Reproductive organs and skin diseases.

Dentistry

Prof. MUDr. Ľudovít Danihel, PhD.
MUDr. Michal Palkovič

Department of Pathology, Faculty of Medicine UK & FH
Branch: Staré mesto
Sasinkova 4, Bratislava
Prof. MUDr. Ľudovít Danihel, CSc.
Male reproductive organs

**Prostate** - outer glands (A) $\rightarrow$ Ca prostate
- inner glands – submuc., muc. (A, ESTR) $\rightarrow$ BHP

**Benign prostatic hyperplasia (65)**

*pathogenesis:* androgen / estrogen dysbalance

• nodular hyperplasia of the prostatic parenchyma

• nodules compress the urethra $\rightarrow$ interferes the normal flow of urine $\rightarrow$ frequent urination, weak urinary stream, urgency, ... increased risk of infections!

• mostly affected is the periurethral part of the gland

*histothological forms:* stromal hyperplasia, fibromuscular, muscular, fibroadenomatous, fibromyoadenomatous
Nodular benign hyperplasia of prostate
Nodular benign myoadenomatous hyperplasia of prostate
Nodular benign hyperplasia of prostate (AE1/3)
Nodular benign hyperplasia of prostate (vimentine)
Male reproductive organs

Prostatic cancer

- in 80% originated from external androgen-dependent glands
- macro: irregular enlargement, hard, elastic, not well defined borders
- micro: in 95% - adenocarcinoma
- high metastatic potential

• propagation:
  • per continuitatem
  • lymphogenic to regional LN
  • hematogenic to bones
- for diagnosis – important evaluation of prostate acid phosphatase and Prostate specific antigen (PSA)
- screening: digital rectal exam
Prostatic adenocarcinoma
Prostatic adenocarcinoma G1 (HE)
Prostatic adenocarcinoma G3 (HE)
Tumors of testis:

- **Germinal tumors** (seminoma, embryonal carcinoma, teratoma, endodermal sinus tumor = yolk-sac tumor, choriocarcinoma)
- **Specific mesoderm tumors**

**Seminoma testis (123)**
- Most common, 30-40y
  - **macro**: white-gray tumor with local bleedings, necrosis, soft consistence
  - **micro**: large round cells with clear cytoplasm (glycogen), stromal lymphocytic infiltrates
Portio in reproductive age (HE)
Portio in postmenopause (HE)
Cervical dysplasia (173)

Dysplasia is characterised by the proliferation of squamous epithelium with the abnormal maturation, stratification failure, nuclear atypia and various mitotic activity.

Etiopatogenesis: human papiloma virus (HPV)

Screening – Pap smear!
Female reproductive organs

Cervical dysplasia (173)

**LSIL** (low-grade squamous intraepithelial lesion) (CIN 1)
- proliferation of basal cells (no more than 1/3 of
- increased mitotic activity, mitoses are not abnormal

**HSIL** (high-grade squamous intraepithelial lesion) (CIN 2, CIN 3)
- proliferating cell compartment extends up into the middle third (CIN 2) or superficial third (CIN 3) of the epithelium
- abundant mitotic activity, abnormal mitotic figures are commonly presented
Koilocytes
Koilocytes (HPV):
- nuclear enlargement
- perinuclear clearing
- hyperchromasia

Portio – LSIL (CIN 1) (HE)
Portio – HSIL (CIN 3) (HE)
Portio – dysplasia border
Granulosa cell tumor

**Macro:** white-gray tumor, often with large diameter (15 cm).

- 30% of these tumors are malignant, hormonal activity - estrogens.

**Micro:** finding of Call-Exner bodies and cells with typical grooves (coffee beans)
Granulosa cell tumor (HE)
Granulosa cell tumor – coffee beans (HE)
Granulosa cell tumor – coffee beans (HE)
Granulosa cell tumor of ovary– Call-Exner body (HE)
Granulosa cell tumor of ovary – Call-Exner body (HE) (detail)
Female reproductive organs

Germinal epithelium tumors

- serous cystadenoma
- mucinous cystadenoma
- endometrioid carcinoma
- clear-cell carcinoma
- Brenner tumor

and malignant variants
Female reproductive organs

Serous cystadenoma

Mostly females between 30-40 years, often bilateral.

