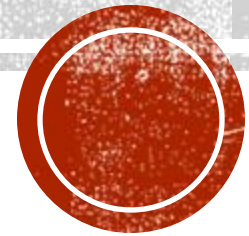


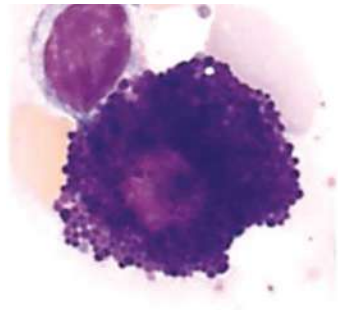
MSS- PATHOLOGY LAB



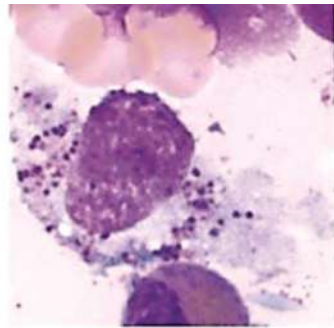
Dr.Eman Kreishan, MD.

URTICARIA.

- a common disorder mediated by localized mast cell degranulation, which leads to dermal microvascular hyperpermeability.
- The resulting erythematous, edematous, and pruritic plaques are termed wheels.



Resting mast cell

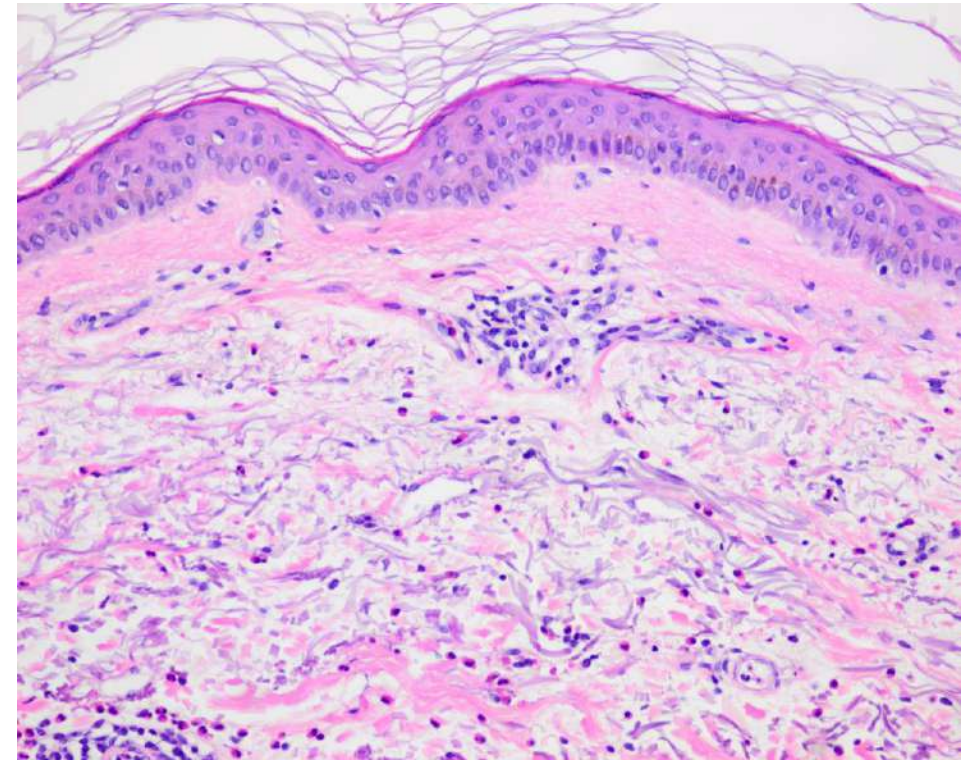
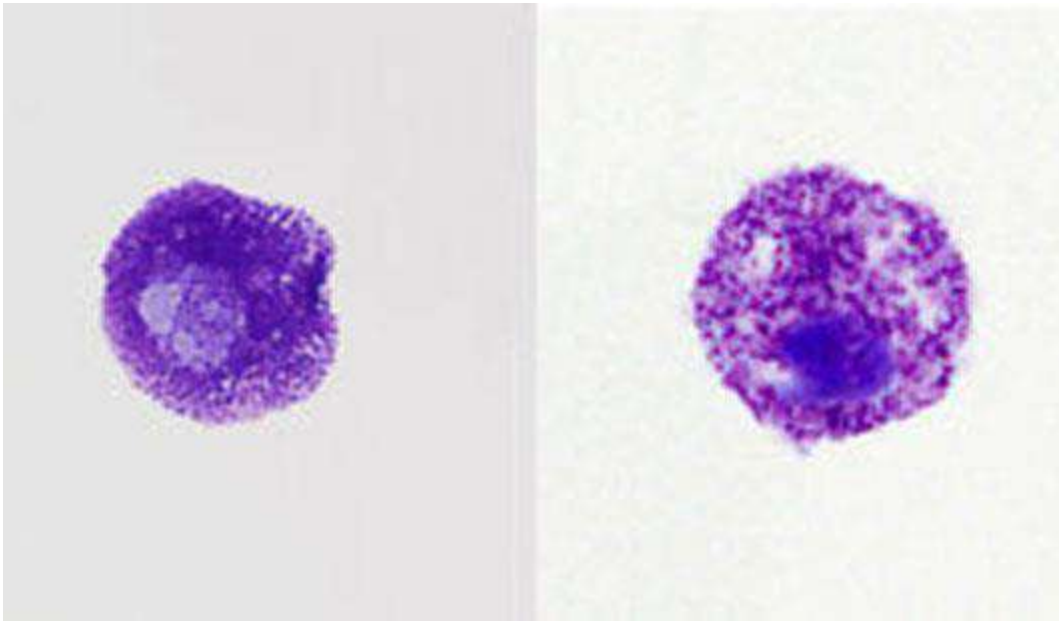


Activated mast cell



HISTOLOGIC FEATURES OF URTICARIA

- *sparse superficial perivenular infiltrate of mononuclear cells, rare neutrophils, and sometimes eosinophils.
- *dermal edema causes splaying of collagen bundles.
- *Degranulation of mast cells, can be highlighted using a Giemsa stain.



ACUTE ECZEMATOUS DERMATITIS.

- Eczema is a clinical term that embraces a number of conditions with varied underlying etiologies.
- Clinically the patient may have:
 - erythematous papules with overlying vesicles, which ooze and become crusted.
 - Pruritus is characteristic.
 - With persistence, these lesions coalesce into raised, scaling plaques.



THE CLINICAL SUBTYPES INCLUDE :

- 1. Allergic contact dermatitis:

stems from topical exposure to an allergen and is caused by delayed hypersensitivity reactions.

- 2. Atopic dermatitis:

stem from defects in keratinocyte barrier function, defined as skin with increased

permeability to substances to which it is exposed, such as potential antigens

- 3. Drug-related eczematous dermatitis:

Hypersensitivity reaction to a drug.



