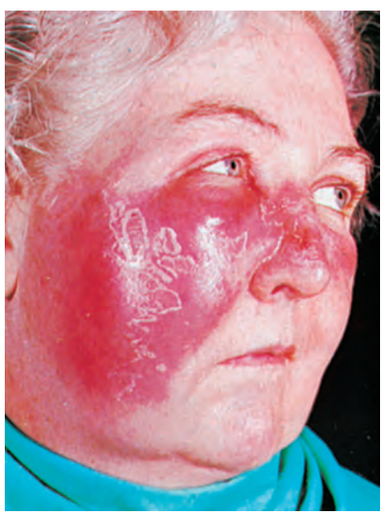

Figure e7-15 **Erysipelas** is a group A streptococcal infection of the superficial dermis and consists of well-demarcated, erythematous, edematous, warm plaques.

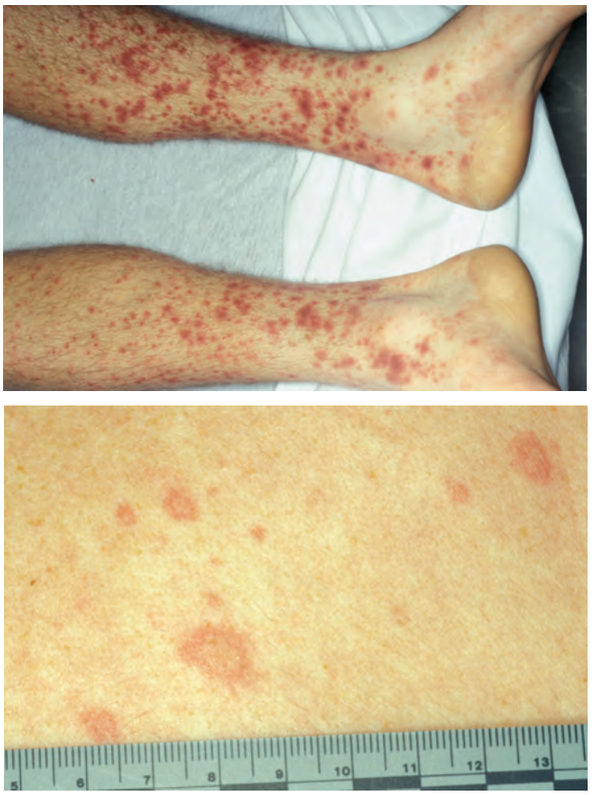

Figure e7-16 ***Top:*** Petechial lesions of **Rocky Mountain spotted fever** on the lower legs and soles of a young, otherwise healthy patient. ***Bottom:*** Close-up of lesions from the same patient. *(Courtesy of Lindsey Baden, MD; with permission.)*

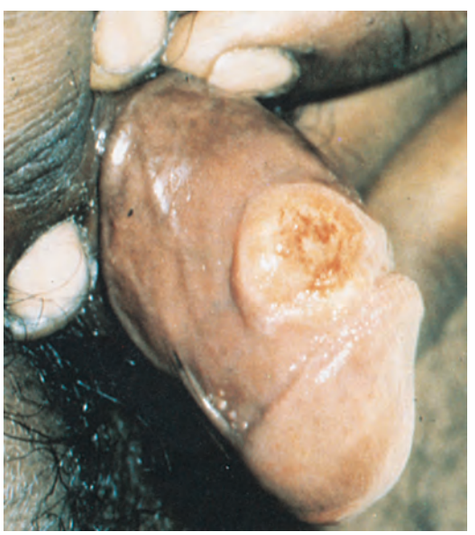

Figure e7-17 **Primary syphilis** with a firm, nontender chancre.

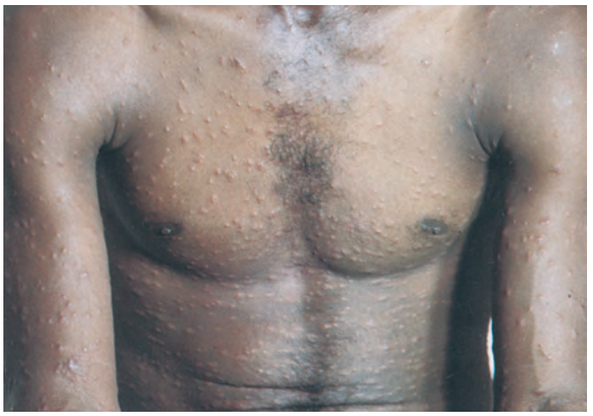

Figure e7-18 **Secondary syphilis,** demonstrating the papulosquamous truncal eruption.

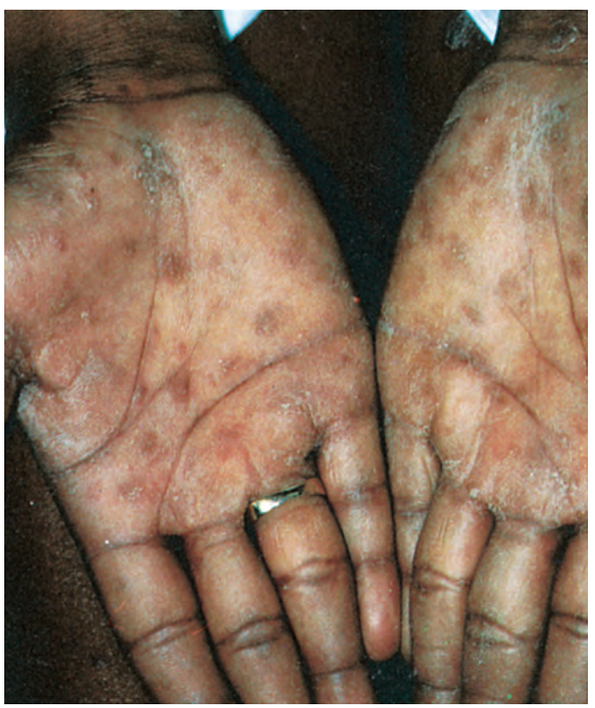

Figure e7-19 **Secondary syphilis** commonly affects the palms and soles with scaling, firm, red-brown papules.

