

Histopathological changes in the skin/PGS

Histopathological changes in the skin are characterized primarily by the fact that the relationship between the morphological picture and the diagnosis is in some cases relatively loose, the diagnosis can only be established after confronting the histopathological findings with the clinical picture of the patient, including his age, gender and any other associated diseases.

Preparation preparation

A sample can usually be collected in one of the following three ways:

- **Cut with a scalpel** (shave technique), in which only a thin slice of the top layer of skin is cut. The sample can usually be cut into halves or thirds, it should be embedded in the block. The cutting surface can be marked with ink.
- **Puncture biopsy**, in which a circular sample of skin is taken with a special instrument. A biopsy goes deeper than an incision, but not all layers of the skin and subcutaneous tissue may be captured. The removed disc, if it has a diameter greater than 4 mm, is trimmed in a plane parallel to the axis of the sample.
- **Elliptical excision of the lesion**, in which surgical excision is performed including a sample of the lesion, or the entire lesion. The advantage is that the biopsy penetrates deep enough into the subcutaneous tissue. The cutting procedure is influenced by the customs of the workplace. The cutting surfaces can be marked with ink and the sample is cut in planes perpendicular to the skin cover. The number of poured samples depends on the practices of the workplace and the expected diagnosis.

The basic staining of dermatopathological preparations is hematoxylin-eosin.

Basic dermatopathological terms

- **Acantholysis** is a manifestation of damage to desmosomes between keratinocytes. There is a loss of cell cohesion and rounding of damaged cells.
- **Acanthosis** is a thickening of the stratum germinativum of the epidermis.
- **A bulla** is an intraepidermal or subepidermal cavity.
- **Colloid bodies** are oval to round apoptotic keratinocytes located near the basement membrane of the epidermis. A synonymous name is **Civatte bodies**.
- **Dyskeratosis** is an abnormal premature keratinization of keratinocytes. Dyskeratotic keratinocytes have clearly eosinophilic cytoplasm.
- **Epidermolysis** is a disorder in the stratum granulosum characterized by perinuclear clearing, swelling, and irregular keratohyalin granules.
- **Erosion** is a partial loss of the epidermis in the sense of the absence of the outer layers.
- **Exocytosis** is a sign of the presence of an inflammatory infiltrate in the epidermis.
- **Hyperkeratosis** is a thickening of the stratum corneum.
 - **Orthokeratotic hyperkeratosis (orthokeratosis)** preserves normal keratinocyte maturation.
 - **Parakeratotic hyperkeratosis (parakeratosis)** is associated with pathological aging, cell nuclei are visible in the stratum corneum.
- **A crust** is an accumulation of parakeratotic debris, degenerated inflammatory cells and exudate on the surface of the epidermis.
- **Leukocytoclasia** is a sign of karyorrhexis and disintegration of neutrophils.
- **Lichenoid changes** consist in the destruction of basal keratinocytes. A striated lymphocytic infiltrate accompanying keratinocyte changes (dyskeratosis) is quite common.
- **Papillomatosis** is an abnormal elongation of papillae in the dermis.
- **Pseudoepitheliomatous hyperplasia** is an acanthosis that resembles squamous cell carcinoma.
- **A pustule** is a bulla filled with neutrophils.
- **Spongiosis** is intercellular intraepithelial edema.
- **Vacuolar changes** are caused by the destruction of basal keratinocytes. First, intracytoplasmic vacuoles are present in the basal keratinocytes, they later enlarge and the keratinocytes may disappear.
- **An ulcer (ulcer)** is a loss of the epidermis in its entire thickness, damage to deeper structures depends on the depth of the lesion.

Links

Related Articles

- Histopathological changes in the skin

Literature

- MILLS, S.E., et al. *Sternberg's Diagnostic Surgical Pathology*. 5. edition. Lippincott Williams & Wilkins, 2012. ISBN 9781451152890.

