

The onerous consequences of pregnancy and childbirth

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Summary: Pregnancy is a special period in the life of every woman, which, although physiological, brings with it a number of changes in the body. In this way, the body adapts to the new homeostasis system, but pregnancy and childbirth are a heavy burden for the female body, which is associated with a higher probability of ailments and complications, starting with pain during childbirth, postnatal depression, incontinence of urine and even obesity. A big problem for women are changes in the appearance of the body, which is conducive to the formation of complexes and lack of self-acceptance. All this directly affects the sense of their own beauty and sexual sphere. The aim of the article is to present the basic complications that occur after pregnancy.

Key words: pregnancy, haemorrhoids, urinary incontinence, cellulite

Introduction:

Pregnancy is a physiological condition characterized by changes in the functioning of the female body. These changes, referred to as pregnancy adaptation, are necessary both for the development of the foetus and are an expression of the mother's defense against an invasion of the tissues of the foetus egg, which is harmful to her body. Large adaptive changes in anatomy, physiology and metabolism determine the proper course of pregnancy and childbirth. Unfortunately, there are also negative effects of these changes - weakened tissues, increased intraabdominal pressure, irreversible changes in the whole body. [16]

Childbirth (especially vaginal) leads to damage to the fascial-muscular-nerve structures. These structures ensure proper statics and function of the pelvic floor, and their damage may cause functional abnormalities. [8]

Urinary incontinence

Urinary incontinence is an involuntary leakage of urine from the urethra. It occurs much more frequently in women than in men and concerns mainly elderly people. There are several types of this disorder, including stress, pressure (hyperactive bladder) and mixed. It is estimated that about 8.5% of women suffer from different types of urinary incontinence, while the percentage of older women may reach 37%. [4,13,17]

Pregnant women are particularly prone to stress urinary incontinence. It is caused by an increase in intra-abdominal pressure, which is not accompanied by an increase in muscle tone of the bladder repressor. Factors predisposing to the occurrence of this disorder include pregnancy, numerous natural births, complicated births (e.g. with the use of forceps), past operations, generalised connective tissue weakness, deficiency of sex hormones, as well as high body mass index (BMI) and gestational diabetes. [4,17,21]

Stress urinary incontinence			
Stage	I	II	III
Activities that cause uncontrolled leakage of urine	coughing, sneezing, heavy physical exertion	climbing stairs, cleaning	getting on flat ground, standing, lying down

Table 1. Degrees of stress urinary incontinence according to Stamey [4]

The methods of treating urinary incontinence can be divided into non-pharmacological, pharmacological and surgical. Non-pharmacological treatment also involves the stimulation of muscles pelvic floor through:

- pelvic floor exercises (Kegel exercises)
- biofeedback

- the use of vaginal cones and balls
- electrostimulation (transversal, transrectal and transvaginal)
- alternating magnetic field
- pessary, which is the prosthetic procedure
- behavioral therapy. [3,4,15,24]

Drug treatment, due to the possibility of numerous side effects, should be selected individually for each patient.

Surgical treatment (especially in patients with stress urinary incontinence) is aimed at improving the function of the urethra closure device. High effectiveness is achieved by performing a colposuspension procedure using the Burch method and procedures involving the application of tension-free synthetic tape on the middle coil. Other surgical techniques are: urethra injection, sling surgery and artificial sphincter implantation. [3,4,18]

Proctological problems

Changes in the physiology and anatomy of a pregnant woman significantly affect the function of the gastrointestinal tract and pelvic floor. 30-60% of pregnant patients (especially in the first trimester) and the puerperium have bowel movements with high pressure, constipation or slow stools. Moreover, uncontrolled escape of gases or dirtiness of underwear is signalled by up to 30% of pregnant women (more often in the III trimester). [10,23]

An independent risk factor for anorectal symptoms - especially fissures, thrombosis and stool incontinence - is dyschymy (difficult defecation), affecting up to 25-35% of pregnant women. The second independent risk factor, this time of postpartum symptoms, is late delivery (>39.7 weeks) and traumatic delivery. [2,23]

Constipation

Constipation is a predominant gastrointestinal disorder reported by pregnant women. It is estimated that the problem affects even 38% of pregnant women (vs. 7% in non-pregnant women). Constipation is particularly severe in women who had difficulty defecating before pregnancy.