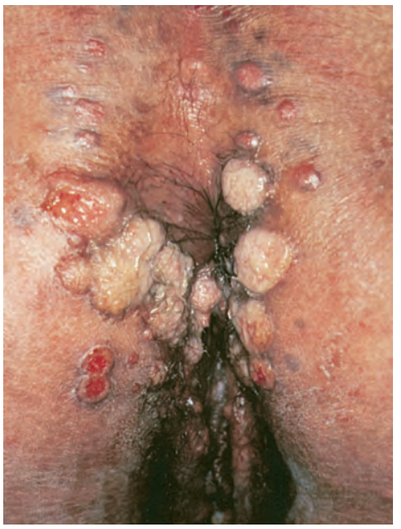

Figure e7-20 **Condylomata lata** are moist, somewhat verrucous intertriginous plaques seen in secondary syphilis.

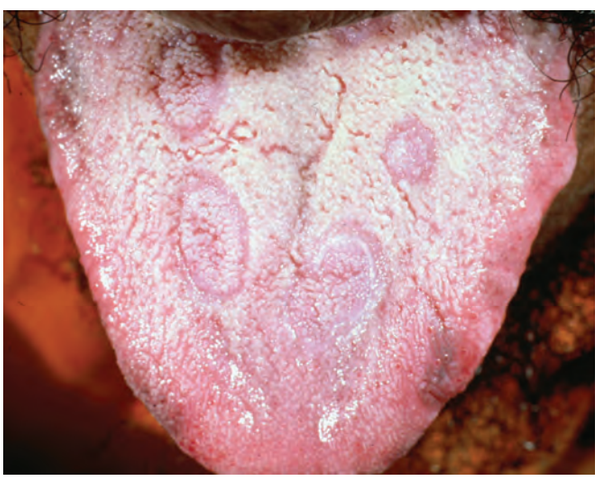

Figure e7-21 Mucous patches on the tongue of a patient with **secondary syphilis.** *(Courtesy of Ron Roddy; with permission.)*

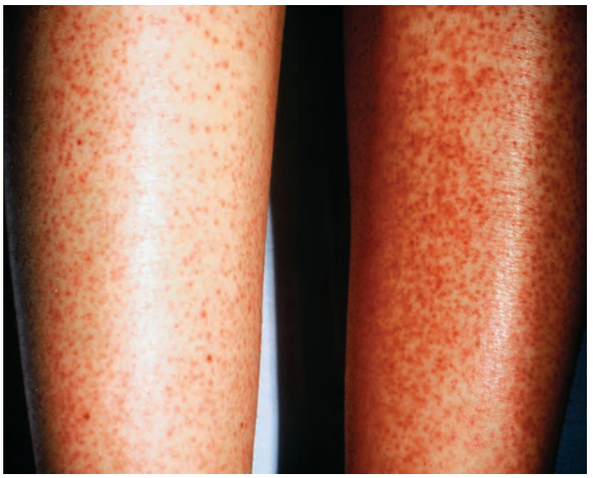

Figure e7-22 Petechial lesions in a patient with **atypical measles.** *(Courtesy of Stephen E. Gellis, MD; with permission.)*

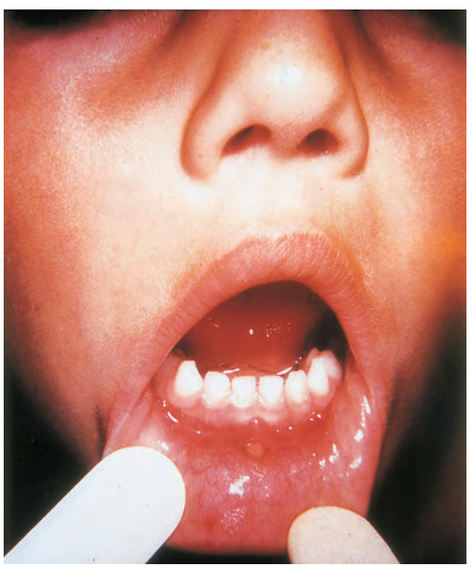

Figure e7-23 Tender vesicles and erosions in the mouth of a patient with **hand-foot-and-mouth disease.** *(Courtesy of Stephen E. Gellis, MD; with permission.)*

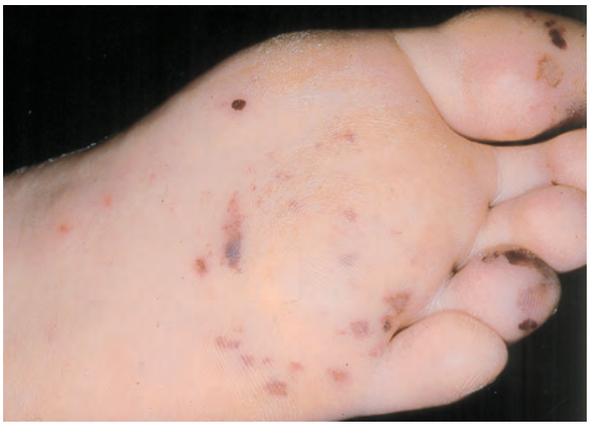

Figure e7-24 Septic emboli with hemorrhage and infarction due to acute *Staphylococcus aureus* **endocarditis.** *(Courtesy of Lindsey Baden, MD; with permission.)*