- 4. Photoeczematous dermatitis:

appears as an abnormal reaction to UV or visible light

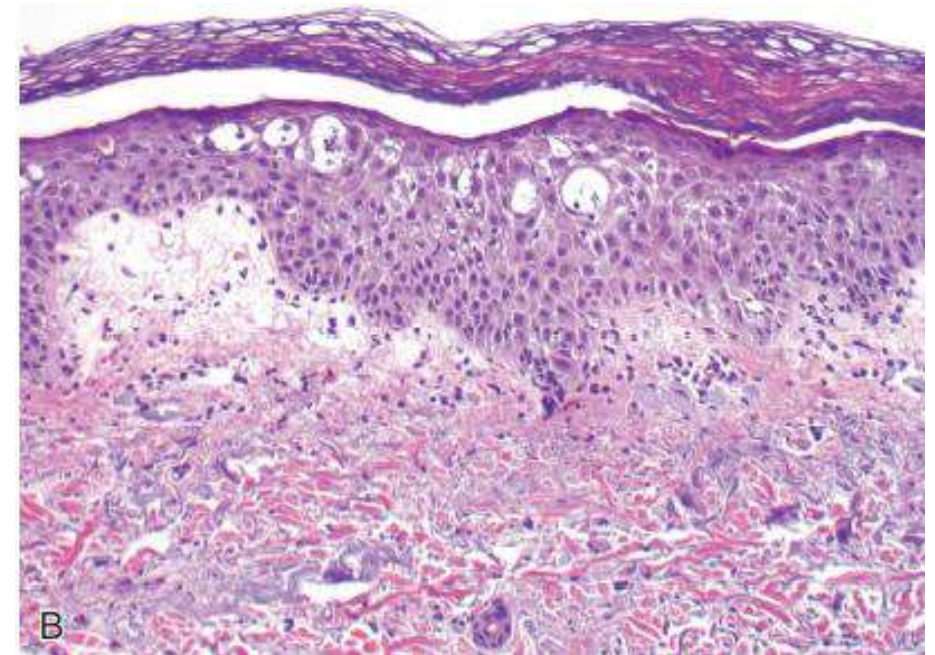
- 5. Primary irritant dermatitis:

results from exposure to substances that chemically, physically, or mechanically damage the skin.



HISTOLOGY

- Spongiosis or epidermal edema, Edema fluid seeps into the epidermis, where it splays apart keratinocytes .
- Intercellular bridges are stretched and become more prominent and are easier to visualize.
- superficial perivascular lymphocytic infiltrate
- edema of dermal papillae.
- mast cell degranulation.



CLINICAL FEATURES

- Lesions of acute eczematous dermatitis are
- pruritic, edematous, oozing plaques, often containing vesicles and bullae.
- With persistent antigen exposure, lesions may become scaly (hyperkeratotic) as the epidermis thickens (acanthosis).
- It usually appears in early childhood and remits spontaneously as patients mature into adults. Children with atopic dermatitis often have asthma and allergic rhinitis, termed the atopic triad.



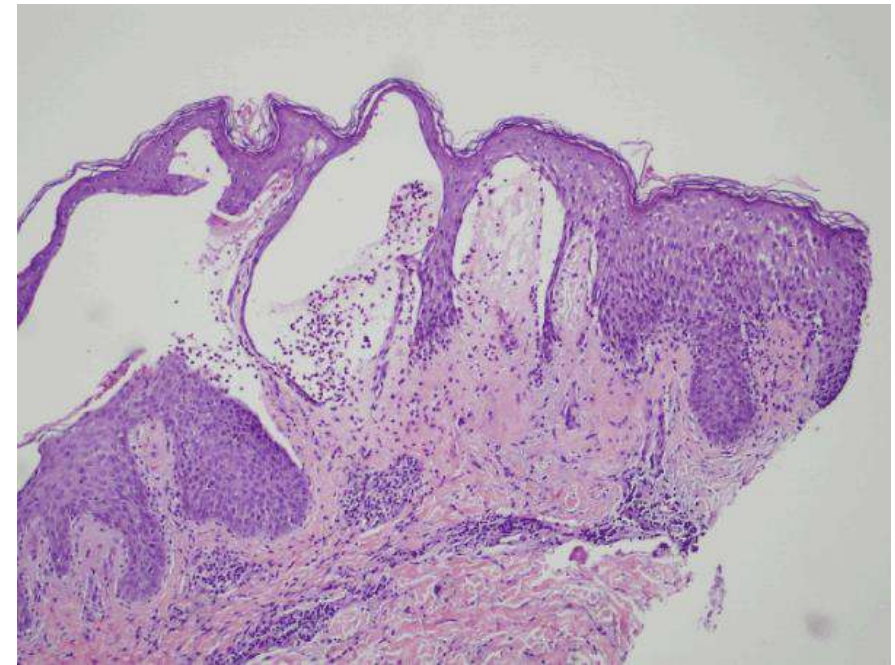
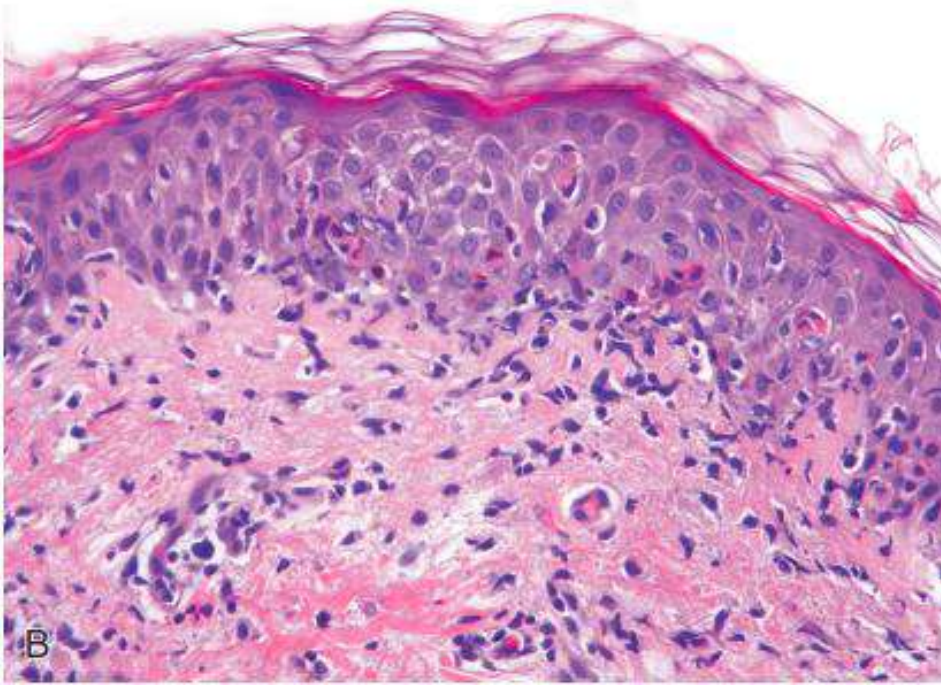
ERYTHEMA MULTIFORME

- Affected individuals present with a wide array of lesions, which may include macules, papules, vesicles, and bullae (hence the term multiforme)
- Well-developed lesions have a characteristic “targetoid” appearance



- Early lesions show
 - superficial perivascular lymphocytic infiltrate
 - dermal edema
 - margination of lymphocytes along the dermoepidermal junction with apoptotic keratinocytes

- With time
 - discrete, confluent zones of basal epidermal necrosis appear, with concomitant blister formation.

