

Cysts

A **cyst** is a cavity with its own lining filled with fluid. In contrast to a pseudocyst - a cystoid that does not have its own lining, a cyst is bounded by tissue in which bleeding (*posthemorrhagic pseudocyst*), colliculating necrosis (*postencephalomalacia pseudocyst*) or purulent colliculation (abscess) has occurred. In contrast to an abscess, a **pseudoabscess** is a cavity filled with pus with its own lining, which was not formed by purulent colic, but by filling the lumen - for example, an ovarian tube filled with pus. In case of cystosis, the organ can be deformed by cysts, this condition is then called **cystic degeneration**. Unlike tumors, cysts do not grow autonomously.

Cysts can be divided according to:

- **content:** serous, mucinous (mucous), colloidal, sebaceous, horn, hemorrhagic, oily (after lipoma necrosis), gaseous
- **frequencies:** solitary, multiple (if the organ is crowded with cysts, we speak of cystosis)
- **origin:** retention, implantation, hyperplastic, fetal, parasitic, tumor

Retention cyst

It is caused by **post-fetal closure of the duct of the gland** (hyperplasia of the lining of the duct, thickening of the secretion, concretion, pressure of a tumor growing near the duct, etc.). The secretion of the gland accumulates in front of the obstruction and dilates the duct or the gland itself until the hydrostatic pressure of the secretion equals the secretory pressure of the gland - the cyst lining then undergoes pressure atrophy and atrophy from inactivity, further enlargement is possible by the breakdown of the cyst contents (increase in osmolarity) or exudation in inflammation of the cyst wall.

Examples are:

- **comedo** - retention of horn scales and thick sebaceous gland secretion at the mouth of the hair follicle - there is a black cap at the end,
- **atheroma** - retention cyst of the sebaceous gland, the content is sebum and scales of the epidermis,
- **ranula** - retention cyst of the sublingual salivary gland with serous content, "frog" (name derived from the resemblance to the belly of a frog)
- **mucocele** - retention cyst of a small salivary gland, often on the facial mucosa, lower lip, soft palate, bottom of the oral cavity, base of the tongue, it must be distinguished from tumors of the small salivary glands,
- **ovum Nabothi** - retention cyst on the cervix uteri arising from the outgrowth of the squamous epithelium through the mouth of the cervical mucus glands.



Atheroma



Ranula

Implantation cyst

It is formed by the **introduction** of epithelium into the ligament during trauma or inflammation, the epithelium lining the wall of the cavity in which it was found (**thigmotaxis** - the tendency of epithelia to coat free surfaces).

Examples are:

- **horn cysts** in the skin,
- **serous cysts** in peritoneal adhesions,
- **apical dental cysts** from the enamel-forming epithelium that has entered the apical granuloma and grown through its wall

Hyperplastic cyst

It arises in organs whose epithelium is subject to hormonal regulation - the cyst is represented by the dilation of the gland or its outlet caused by hyperplasia of the **lining** (which, however, remains mostly single-layered, is not atrophic, and its proliferation leads to an increase in surface area - the prerequisite is the low consistency of the surrounding area, which allows dilatation of the epithelial structure).

Examples

- **cystic mastopathy** - in the mammary gland (effect of follicle-stimulating hormone)
- **glandular cystic hyperplasia of the endometrium** - an excess of follicle-stimulating hormone
- **ovarian follicular cysts** - cysts arise from overgrowing follicles that do not ovulate (however, the lining of the cyst originates in the ovarian stroma and not in the epithelium - it is more of a case of a pseudocyst).

Fetal cyst

A fetal cyst is caused by a developmental disorder, e.g. a **defective connection of tubular structures** (*kidney cystosis* - non-connection of the proximal and distal bases of the nephron - the proximal section dilates due to stagnation of the fluid produced by the epithelium), **incomplete closure of the embryonic slits** (neck cysts - medial ductus thyreoglossus (from the root of the tongue to the thyroid gland → moves when swallowing and moving the tongue) and lateral from gill slits - *branchiogenic cysts*), **persistence of epithelial islands in the interstitium** (Walthard's cysts around the ovary from detached nests of its surface epithelium - a variant of implantation cysts) or from embryonically based organs, which in they disappear during further development (cysts from the remains of the urachus, ductus omphaloentericus, etc.).

Parasitic cyst

It is formed by the body of a parasite, e.g. tapeworm or echinococcus.

Tumor cyst

It belongs to **true tumors** and arises from the tumor growth of tissue that preserves the glandular cystic appearance of the original epithelium with serous or mucinous secretion (macroscopically, the cystic nature of the formation predominates before the growth of solid sections of the tumor parenchyma), e.g. cystadenomas of the ovary.

Links

Related articles

- Fissural cysts

Sources

- PASTOR, Jan. *Langenbeck's medical web page* [online]. [cit. 2009]. <<https://langenbeck.webs.com/>>.
- HRUBÝ, Jan. *Cysty v orofaciální oblasti* [přednáška k předmětu Orální chirurgie 1, obor Zubní lékařství, 1. LF UK]. Praha. 2.12.2014.