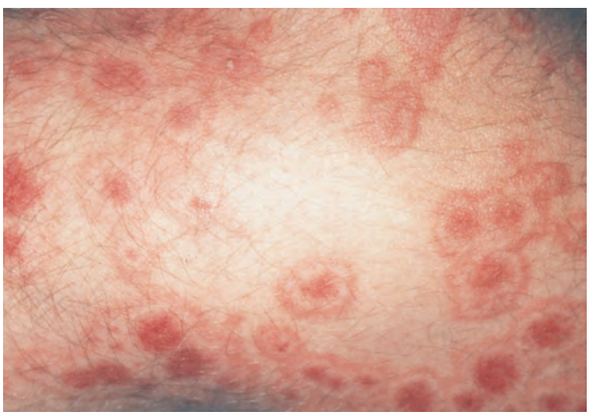

Figure e7-25 **Erythema multiforme** is characterized by multiple erythematous plaques with a target or iris morphology and usually represents a hypersensitive reaction to drugs or infections (especially herpes simplex virus). *(Courtesy of the Yale Resident's Slide Collection; with permission.)*

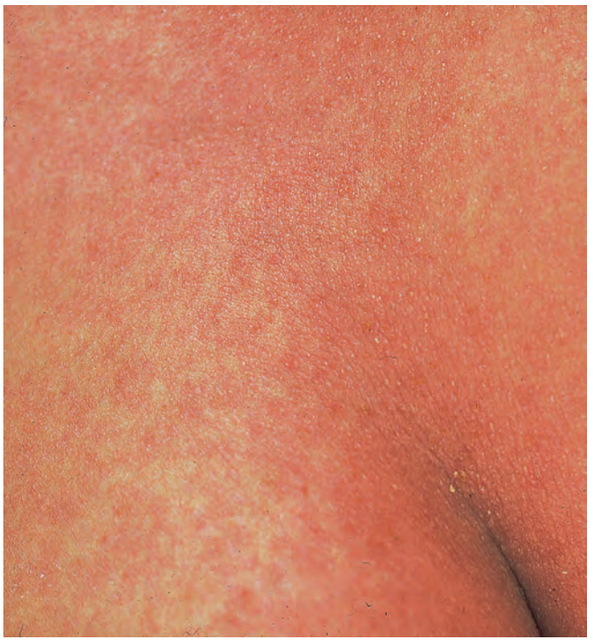

Figure e7-26 **Scarlet fever exanthem.** Finely punctuated erythema has become confluent (scarlatiniform); accentuation of linear erythema in body folds (Pastia's lines) is seen here. *(Reprinted from K Wolff, RA Johnson: Color Atlas & Synopsis of Clinical Dermatology, 6th ed. New York, McGraw-Hill, 2009.)*

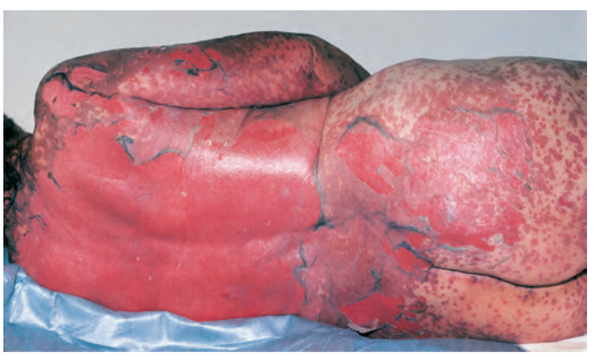

Figure e7-27 Erythema progressing to bullae with resulting sloughing of the entire thickness of the epidermis occurs in **toxic epidermal necrolysis.** This reaction was due to a sulfonamide. *(Reprinted from K Wolff, RA Johnson: Color Atlas & Synopsis of Clinical Dermatology, 5th ed. New York, McGraw-Hill, 2005.)*

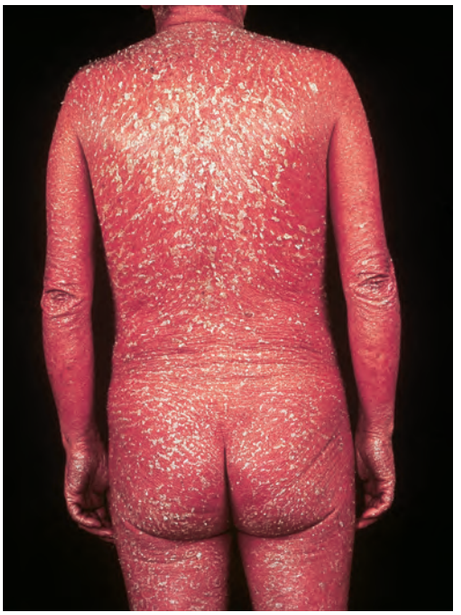

Figure e7-28 Diffuse erythema and scaling are present in this patient with psoriasis and the **exfoliative erythroderma syndrome.** *(Reprinted from K Wolff, RA Johnson: Color Atlas & Synopsis of Clinical Dermatology, 6th ed. New York, McGraw-Hill, 2009.)*

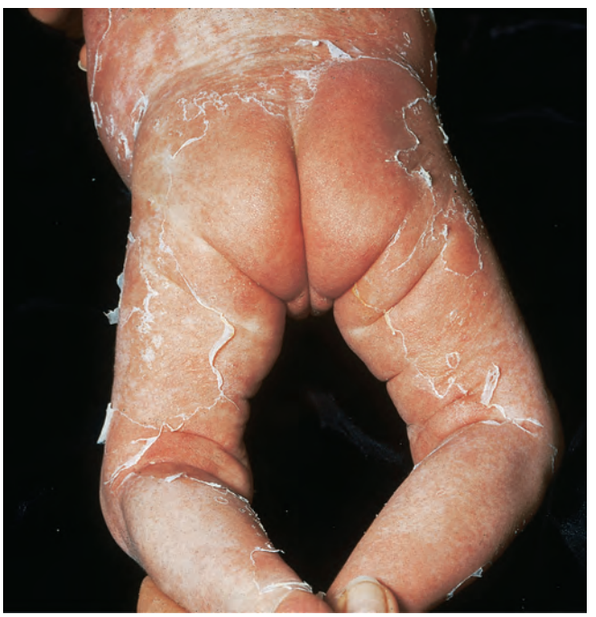

Figure e7-29 This infant with **staphylococcal scalded skin syndrome** demonstrates generalized desquamation. *(Reprinted from K Wolff, RA Johnson: Color Atlas & Synopsis of Clinical Dermatology, 6th ed. New York, McGraw-Hill, 2009.)*

