

Precancerous conditions in gynecology

Precancerous disease is a **preinvasive intraepithelial lesion** that has the same etiopathology as invasive cancer. It is still progressing and threatening to develop into invasive cancer, which lasts for about 10-15 years.

Precancerous lesions are asymptomatic, do not cause metastases, and when completely removed, the disease is completely cured.

Anatomical division of precancerous lesions

Precancerous lesions of the lower genital tract and **precancerous lesions of the endometrium** are distinguished anatomically.

In the Czech Republic, it is not very common to count precancerous lesions as gynecological precancerous lesions, but abroad they are usually screened as part of comprehensive gynecological care and undoubtedly anus belongs to the neoplastic syndrome of the lower genital tract.

The **precancerous lesions** of the lower genital tract include:

precancerous lesions of the **vulva** precancerous lesions of the **vagina**, precancerous lesions of the **cervix**, precancerous lesions of the **anus**

Histological division

There are two types of epithelium physiologically in the genitals: **stratified squamous epithelium** on the vulva (horned) and vagina (non-horned) and **single-row cylindrical epithelium** of the endometrium. Precancerous lesions can arise from both types of epithelium.

Both occur on the cervix with an interface in the form of a transformational metaplastic zone (squamous-colony junction).

Epithelial metaplasia in the transformation zone is a **physiological process** in which the cylindrical epithelium transforms into squamous cell and the interface between the two types thus shifts with age at the expense of squamous epithelium. Physiologically, it takes place in the cervix, anus and esophagus.

The epithelium in the metaplastic zone is the most sensitive to precancerous lesions due to remodeling. For this reason, squamous cell epithelial precancerous lesions are also more common.

Causes and risk factors

In precancerous lesions of the **vulva**, **vagina** and **cervix**, chronic **oncogenic papillomavirus** infection (18 different types) is usually the cause. 70% of oncogenic HPV infections are caused by HPV-16 or HPV-18. The infection alone is not enough, usually atypical cells are removed by the immune system. Risk factors for precancerous lesions are **smoking**, **immunosuppression**, **immunoncompetence**, **sexually transmitted diseases** (especially chlamydia and HSV-2), **promiscuity** (defined as more than 6 life partners), early coitarché [1].

Endometrial precancerous lesions are caused by hyperestrinism. This can be absolute (normal progesterone levels and high estrogens) or relative (normal estrogen levels and low progesterone).

Precancerous screening

- Colposcopy (called vulvoscopy in the vulva) - a colposcope device is used, which is structurally a telescope, not a microscope, as is sometimes stated.
- Cytology
- HPV typing

 For more information see *Prebioptic examination methods in gynecology*.

 For more information see *Prevention of gynecological tumors*.

Cervical precancerous lesions

This is a very sophisticated issue with the best developed screening system, so a separate article discusses this topic.

 For more information see *Cervical precancerous lesions*.

Precancerous disease of the vulva

There are two types of **vulvar intraepithelial neoplasia (VIN)**:

- usual VIN (**uVIN**) - lesions more common and with a better prognosis, caused by HPV infection,
- differentiated VIN (**dVIN**) - less common lesions that are not caused by HPV infection, have a mutated p53 gene, have a worse prognosis.

dVINs can occur in the field of lichen sclerosus et atrophicus, but lichen sclerosus is by no means a precancerous lesion, it is a benign lesion, dermatosis.

(Previously, a distinction was made between VIN I, which today no longer belongs to VIN, VIN II and VIN III, which is synonymous with 'in situ' carcinoma.)

Other precancerous lesions include:

- extramammary form Pagett's disease,
- premature -in diagnosis there is used rule A (*asymmetry*), B (*border*), C (*color*), D (*diameter*), E (*evolution*).

It is necessary to differentiate psoriasis and lichen lesions differentially. **Biopsy** is an essential method in diagnosis, the samples are easily biopsically accessible and any suspected lesion should be histologically examined

Vaginal precancerous lesions

Vaginal intraepithelial neoplasia (VaIN) occurs most often in patients after hysterectomy (90%), especially in the surgical stump. There may also be co-occurrence on the cervix and vagina. In 80%, lesions occur in the proximal third.

Endometrial precancerous lesions

Atypical hyperplasia, which is a precancerous adenocarcinoma, can occur in the endometrium and can be either **simplex** or **complex** and with or **without atypia**. Another precancerous disease is carcinoma in situ, which is less common and occurs in the atrophic mucosa.

Treatment of precancerous lesions

 For more information see *Treatment of precancerous lesions of gynecological tumors*.

In general, you can choose a conservative, ie wait-and-see approach (few times), or an active approach. The active approach includes either destructive methods for pathological tissue that are no longer used (cryoablation, laser vaporization) or ablative methods. In the case of the vulva, it is laser-skinning or excision, in the case of the vagina a partial or total colectomy, in the case of the endometrium a hysterectomy with adnexectomy, in the case of the cervix a cylindrical dissection or conization (cold-knife, LEEP or laser-ablation).

For endometrial precancerous lesions in women of childbearing potential who wish to become pregnant, gestagen therapy may be indicated. For vaginal and vulvar lesions caused by HPV, treatment with Imiquimod (immunomodulatory cream) may be appropriate in some cases.

Links

Related articles

- Malignant tumors in gynecology
- Treatment of precancerous lesions of gynecological tumors
- Prevention of gynecological tumors
- Cervical precancerous lesions
- Precancerous conditions in dermatology