erythrocytes into the dermis. It is mostly found in spongiotic space. Infiltration of lymphocytes is seen in epidermal inflammatory diseases such as contact dermatitis and atopic dermatitis. Infiltration of multinucleated leukocytes is observed as a pustule in impetigo contagiosa, palmoplantar pustulosis and psoriasis.

In cutaneous T-cell lymphomas such as mycosis fungoides, tumorous T cell may infiltrate into the epidermis forming a mass that does not become spongiform; it is called Pautrier’s microabscess for its resemblance to an abscess (Fig. 2.17). Langerhans cells infiltrate into the epidermis in Langerhans cell histiocytosis.

Vacuolar degeneration occurs when the dermo-epidermal junctions become vacuolated and ill defined as a result of basal cell degeneration (Fig. 2.18). It is often accompanied by edema and lymphocyte infiltration, and the basal membranes are lost at the site. It is an inflammation that mainly occurs at the dermo-epidermal junction. When further aggravated, subepidermal blisters form. Melanin granules contained in basal cells may permeate into the dermis, a condition called incontinentia pigmenti histologica. The macrophages phagocytose melanin granules. Dyskeratosis caused by necrotic keratinocytes is seen in erythema multiforme, lichen planus, lupus erythematosus and graft-versus-host disease (GVHD). An eosinophilic Civatte body with a diameter of 10 μm may be found immediately beneath the dermis (Fig. 2.9).

### 2. Melanin synthesis abnormality

Production of melanin pigment in the basal epidermal layer is increased by exposure to ultraviolet radiation. When pigment is lost, leukoderma is observed. Generally, to diagnose melanin synthesis abnormality, a DOPA test or an immunohistological test is performed.

**Albinism**: A congenital abnormality of melanin synthesis. Melanin loss can be identified by Fontana Masson staining, for example.

**Idiopathic guttate hypomelanosis**: Melanocytes experience functional reduction by aging.

**Nevus of Ota**: Ectopic melanocytes are found in the dermis.

**Chloasma**: Melanocytes and melanin pigments increase.

**Freckles**: Melanocytes experience functional increase.