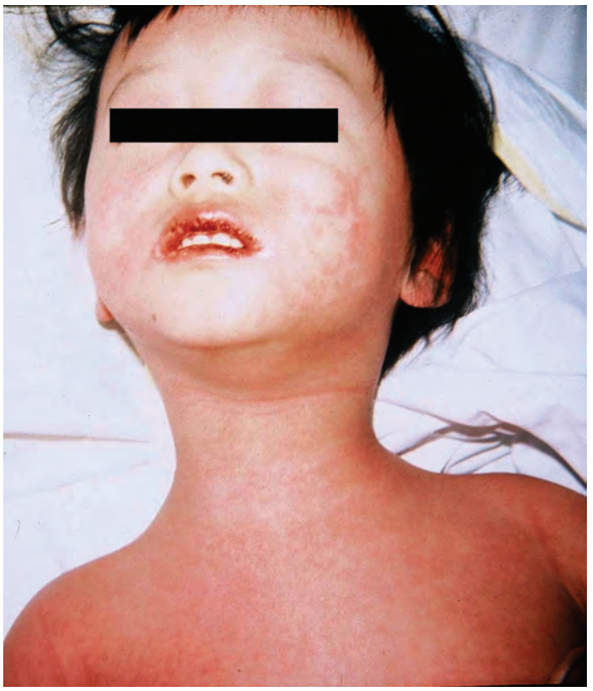

Figure e7-30 Fissuring of the lips and an erythematous exanthem are evident in this patient with **Kawasaki's disease.** *(Courtesy of Stephen E. Gellis, MD; with permission.)*

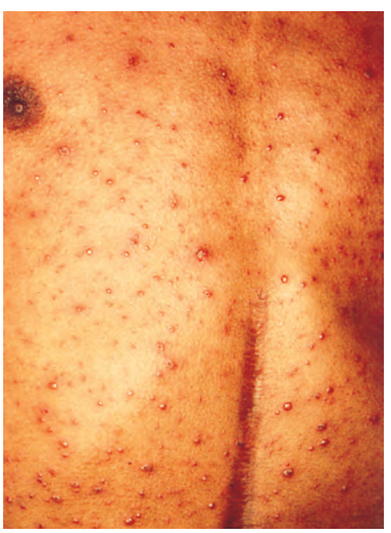

Figure e7-31 Numerous **varicella** lesions at various stages of evolution: vesicles on an erythematous base, umbilicated vesicles, and crusting lesions. *(Courtesy of R. Hartman; with permission.)*

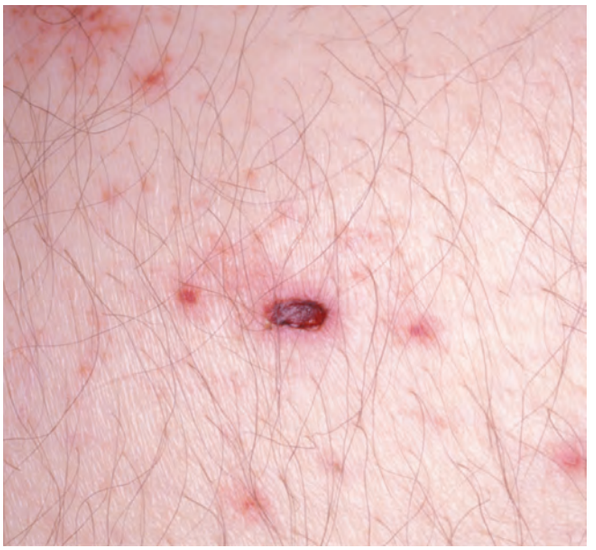

Figure e7-32 Close-up of lesions of **disseminated zoster.** Note lesions at different stages of evolution, including pustules and crusting. *(Courtesy of Lindsey Baden, MD; with permission.)*

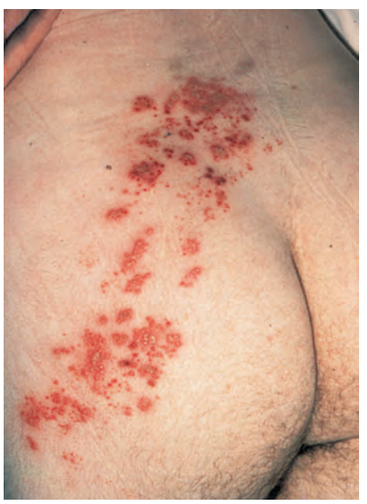

Figure e7-33 **Herpes zoster** is seen in this HIV-infected patient as hemorrhagic vesicles and pustules on an erythematous base grouped in a dermatomal distribution.

