

Pathological puerperium

After giving birth, a puerperium period follows, when the body gets back to its pre-pregnancy shape. At this moment, complications can occur, which then turn physiological puerperium into a pathological one.

Disorders of contraction and involution of the uterus

Already after childbirth, it is necessary to check the wrapping of the uterus. **If it does not wrap at a certain speed**, the woman is at risk of more significant bleeding, therefore, against this complication, **we apply uterotonics**, with which we support the retraction of the uterus. We must also rule out placental residues in the uterus, lochiometra, disorders of bladder emptying, pelvic hematomas, etc.

Lochiometra - premature closure of the cervix occurs here, and placental residues may remain in the uterus, which prevent proper wrapping of the uterus.

Bladder emptying disorders - after childbirth, a situation may arise that the urethra has swollen due to childbirth, so the bladder cannot empty itself as needed, thus preventing the uterus from wrapping properly due to its size.

Postpartum bleeding

Postpartum bleeding is the most dangerous in the form of **disseminated intravascular coagulopathy**, when it represents **peripartum life-threatening bleeding** and one of the most common causes of death for the mother. Postpartum bleeding can be divided according to the time point into bleeding in **the early and late six months**.

Early puerperium

In this period, the most common cause is **uterine retraction and contraction disorders, placental residues** in the uterus, **poor treatment of the birth injury** or its neglect, **hemocoagulation disorders** - the aforementioned disseminated intravascular coagulopathy.

Late puerperium

The most common causes of bleeding in late six-week period are the occurrence of **endometritis, choriocarcinoma, placental polyp** or the earlier **onset of menstruation**.

Perineal injury

In most cases, the perineum is injured during childbirth, but more serious injuries can also occur
Breakdown of injuries:

- **1st degree** - perineal skin injury
- **2nd degree** - injury to the perineal muscles without injury to the sphincter
- **3rd degree** - injury affecting the anal sphincter (3A - injury to less than 50% of the sphincter, 3B - injury to more than 50% of the sphincter, 3C - injury to the external and internal sphincter without injury to the anal mucosa)
- **4th degree** - injury to the external, internal anal sphincter and anal mucosa

Injury of the 3C and 4th degrees are treated **under general anesthesia in the operating room**, most often with **the overlap technique**, when the edges of the muscle are dissected and released so that the edges can be folded over each other.

An unrecognized injury to the mucous membrane of the sphincter or its poor healing can cause the formation of a rectovaginal fistula.

Puerperal infections

Before IP Semmelweis introduced antisepsis procedures and before antibiotic therapy, puerperal infection was the most common cause of so-called **teenage fever**.

The area after the separated placenta was a suitable place for the multiplication of bacteria and the further spread of the infection.

Source of the infection:

1. heterogeneous infection - external source
2. autogenous infection - own vaginal flora

Risk factors

Risk factors for infection are **intrauterine procedures, premature outflow of amniotic fluid, caesarean section**, etc.

Infections of the vulva and vagina

The manifestation of this infection is in the form of secondary healing of the perineal injury with its redness. The treatment takes place in a local antiseptic rinse and bath, sometimes it is necessary to remove granulations in the wound and subsequent antibiotic treatment.

Endometritis

Inflammation of the endometrium, or endometritis, is one of the most common puerperal infections. The causative agents of endometritis include streptococci, gram-negative bacteria, chlamydia and also mycoplasmas. An ultrasound examination revealed a painful and engorged uterus with demonstrable dilatation of the uterine cavity. It is treated in the form of antibiotics with coverage of both aerobic and anaerobic bacteria.

Myometritis

The infection is caused by transfer from the uterine mucosa to the uterine muscle either directly or via the lymphatic route. In a more severe course, part of the muscle may undergo necrosis or abscesses may form in it. The pus can then spill into the abdominal cavity. Subsequent treatment is in the form of antibiotics.

Parametritis

From the muscle, the infection can spread to the broad muscle ligament and cause parametritis. The infiltrate is in the form of paustose and later plank-like, but always very painful. It manifests itself in high temperatures, urge to urinate, cramps, etc. All can be accompanied by palpable symptoms of peritoneal irritation. Treatment is through antibiotics.

Apendicitis

During pregnancy and puerperium, apendicitis can progress not quite clearly, but it can be all the more dangerous. In puerperium, it is often mistaken for uterine retraction. Symptoms include higher pulse values, significant leukocytosis or intestinal passage disorders.

