Lupus Erythematosus

Pattern:

Superficial and deep perivascular vacuolar interface dermatitis.

Histologic criteria (DLE):

- Compact orthohyperkeratosis of the interfollicular epidermis and hair infundibulum. Parakeratosis may also be seen
- Atrophic or hyperplastic epidermis
- Vacuolar degeneration of the epidermal-dermal junction accompanied by lymphocytes and necrosis of individual keratinocytes in the basal layer of epidermis and hair follicles
- In the PAS staining ,thickening of the basement membrane may be present focally in older lesions
- Dense superficial and deep perivascular as well as periadnexal lymphocytic infiltrate ("sleeve like"). Lichenoid infiltrate may be sometimes seen.
- Beware: in the acute stage the inflammatory infiltrate is only in the upper dermis and contains neutrophils. Leukocytoclasia may be found.
- Interstitial deposition of mucopolysaccharides (Alcian blue or colloidal iron staining)
- Melanophages and extravasated erythrocytes in the papillary dermis
- Telangiectasias

Variants:

1. *Subacute cutaneous and systemic lupus erythematosus*: no follicular hyperkeratoses, less pronounced thickening of basement membrane, the inflammatory infiltrate is less dense and hardly periadnexal. Leukocytoclastic vasculitis may be present. Reliable differentiation from DLE is usually not possible histologically!
2. *Bullous lupus erythematosus*: subepidermal blistering due to interface dermatitis induced by neutrophils
3. *Tumid* l*upus* (Syn.: *Lymphocytic infiltration of the skin Jessner-Kanof*): no epidermal and dermo-epidermal junctional changes

4. *Lupus erythematosus profundus* (Syn.: *Lupus panniculitis*): no epidermal and dermo-epidermal junctional changes, lymphocytic lobular panniculitis, presence of plasma cells, lymphoid follicles, leucocytoclasia, and lymphocytic vasculitis, necrosis of adipocytes accompanied by neutrophils and hyalinization of the subcutaneous fat.
5. *Hypertrophic lupus erythematosus*: marked epidermal hyperplasia with hyperkeratosis. It can be easily confused with keratoacanthoma, squamous cell carcinoma, lichen planus, and prurigo nodularis.

Differential diagnoses:

1. Dermatomyositis: not always distinguishable, similar histology, same changes, but rather discrete
2. Lichen planus: focal hypergranulosis, usually no atrophic epidermis, no thickened basement membrane, no deep perivascular infiltrate nor mucin deposition
3. Polymorphous light eruption: spongiosis, edema of papillary dermis, no interface dermatitis, no mucin deposition
4. Drug eruption: sometimes parakeratosis, usually more superficial inflammatory infiltrate containing eosinophils and neutrophils, no mucin deposition