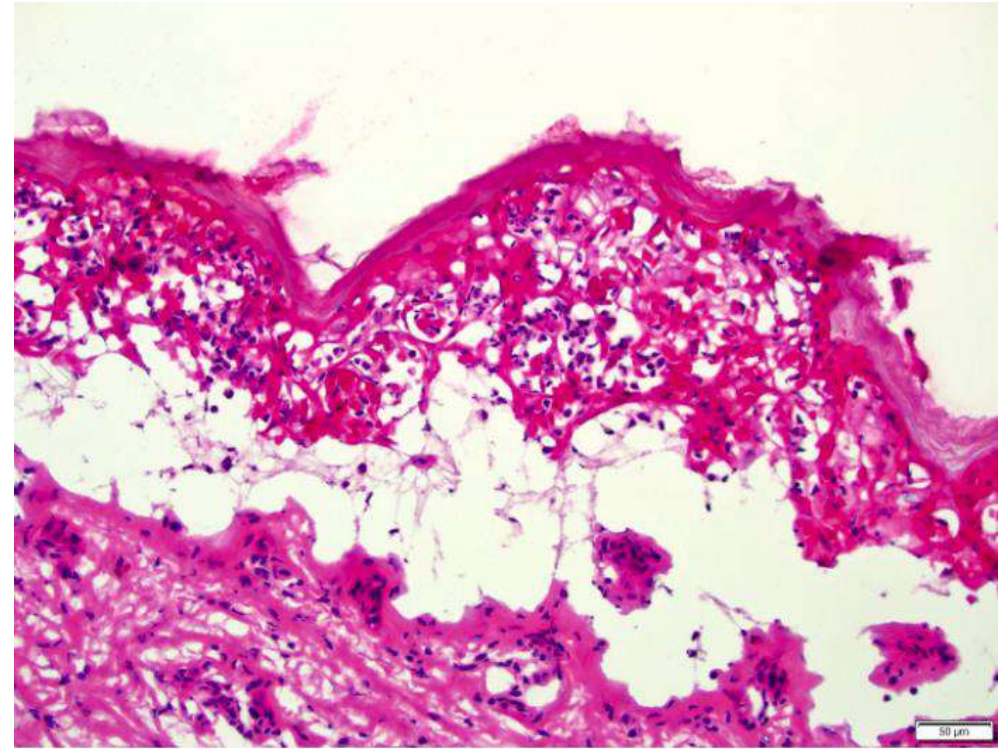
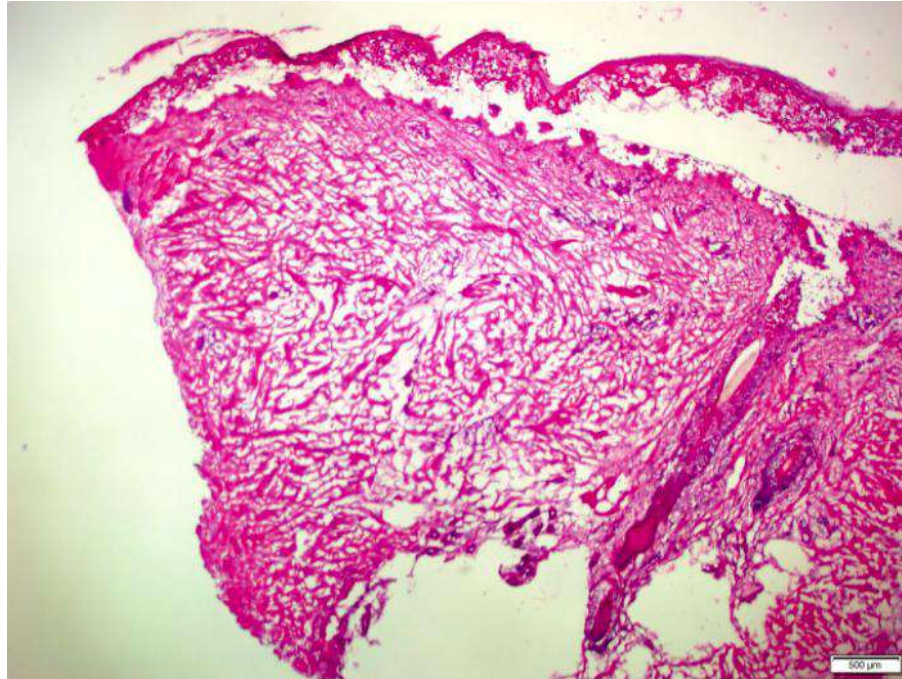


CLINICAL FEATURES

- Erythema multiforme caused by medications may progress to more serious eruptions, such as
- Stevens-Johnson syndrome: epidermal detachment < 10% body surface area
- toxic epidermal necrolysis: epidermal detachment > 30% body surface area

- These forms can be life-threatening, as they may cause sloughing of large portions of the epidermis, resulting in fluid loss and infections complications





PSORIASIS

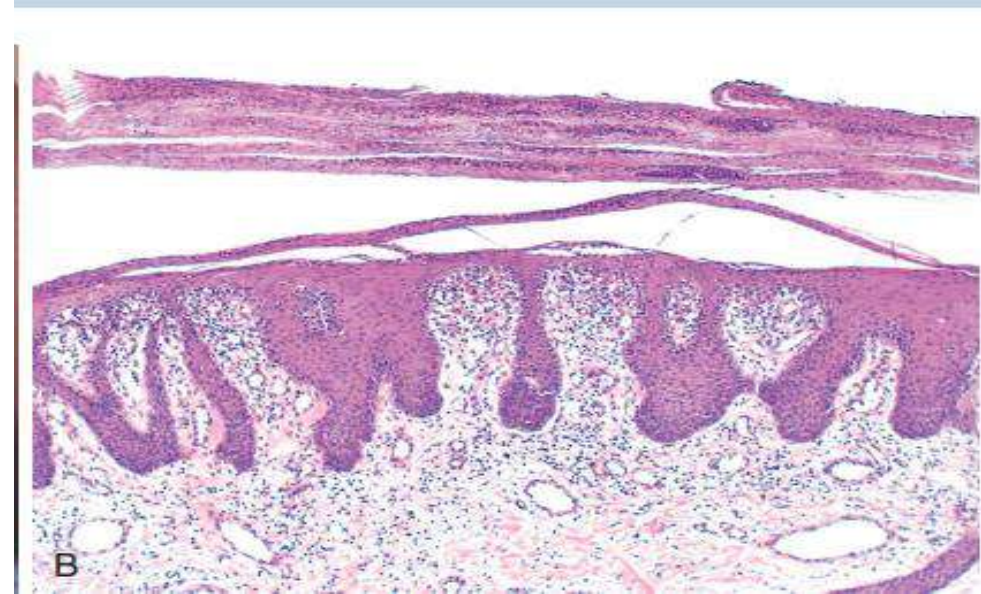
- Psoriasis is a common chronic inflammatory dermatosis, affecting 1% to 2% of individuals.
- psoriasis is associated with an increased risk for heart attack and stroke, a relationship that may be related to a chronic inflammatory state.
- Psoriasis also is associated in up to 10% of patients with arthritis.