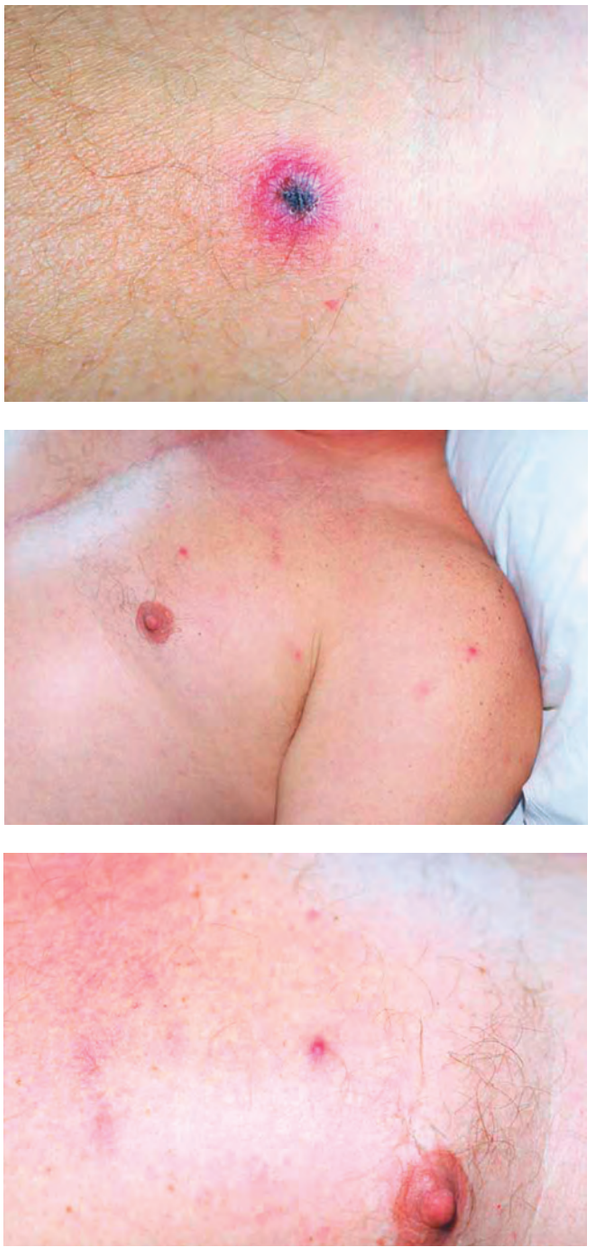

Figure e7-34 ***Top:*** Eschar at the site of the mite bite in a patient with **rickettsialpox.** ***Middle:*** Papulovesicular lesions on the trunk of the same patient. ***Bottom:*** Close-up of lesions from the same patient. *(Reprinted from A Krusell et al: Emerg Infect Dis 8:727, 2002.)*

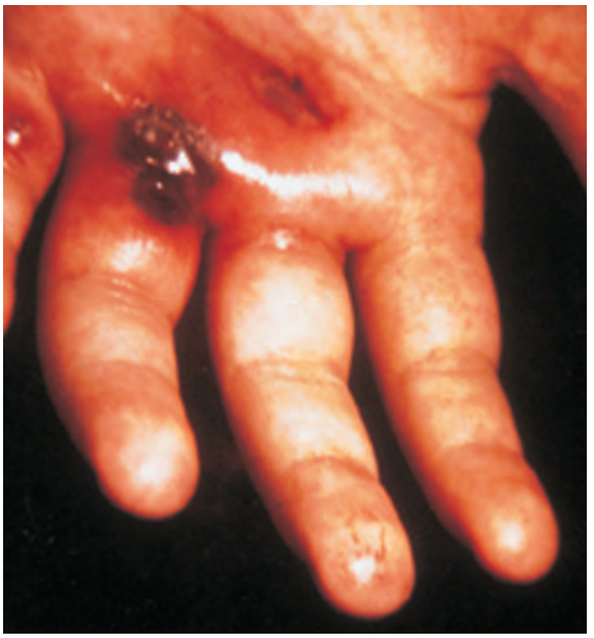

Figure e7-35 **Ecthyma gangrenosum** in a neutropenic patient with *Pseudomonas aeruginosa* bacteremia.

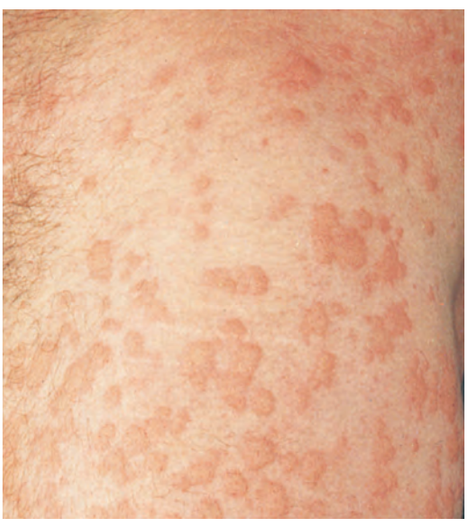

Figure e7-36 **Urticaria** showing characteristic discrete and confluent, edematous, erythematous papules and plaques.

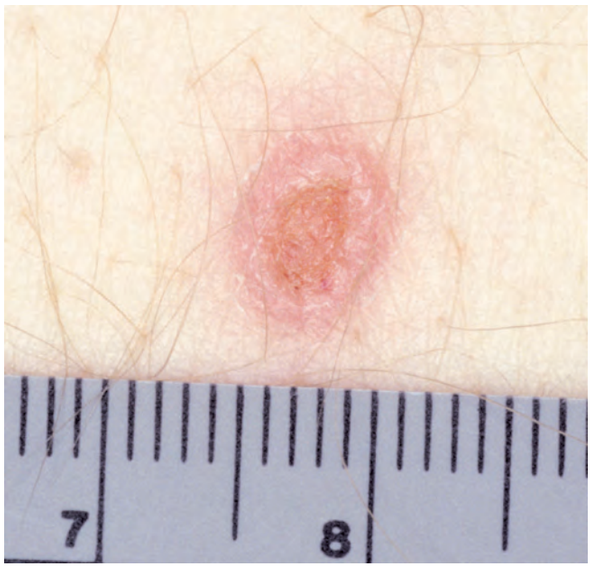

Figure e7-37 **Disseminated cryptococcal infection.** A liver-transplant recipient developed six cutaneous lesions similar to the one shown. Biopsy and serum-antigen testing demonstrated *Cryptococcus.* Important features of the lesion include a benign-appearing fleshy papule with central umbilication resembling molluscum contagiosum. *(Courtesy of Lindsey Baden, MD; with permission.)*

