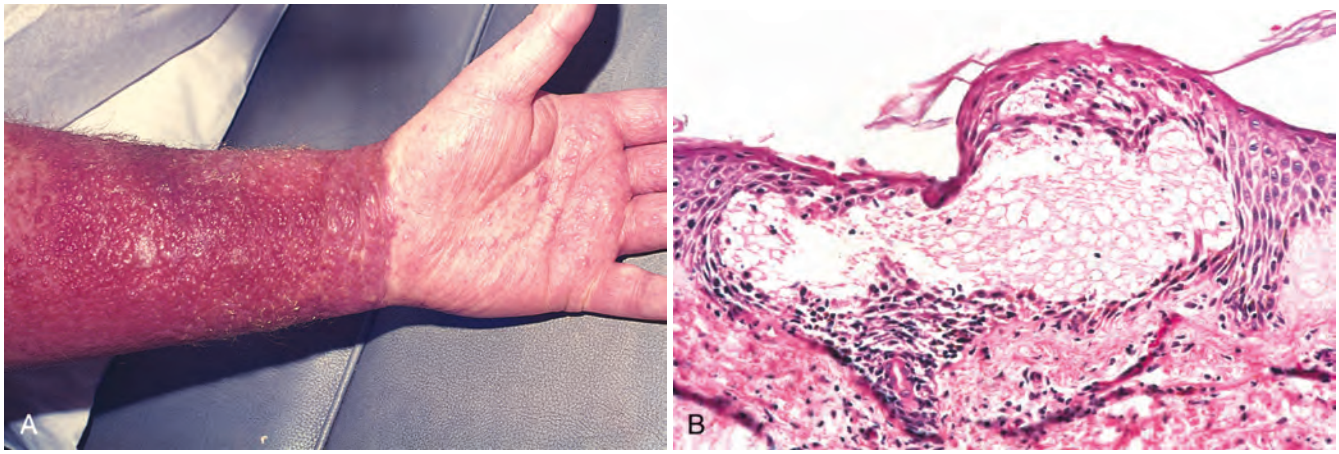

Figure 25-23 Eczematous dermatitis. **A,** Acute allergic contact dermatitis due to antigen exposure (in this case, laundry detergent in clothing) marked by numerous vesicular lesions on erythematous skin. **B,** Edema within the epidermis creates small fluid-filled intraepidermal vesicles.

eczema is an acute contact reaction to topical antigens such as urushiol in poison ivy/oak *(Rhus toxicodendron)*, characterized by pruritic, edematous, oozing plaques, often containing small and large blisters (vesicles and bullae) (Fig. 25-23*A*). Such lesions are prone to bacterial superinfection, which produces a yellow crust (impetiginization). With time, persistent lesions become less "wet" (fail to ooze or form vesicles) and become progressively (hyperkeratotic and acanthotic). **Spongiosis** characterizes acute eczematous dermatitis, hence the histologic synonym spongiotic dermatitis. Unlike urticaria, in which edema is restricted to the superficial dermis, edema seeps into the intercellular spaces of the epidermis, splaying apart keratinocytes, particularly in the stratum spinosum. Mechanical shearing of intercellular attachment sites (desmosomes) and cell membranes by progressive accumulation of intercellular fluid may result in the formation of intraepidermal vesicles (Fig. 25-23*B*).

During the earliest stages of eczematous dermatitis, there is a superficial, perivascular, lymphocytic infiltrate associated with papillary dermal edema and mast cell degranulation. The pattern and composition of this infiltrate may provide clues to the underlying cause. For example, eczema resulting from certain ingested drugs is marked by a lymphocytic infiltrate, often containing eosinophils**,** around deep as well as superficial dermal vessels. By contrast, eczematous dermatitis resulting from contact antigens tends to produce a mononuclear inflammatory reaction that preferentially affects the superficial dermal layer.

Erythema Multiforme

Erythema multiforme is an uncommon self-limited hypersensitivity reaction to certain infections and drugs. It affects individuals of any age and is associated with the following conditions: (1) infections such as herpes simplex, mycoplasmal infections, histoplasmosis, coccidioidomycosis, typhoid, and leprosy, among others; (2) exposure to certain drugs (sulfonamides, penicillin, barbiturates, salicylates, hydantoins, and antimalarials); (3) cancer (carcinomas and lymphomas); and (4) collagen vascular diseases (lupus erythematosus, dermatomyositis, and polyarteritis nodosa).

Pathogenesis. **Erythema multiforme is characterized by keratinocyte injury mediated by skin-homing CD8+ cytotoxic T lymphocytes.** This mechanism of injury is shared with a number of other conditions, including acute graft-versus-host disease, skin allograft rejection, and fixed drug eruptions. In erythema multiforme, CD8+ cytotoxic T cells are more prominent in the central portion of the lesions, while CD4+ helper T cell and Langerhans cells are more prevalent in the peripheral portions. The epidermal antigens that are recognized by the infiltrating T cells in erythema multiforme remain unknown.

MORPHOLOGY

Affected individuals present with a diverse array of lesions (hence the term multiforme), including macules, papules, vesicles, bullae, and characteristic targetoid (target-like) lesions (Fig. 25-24*A*). The lesions may occur in a variety of distributions. Cases that are limited in extent often show symmetric involvement of the extremities. A febrile form associated with extensive involvement of the skin is called **Stevens-Johnson syndrome**, which is often (but not exclusively) seen in children. In Stevens-Johnson syndrome, lesions involve not only the skin but also the lips and oral mucosa, conjunctiva, urethra, and genital and perianal areas. Secondary infection of involved areas due to loss of skin integrity may result in life-threatening sepsis. Another variant termed **toxic epidermal necrolysis** is characterized by diffuse necrosis and sloughing of cutaneous and mucosal epithelial surfaces. The widespread epidermal damage produces a clinical picture similar to that seen in patients with extensive burns.

On histologic examination, the "targetoid" lesions show a superficial perivascular, lymphocytic infiltrate associated with dermal edema and accumulation of lymphocytes along the dermoepidermal junction, where they are intimately associated with degenerating and necrotic keratinocytes, a pattern termed *interface dermatitis* (Fig. 25-24*B*). With time there is upward migration of lymphocytes into the epidermis. Discrete and confluent zones of epidermal necrosis occur with concomitant blister formation. Epidermal sloughing leads to shallow erosions.