MORPHOLOGY



well-demarcated, pink to salmon-colored
plaque covered by loosely adherent
silver-white scale



- *epidermal thickening (acanthosis).
- * regular downward elongation of the rete ridges
- * Increased epidermal cell turnover and lack of maturation
- * results in loss of the stratum granulosum
- * extensive parakeratotic scale



CLINICAL FEATURES

- Psoriasis most frequently affects the skin of the elbows, knees, scalp, lumbosacral areas, intergluteal cleft, glans penis, and vulva.
- Nail changes on the fingers and toes occur in 30% of cases.



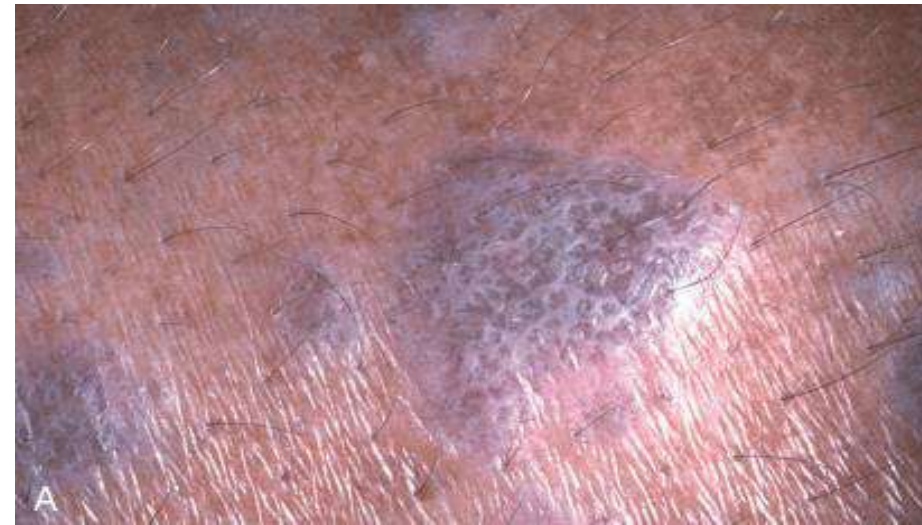
LICHEN PLANUS

- * “**P**ruritic, **p**urple, **p**olygonal, **p**apules, and **p**laques” are the tongue-twisting Ps that describe this disorder of skin and squamous mucosa
- * The lesions may result from a CD8+ T cell–mediated cytotoxic response against antigens in the basal cell layer and the dermoepidermal junction that are produced by unknown mechanisms



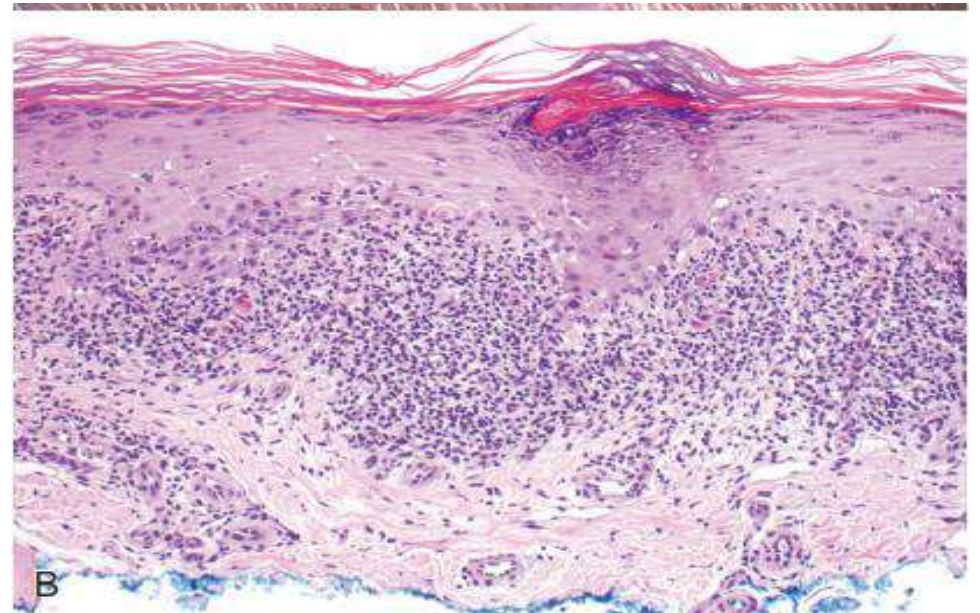
GROSSLY

- * Cutaneous lesions of lichen planus consist of pruritic, violaceous, flat-topped papules that may coalesce focally to form plaques .
- * These papules are highlighted by white dots or lines termed Wickham striae.
- * Hyperpigmentation may result from melanin loss into the dermis from damaged keratinocyte



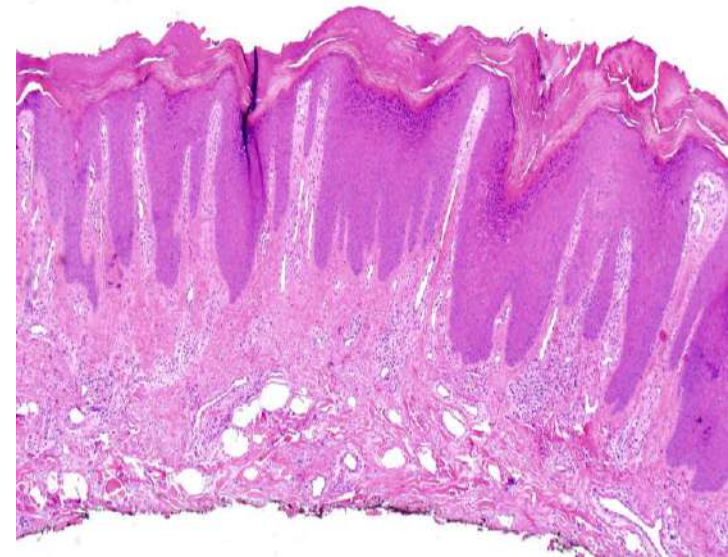
MICROSCOPICALLY

- * lichen planus is a prototypical interface dermatitis, so called because the inflammation and damage are concentrated at the interface of the squamous epithelium and papillary dermis.
- * There is a dense, continuous infiltrate of lymphocytes along the dermoepidermal junction.
- * Civatte bodies*.



LICHEN SIMPLEX CHRONICUS

- * Lichen simplex chronicus manifests as roughening of the skin. It is a response to local repetitive trauma, usually from rubbing or scratching.
- * The pathogenesis of lichen simplex chronicus is not understood, but the trauma probably induces epithelial hyperplasia and eventual dermal scarring.
- * Microscopically :Lichen simplex chronicus is characterized by acanthosis, hyperkeratosis, and hypergranulosis.