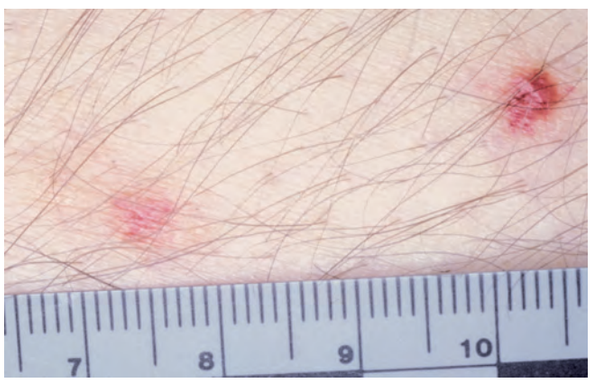

Figure e7-38 **Disseminated candidiasis.** Tender, erythematous, nodular lesions developed in a neutropenic patient with leukemia who was undergoing induction chemotherapy. *(Courtesy of Lindsey Baden, MD; with permission.)*

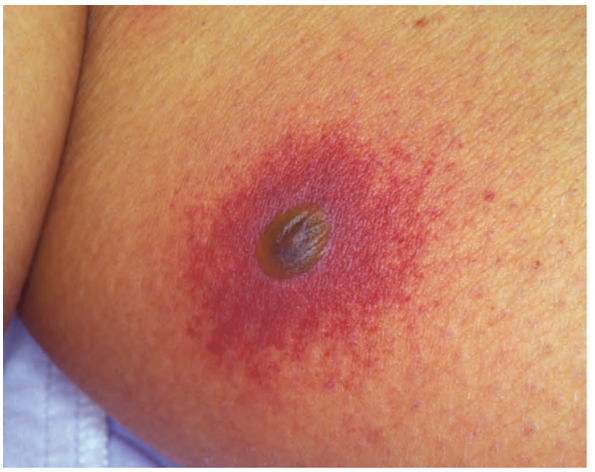

Figure e7-39 **Disseminated *Aspergillus* infection.** Multiple necrotic lesions developed in this neutropenic patient undergoing hematopoietic stem cell transplantation. The lesion in the photograph is on the inner thigh and is several centimeters in diameter. Biopsy demonstrated infarction caused by *Aspergillus fumigatus. (Courtesy of Lindsey Baden, MD; with permission.)*

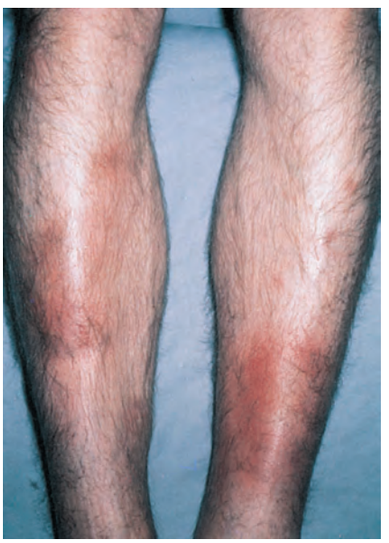

Figure e7-40 **Erythema nodosum** is a panniculitis characterized by tender, deep-seated nodules and plaques usually located on the lower extremities. *(Courtesy of Robert Swerlick, MD; with permission.)*

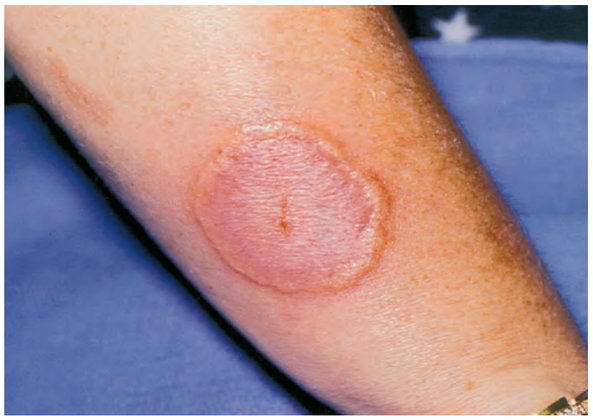

Figure e7-41 **Sweet's syndrome:** an erythematous indurated plaque with a pseudovesicular border. *(Courtesy of Robert Swerlick, MD; with permission.)*

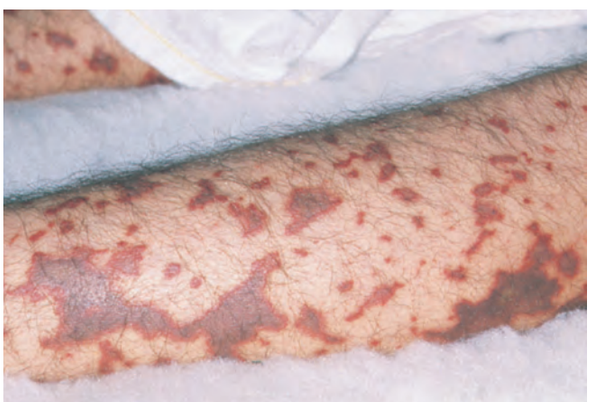

Figure e7-42 **Fulminant meningococcemia** with extensive angular purpuric patches. *(Courtesy of Stephen E. Gellis, MD; with permission.)*