Thrombophlebitis of pelvic veins

We treat inflammation of deep pelvic veins with broad-spectrum antibiotics and perform heparinization to prevent thromboembolic disease.

Peritonitis

If the infection passes from the uterus to the fallopian tubes, it can then spread via the lymphatic route to the peritoneum.

Puerperal sepsis

Puerperal sepsis can be divided into two types:

- **primary sepsis** - direct introduction of microorganisms into the bloodstream
- **secondary sepsis** - if there is an infection in the small pelvis and the subsequent washing out of microbial toxins, this phenomenon can turn into secondary puerperal sepsis

Complications of healing after cesarean section

During a caesarean section, abdominal organs can be injured, especially the bladder or intestinal loops. It is these injuries that can be the source of the development of peritonitis. Untreated occult bleeding can progress to hemoperitoneum or subfascial hematoma. Infection in the wound is manifested by temperature, redness or rippling of the suture. This infection is then treated with antibiotics or pus drainage.

Other complications in puerperium

Hemorrhoids

If they do not disappear after six months, we first treat them with local suppositories and ointments. Later, we will add anti-edematous treatment and gentle reduction.

Swelling of the lower extremities

Swelling is a common problem during pregnancy and after childbirth, but usually disappears on its own. If bilateral swelling of the lower limbs persists even after delivery, this may be a sign of hypoproteinemia. However, if unilateral limb swelling persists after delivery, there is **a risk of deep vein thrombosis**.

Headaches

One source of headache after childbirth is **postpuncture cephalgia**. It occurs as a complication of epidural analgesia, as a result of perforation of the dura mater, intracranial pressure decreases. The pain worsens especially when changing the position from lying down to sitting, sometimes hearing and vision disorders are also added. Postpuncture headache is treated in two ways: **conservative treatment** (lying down, hydration, nonsteroidal antirheumatic drugs, central relaxation) or **blood plug** (10-15 ml of own blood applied to the site of epidural analgesia).

Psychological problems in the puerperium

Psychological problems in the puerperium period can cause significant complications in the new role of a parent. We can experience **postpartum blues**, **postpartum depression**, and **postpartum psychosis**.

Postpartum blues

Appears on the 2nd to 4th day after birth and is characterized by anxiety, mood swings, great hypersensitivity, inability to feel love for the newborn, and subsequent self-blame.

Postpartum depression

A worse degree of postpartum blues is postpartum depression. It is manifested by exhaustion, anxiety, loss of appetite or insomnia.

Postpartum psychosis

The most serious mental illness in the postpartum period is postpartum psychosis. It is divided into two states. Distribution:

- 1. **Better prognosis** - amebic (restlessness, disorientation) and manic psychoses, after a month of treatment the woman is cured
- 2. **Worse prognosis** - a creeping state of depressive and schizophrenic form (behavioral changes, crying, apathy, insomnia, paranoid delusions)

It used to be mistakenly called lactational psychosis, but **breastfeeding and childbirth** are **only triggers** of this disease, **not its source**.

Lactation disorders

Insufficient milk production

Often caused by hypertrophy of the mammary gland, general asthenia or faulty breastfeeding technique. In the case of the last reason, this malfunction can be corrected.

Excessive milk production

Excessive milk production can even weaken a woman. This can be prevented to a lesser extent with cold compresses.

Spontaneous outflow of milk

It may be a rare postpartum pituitary disorder. Spontaneous outflow can be dampened by breast compression.

Milk retention

This is a very painful condition where the milk ducts are blocked with milk. It is often accompanied by temperatures. The solution is regular milk spraying and compresses. In most cases, the retention disappears by itself within three days.

Mastitis

Puerperal mastitis is a serious condition with high fevers, exhaustion, breast swelling with possible abscess formation. It is caused by **Staphylococcus aureus**, which enters the breast either through rags or milk ducts from the baby's mouth. Treatment consists of regular spraying (lactation must not be stopped) and the administration of

beta-lactamase-stable penicillin antibiotics in possible combination with beta-lactamase inhibitors..

Links

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References

- HÁJEK, Zdeněk – ČECH, Evžen – MARŠÁL, Karel, a kolektiv.. *Porodnictví*. 3.přepracované a doplněné vydání edition. Praha. 2014. 576 pp. ISBN 978-80-247-4529-9.