BLISTERING (BULLOUS) DISORDERS:

- a group of disorders in which blisters are the primary and most distinctive feature. Which include:
- - 1-Pemphigus (Vulgaris and Foliaceus).
 - 2-Bullous pemphigoid.

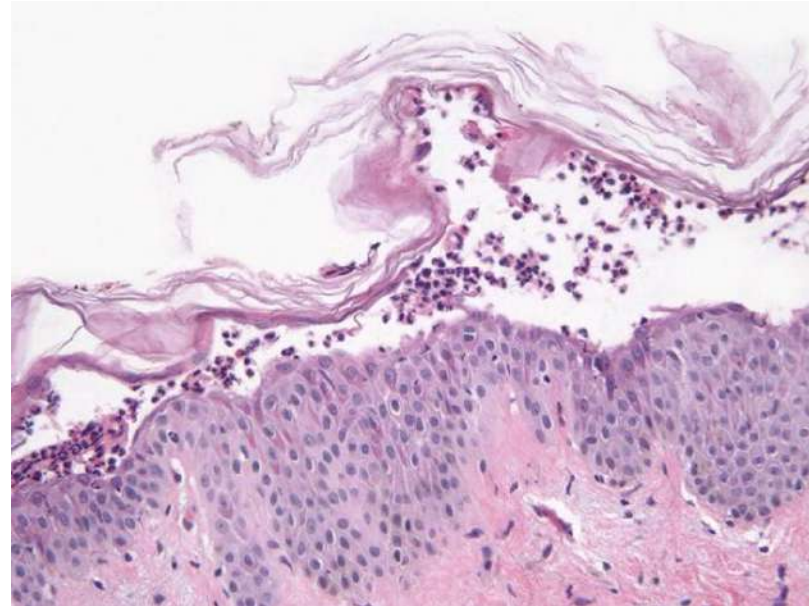
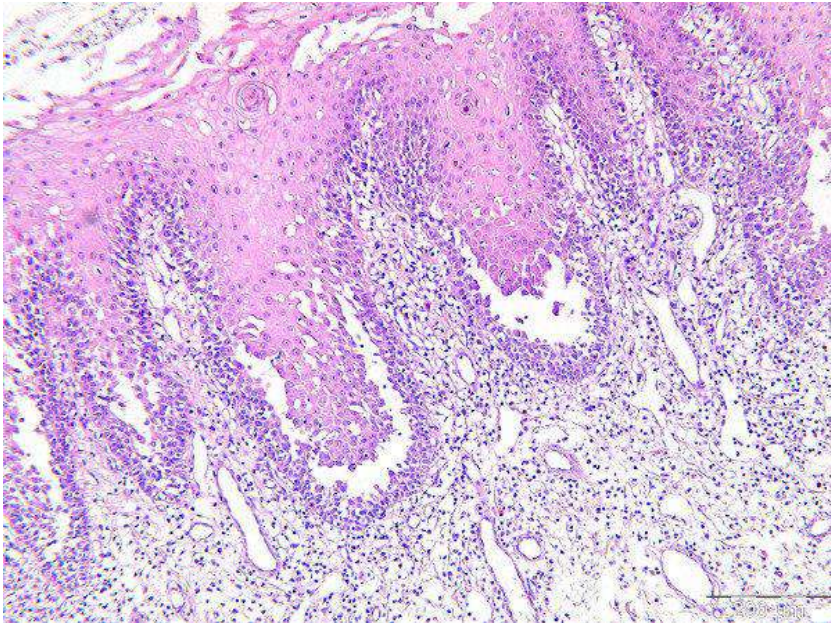


pemphigus

The main histological picture in all forms of pemphigus is:

■ Acantholysis

- Lysis of intercellular adhesive junctions between neighboring squamous epithelial cells results in detached cells.



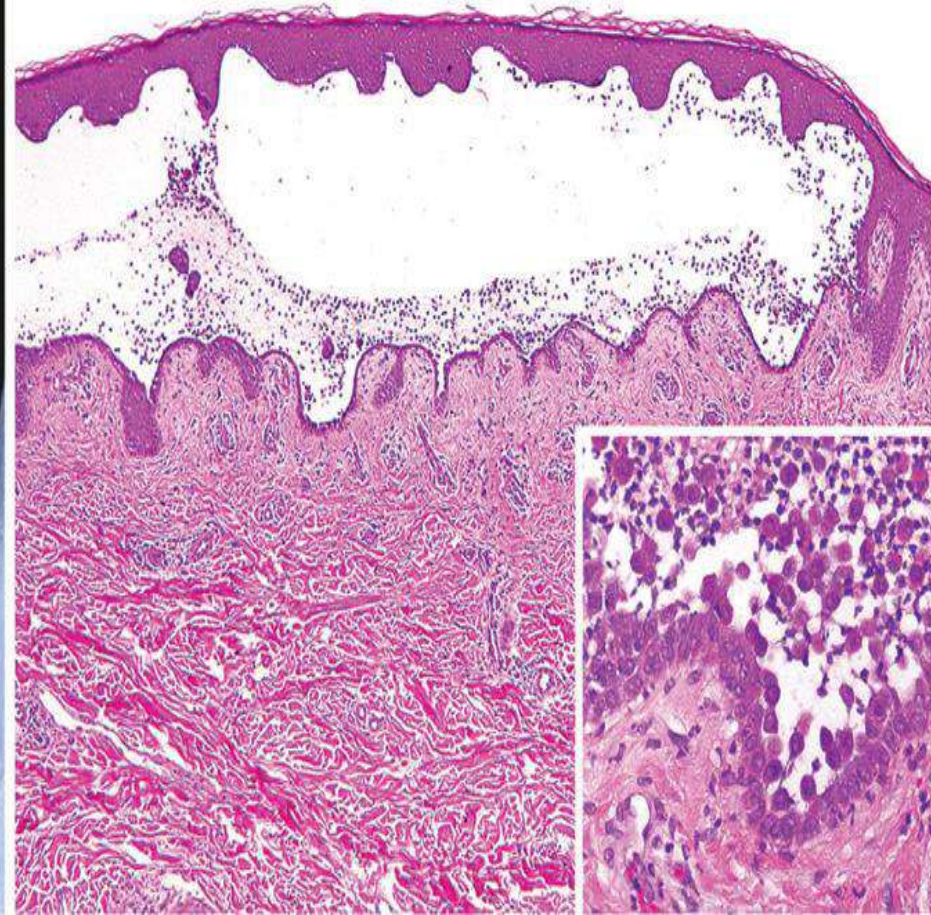
1-Pemphigus vulgaris:

- Most common type.
- Involves both mucosa & skin of scalp, face, axillae, groin, trunk, & points of pressure.
- The lesions are superficial vesicles & bullae rupture easily leaving deep & extensive erosions covered with serum crust.



PEMPHIGUS VULGARIS:

- * EROSION ON LEG: GROUP OF CONFLUENT, UNROOFED BLISTERS.
- * SUPRABASAL ACANTHOLYSIS RESULTS IN INTRAEPIDERMAL BLISTER.