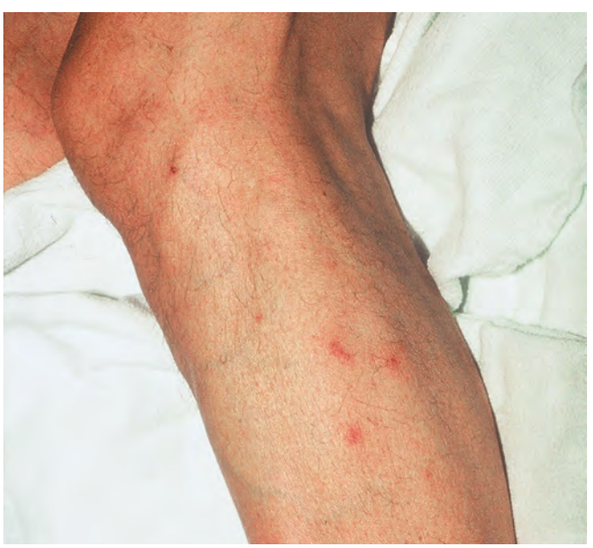

Figure e7-43 Erythematous papular lesions are seen on the leg of this patient with **chronic meningococcemia**.

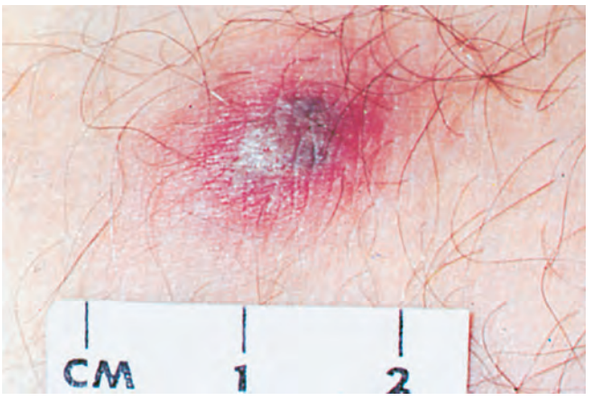

Figure e7-44 **Disseminated gonococcemia** in the skin is seen as hemorrhagic papules and pustules with purpuric centers in a centrifugal distribution. *(Courtesy of Daniel M. Musher, MD; with permission.)*

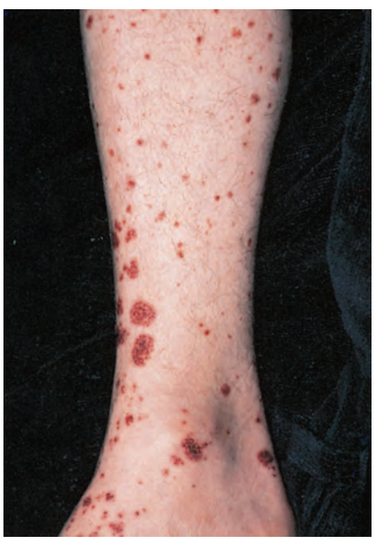

Figure e7-45 Palpable purpuric papules on the lower legs are seen in this patient with **cutaneous small-vessel vasculitis.** *(Courtesy of Robert Swerlick, MD; with permission.)*

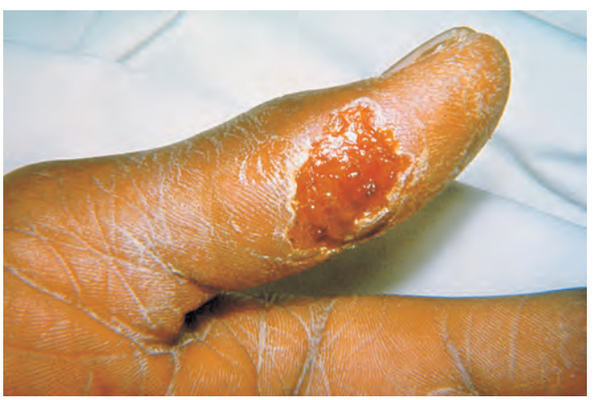

Figure e7-46 The thumb of a patient with a necrotic ulcer of **tularemia.** *(Source: Centers for Disease Control and Prevention.)*

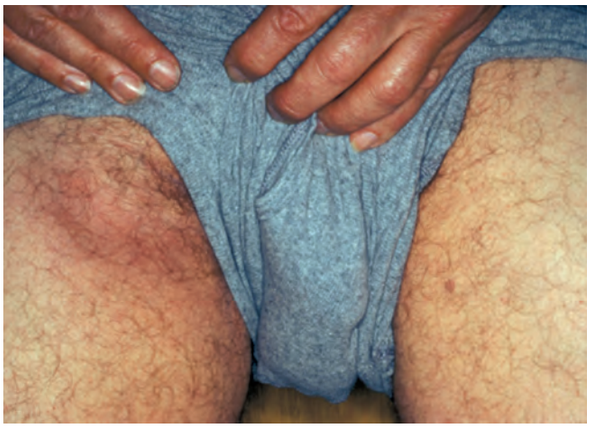

Figure e7-47 This 50-year-old man developed high fever and massive inguinal lymphadenopathy after a small ulcer healed on his foot. **Tularemia** was diagnosed. *(Courtesy of Lindsey Baden, MD; with permission.)*

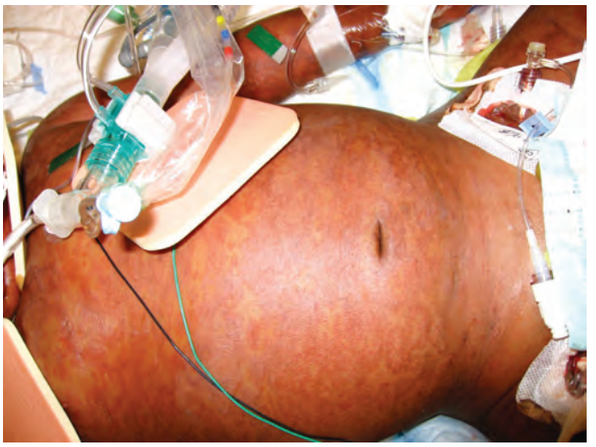

Figure e7-49 **Drug-induced hypersensitivity syndrome (DIHS/DRESS)**: This patient developed a progressive eruption exhibiting early desquamation after taking phenobarbital. There was also associated lymphadenopathy and hepatomegaly. *(Courtesy of Peter Lio, MD; with permission.)*