*Macro:* cystical tumor with serous fluid content

*Micro:* columnar ... flat epithelium, often papillary formations

Mucinous cystadenoma

Mostly females between 40-60 years, often unilateral.

*Macro:* multilocular tumor with mucous content, often large diameter (50 cm)

*Micro:* high columnar epithelium with the nucleus on the basis
Serous cystadenoma
Serous cystadenoma (HE)
Mucinous cystadenoma
Mucinous cystadenoma (HE)
Fibroadenoma of the mammary gland (126,127)

- most common benign breast lesion
- often young female (20-45 years)

Macro: solitary, grayish-white, strictly bounded nodule

Micro: *benign stromal and epithelial proliferation*.

Forms:
- intracanalicular
- pericanalicular
Benign mammary gland fibroadenoma (pericanalicular form)
Benign mammary gland fibroadenoma (intracanalicular form)
Fibrocystic changes of the mammary gland
(benign dyslasia of breast)

- in women from 20. year of life up to climacterium

**Macro:** multilocular appearance, size of cysts varies from few mm to 1-2 cm

**Micro:** cysts, adenosis, fibrosis, apocrine metaplasia of epithelium of cysts, atypical epithelial hyperplasia
Benign dyslasia of breast
Benign dyslasia of breast (apocrine metaplasia)
Benign dyslasia of breast (apocrine metaplasia)
Breast cancer
- *macro:* hard, elastic nodule, not well defined borders, fixed, changes in breast size or shape, skin dimpling, nipple inversion, single-nipple discharge
- Mts – lymph nodes (axillary...), hematogenic (bone, liver, lung, brain)
- 80% from ducts

Invasive ductal (no special type) carcinoma (189, 304)

- most common form of the mammary gland carcinoma

- *micro:* *solid and/or tubular structures in fibrous stroma*

- DCIS
Invasive ductal carcinoma (HE)
Invasive ductal carcinoma – estrogen receptor (HE)
Paget carcinoma of the mammary gland

Papilla „metastatic“ form originated from primary invasive ductal carcinoma of the mammary gland.

*Macro:* eczematic or „ulcerative“ skin changes.

*Micro:* in epidermis of the papilla are formations of large cells with clear cytoplasm and hyperchromatic nucleus (*Paget cells*).
Paget carcinoma
Paget carcinoma
Viral infections

Verruca vulgaris (HPV 2,4,7)

- small, rough tumors typically on hands and feet
- thickening of the epidermis, forming of pappilary protuberances
- hyperkeratosis, parakeratosis
Verruca vulgaris
Skin pathology

Viral infections

Molluscum contagiosum (poxviruses) (142)

- STD

- flesh-colored, elevated with dimpled center, pearly, 1-5 mm

- nodules in the epidermis, cytoplasmatic inclusions + excentric nucleus
Molluscum contagiosum
Basocellular papiloma (verruca senilis, seborrhoic dermatosis) (178)

- benign tumor
- basal cell like cells, keratin cysts, melanin
Verruca senilis
Verruca senilis
Skin pathology

Melanocytic nevus (41)

- acquired / congenital

- types:
  - junctional nevus
  - compound nevus
  - intradermal nevus

- ! dysplastic nevus – irregular borders, irregular color

  - higher risk of malignant melanoma
Melanocytic nevus
Malignant melanoma (42)

(Asymmetry, Border, Color, Diameter, Elevation, Enlargement)

- bleedings and ulcerations

- **Superficial spreading melanoma**
  - from the melanocytic nevus (mostly junctional)

  → Lentigo maligna (precancerosis) →

**Lentigo maligna melanoma**

- **Nodular form** of melanoma

- **Acral lentiginous melanoma**

- regional metastasis

- Breslow (mm) a Clark (skin layer) score
Malignant melanoma
Malignant melanoma