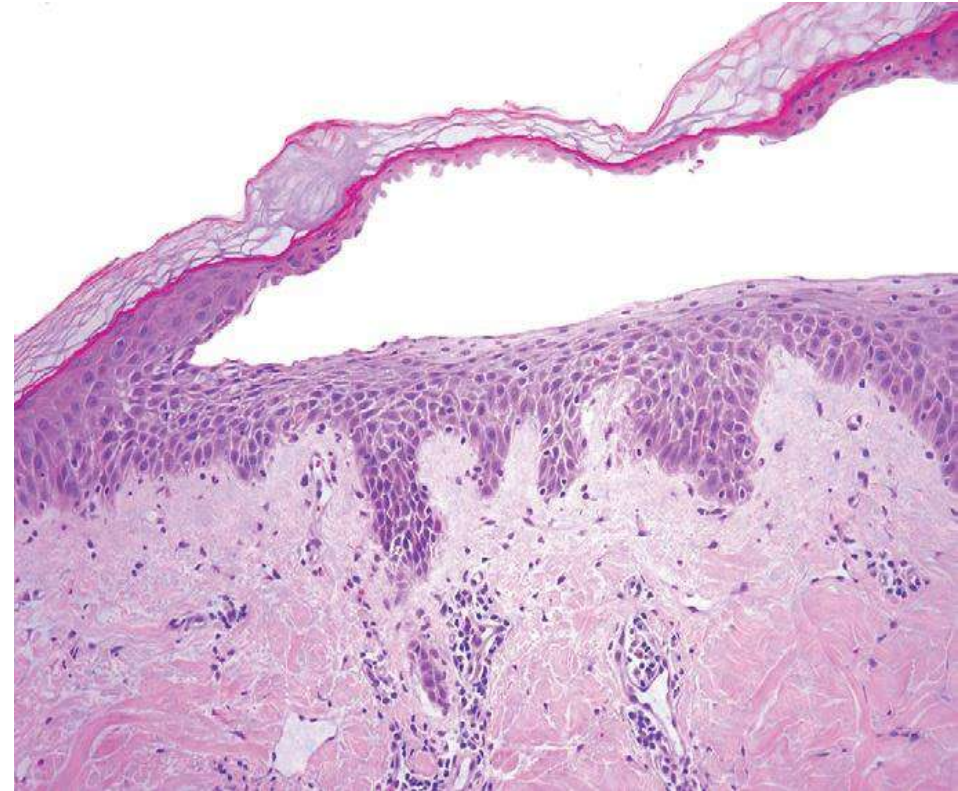


2-Pemphigus foliaceus:

- * Rare variant, clinically more benign form of pemphigus.
- * Bullae are confined to the skin with infrequent involvement of mucous membranes.
- * Blisters are superficial with more limited zones of erythema & crusting of ruptured blisters.



PEMPHIGUS FOLIACEUS:



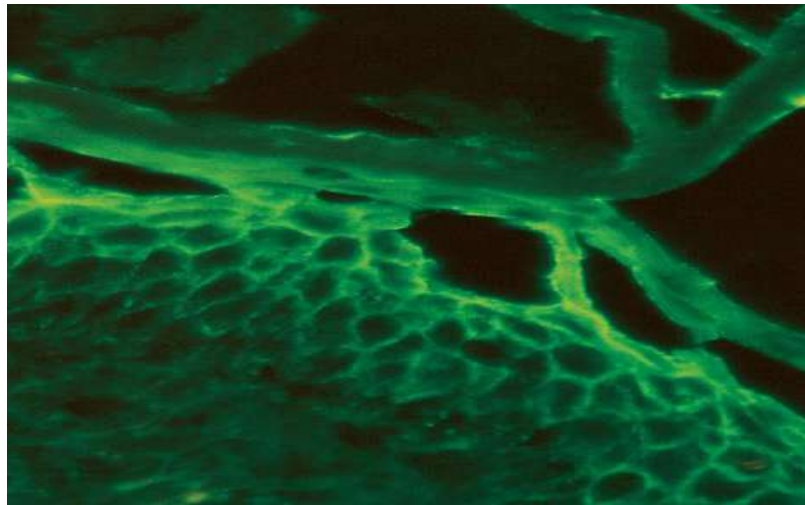
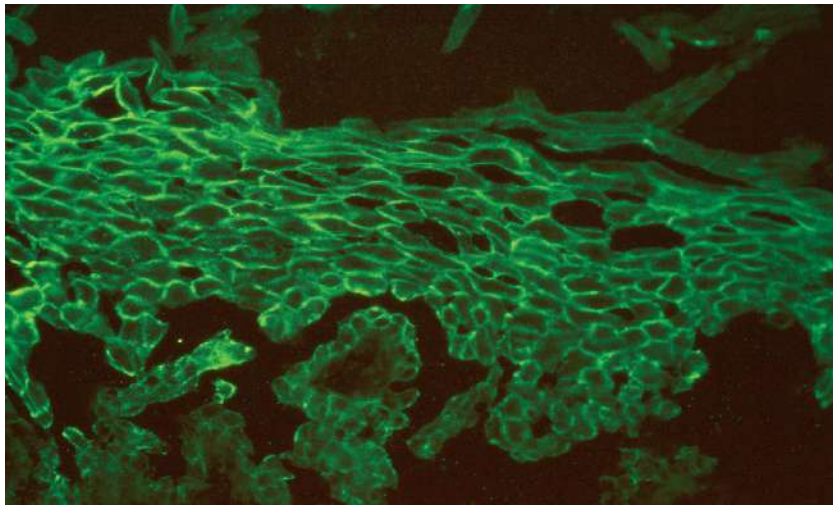
less severely eroded than those seen in pemphigus vulgaris.

subcorneal blister.



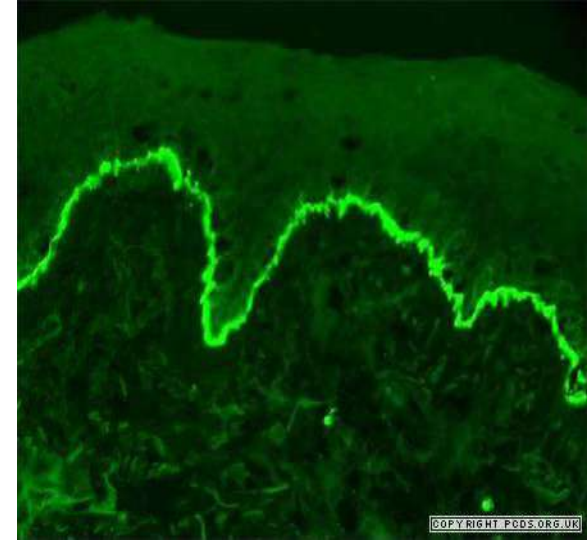
DIAGNOSIS

- Made on clinical, histopathologic, immunopathologic and serologic findings.
- Histopathology
 - Biopsy for H&E taken from the edge of the blister
- Immunopathology
 - Direct immunofluorescence (most sensitive):
 - Pemphigus vulgaris: Uniform deposition of Ig (green) along cell membrane of keratinocytes (fishnet pattern).
 - Pemphigus foliaceus: Ig deposits confined to superficial layers of epidermis