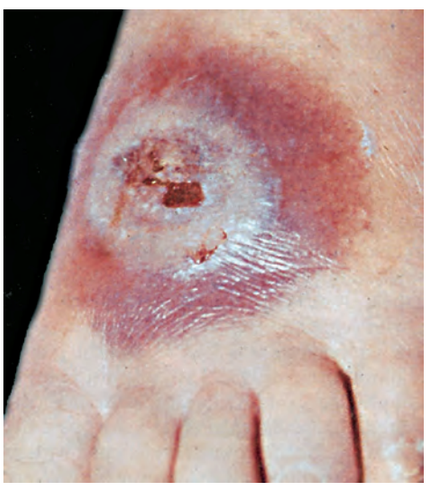

Figure e7-48 This painful **trypanosomal chancre** developed at the site of a tsetse-fly bite on the dorsum of the foot. *Trypanosoma brucei* was diagnosed from an aspirate of the ulcer. *(Courtesy of Edward T. Ryan, MD. N Engl J Med 346: 2069, 2002; with permission.)*

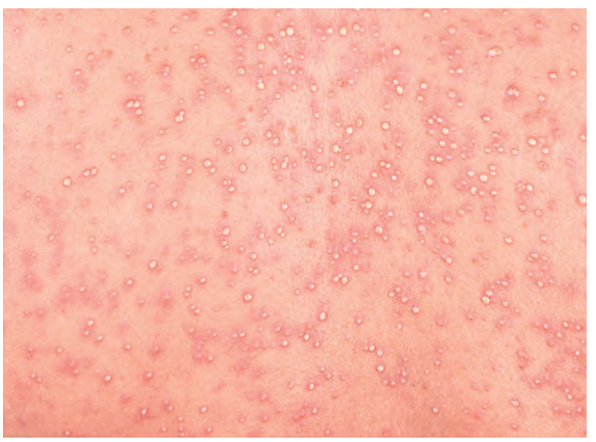

Figure e7-50 Many small, nonfollicular pustules are seen against a background of erythema in this patient with **acute generalized eruptive pustulosis (AGEP)**. The rash began in body folds and progressed to cover the trunk and face. *(Reprinted from K Wolff, RA Johnson: Color Atlas & Synopsis of Clinical Dermatology, 6th ed. New York, McGraw-Hill, 2009, p. 561.)*

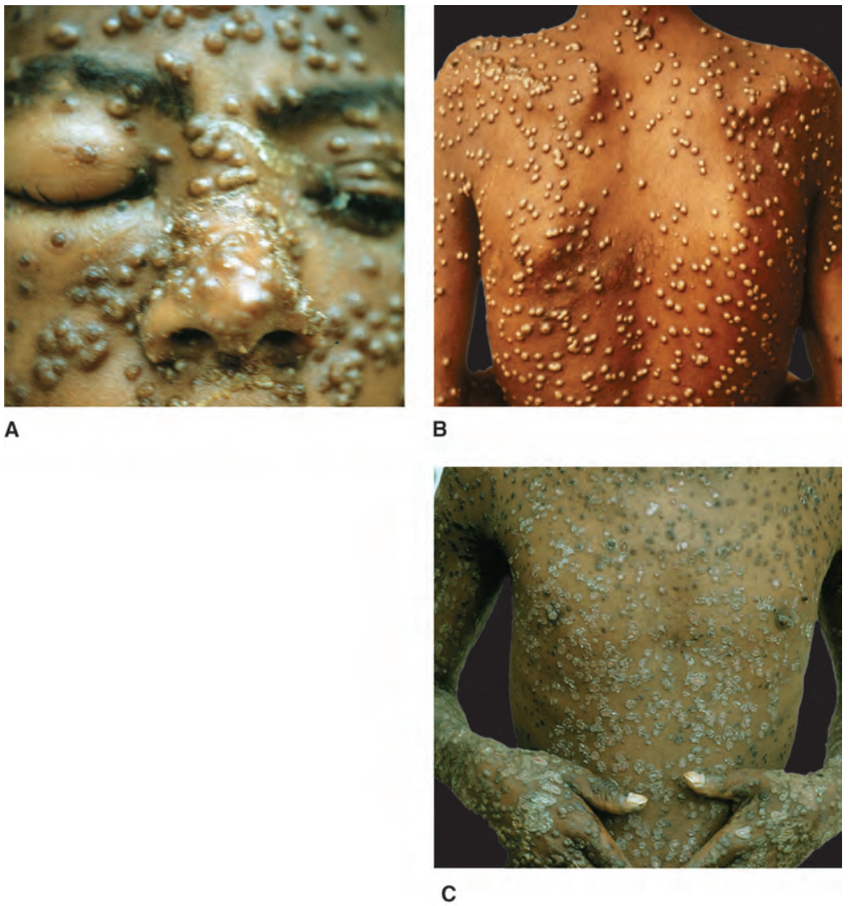

Figure e7-51 **Smallpox** is shown with many pustules on the face, becoming confluent (A), and on the trunk (B). Pustules are all in the same stage of development. In (C), crusting, healing lesions are noted on the trunk, arms, and hands. *(Reprinted from K Wolff, RA Johnson: Color Atlas & Synopsis of Clinical Dermatology, 6th ed. New York, McGraw-Hill, 2009, p. 780.)*