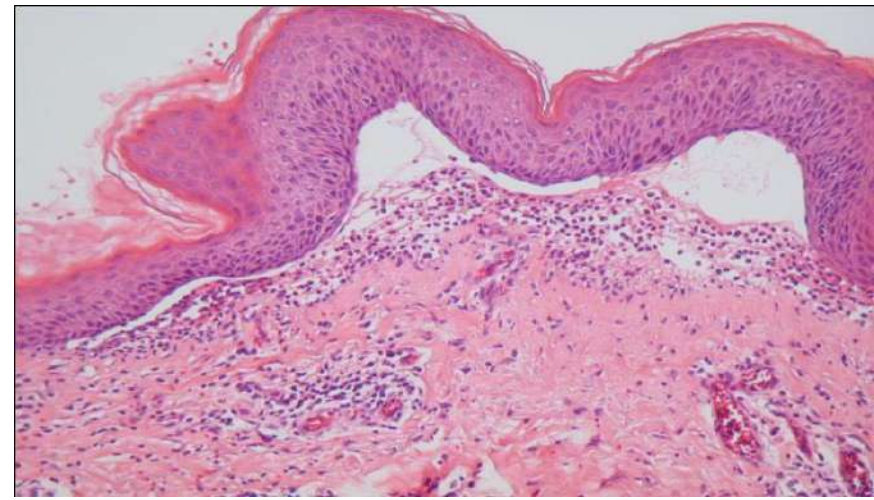
2-Bullous pemphigoid:

- * Acquired blistering disorder with autoimmune basis.
- * Pathogenesis
 - Blistering is triggered by linear deposition of IgG antibodies in epidermal basement membrane.
 - Deposition of IgG antibody detected by direct immunofluorescence as linear band outlining the subepidermal basement membrane zone.
 - Tense bullae filled with clear fluid



■ Microscopically

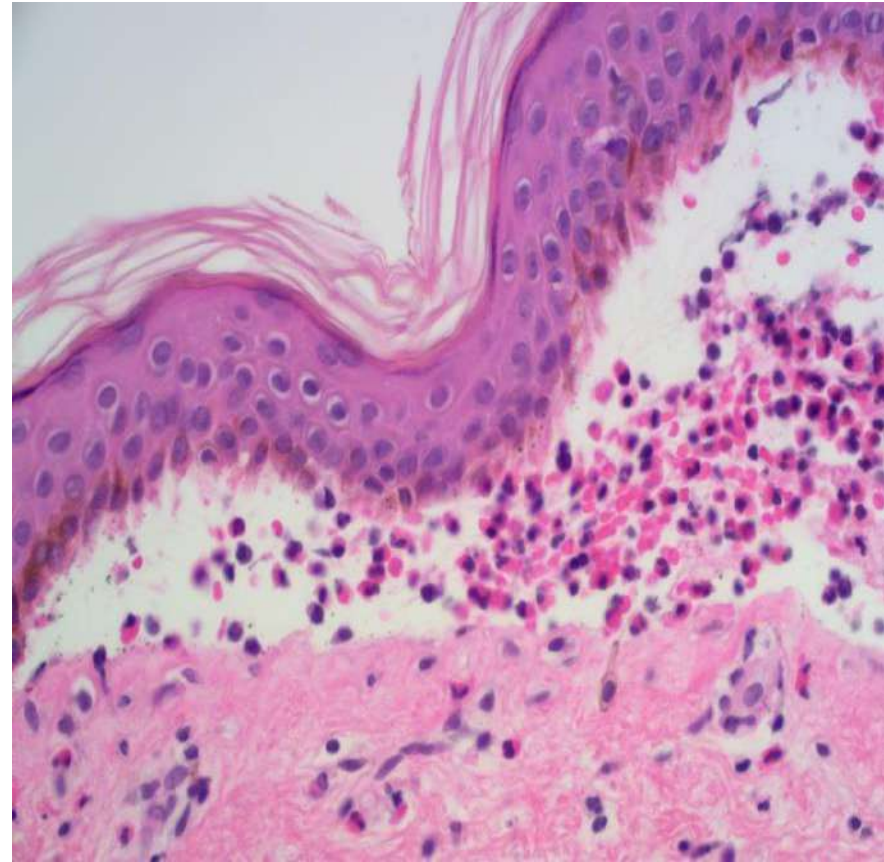
- - Subepidermal nonacantholytic blisters.
- - Perivascular infiltrate of lymphocytes & eosinophils.
- - Superficial dermal edema.
- - Basal cell vacuolization gives rise to fluid-filled blister.
- - Blister roof consists of full thickness with intact intercellular junctions so epidermis not rupture easily. (Key distinction from blisters in pemphigus)



BULLOUS PEMPHIGOID.



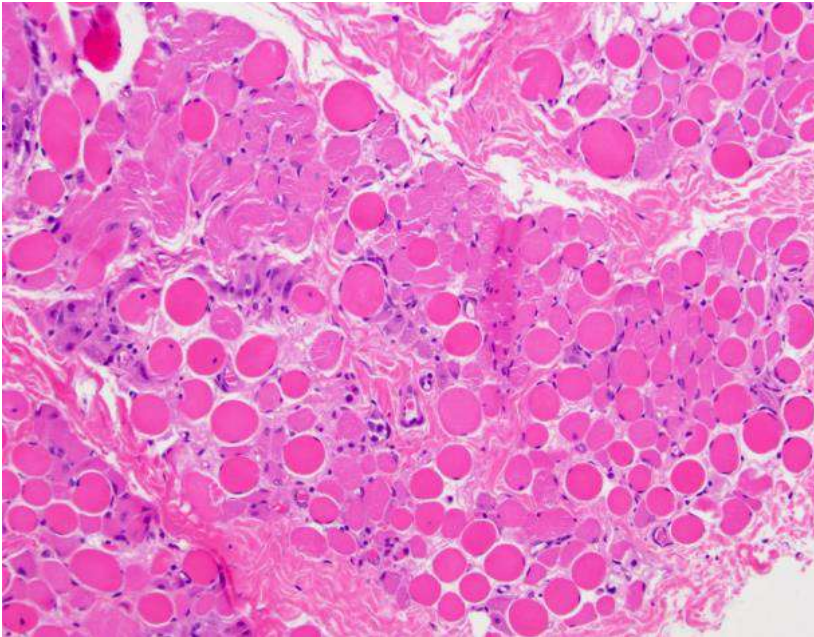
Tense blister



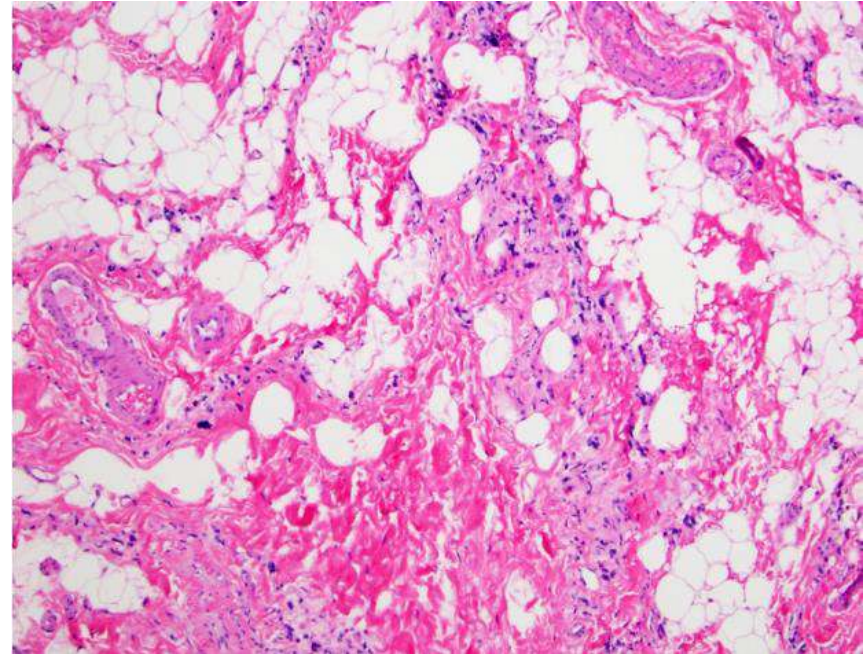
Subepidermal vesicle with inflammatory infiltrate rich in eosinophils.



X-LINKED MUSCULAR DYSTROPHY MORPHOLOGY



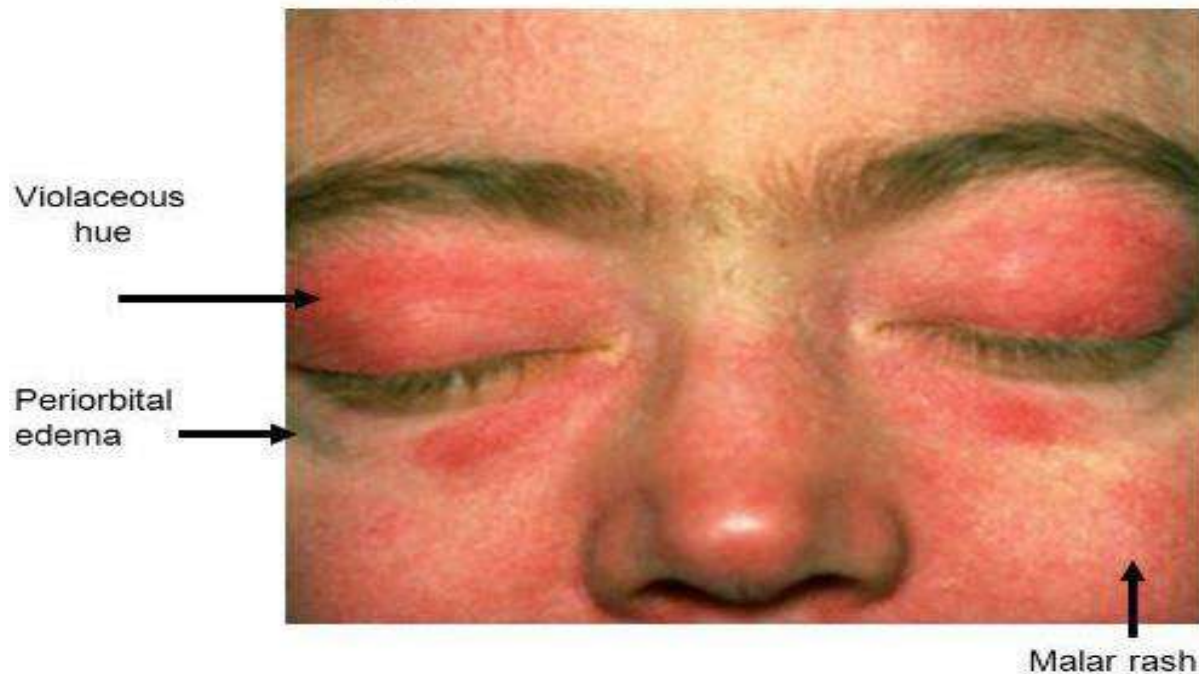
variation in myofiber size with small atrophic fibers admixed with large rounded hypertrophic fibers and increased internal nuclei.



End stage changes in muscle including endomysial fibrosis, fatty replacement and widespread atrophic myofibers.



DERMATOMYOSITIS.



#helicotropic (violaceous, purple-blue) with edema over the upper eyelids

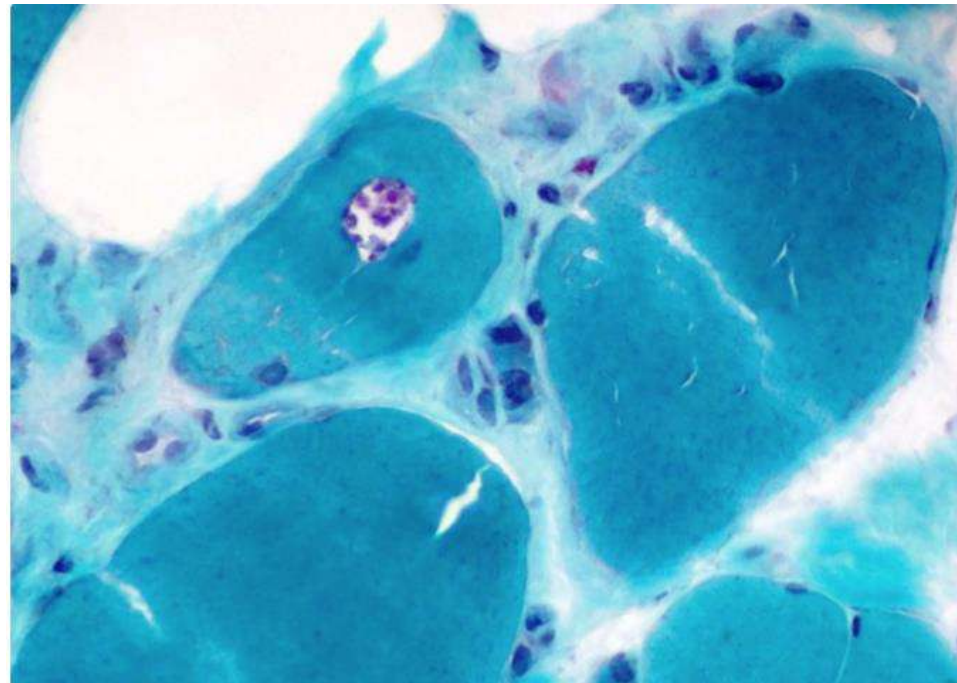


#Gottron's papules: erythematous papules on the dorsum of MCP or interphalangeal joints



INCLUSION BODY MYOSITIS.

- inflammatory myopathy of predominantly skeletal muscle usually seen in ages 50+
- The main histologic finding is rimmed vacuoles with accumulation of specific proteins.



- Office hours
- Monday and Wednesday
 - 11-12:30