Treatment of constipation is difficult due to limited possibilities of pharmacotherapy. Stool softeners are preferred and drinking large amounts of fluids is recommended. It is also necessary to ensure a sufficient supply of dietary fiber.[23]

Hemorrhoidal disease

Haemorrhoidal disease is the most common proctological disease and it is estimated that it affects up to 85% of women in the third trimester of pregnancy. Pregnancy and puerperium are the most important risk factor, while the others are: constipation, incomplete bowel movements, improper eating habits, frequent diarrhoea, obesity, sedentary lifestyle, and some physical exercises leading to an increase in abdominal pressure. The symptoms include: discomfort, burning, itching, pain in the rectum area, bleeding, presence of mucus. [23]

The basic recommendations to alleviate symptoms are: change of hygienic and dietary habits, weight control, exercise, proper hydration, and a sufficient amount of fiber in the diet.

Treatment includes topical therapy, general medications, surgical treatment. Topical treatment uses preparations in the form of creams, ointments or suppositories, which contain analgesics, anti-inflammatory or astringent drugs, reducing the permeability of blood vessels. General drugs are used to improve microcirculation. Advanced lesions, nodules not responding to conservative treatment, may be qualified for surgical treatment. [19,23]

Stool incontinence

The second period of delivery (excretion of the foetus) is characterized by a decrease in perineal muscles and pressure on the pelvic tissues. The compression of the pudendal nerve, which controls the systolic activity of the anal sphincter, is particularly important. The pudendal nerve is irreversibly damaged when exposed to 80 mm Hg for 8 hours. The other causes are: rupture of the perineum or poorly made incision, the use of forceps entails a high risk of postpartum sphincter damage. [23]

In the early postpartum period, an elongated latency of the pudendal nerve is observed in more than half of the obstetricians. Thanks to the regenerative capacity of the pudendal nerve, the majority of these disorders are transient. However, if fixation occurs, symptoms such as incontinence of gases and stools, incontinence of urine, dyspareunia may appear. Postpartum rectal sphincter dysfunction can be compensated for by a strong pubic-rectal muscle, therefore, some of these disorders occur only during the menopause, when the pelvic floor muscles are generally weakened. [22,23]

In about 20-30% of patients with symptoms of stool incontinence, cannot achieve improvement despite the use of non-operative techniques. According to IFFGD recommendations, they are qualify for surgical treatment - always after at least 6 months of intensive conservative treatment. [22,23]

Dyspareunia

Epidemiological data show that about 80-93% of young women take up sexual activity again usually within 3 months of delivery. However, it should be emphasized that about 60-70% of them experience significant problems in intimate life caused by: dyspareunia, decreased libido, difficulties in achieving orgasm and vaginal dryness. These problems are associated with the physiology of the postpartum period and the consequences of breastfeeding.

Long-term influence of pregnancy and childbirth on the sexual activity of women is often related:

- perineal pain caused by perinatal injuries, which may cause dyspareunia. In women who have given birth vaginally, the intensity of dyspareunia usually correlates with the degree of perineal damage during delivery.
- neuralgia of the labia nerve, caused by intra-partum damage to its branches or ischaemia resulting from compression on the nerve during a prolonged second period of labour.

- a change in a woman's sexual behaviour after childbirth may also result from a new psychological situation (the role of the mother), changes in physical appearance, fatigue, mood changes and anxiety about proper child development.

Therefore, from the obstetrical point of view, the most important thing is to undertake the procedure reducing the risk of significant damage to pelvic floor structures.[8]

Static disturbances of the reproductive organs

Pelvic organ prolapse (POP) is a reduction of the pelvic organs below their normal position, which in consequence causes, apart from the feeling of discomfort, a whole range of functional symptoms resulting from anatomical abnormalities.

The etiology of this disease is multifactorial, but the most common causes are damage to the fascial-muscular-nervous structures of the small pelvis:

- mechanical damage (births, surgical births, surgical procedures in the pelvic floor)
- the aging process of the organism with its genetic and epigenetic conditions
- additional risk factors, such as: age, menopause, obesity, diseases with persistent cough, chronic constipation, physical workload, stress. [9,14]

During labour, the forces acting on the pelvic diaphragm cause it to deform over a longer period of time. According to epidemiological data, vaginal childbirth increases the risk of pelvic floor static disturbances by 4-11 times and is one of the factors that may be important for the prevention of this disease. It should be emphasized that the damage to pelvic floor structures affects as much as 85% of women who gave birth by nature. [8,11]

The POP-Q (Pelvic Organ Prolapse Quantification) scale is used to objectively assess the degree of genital static disorders. However, it does not indicate the type of defect. The clinical division according to DeLancey defines the type of defect, indicating the anatomical cause of the damage, but not the severity. [20]

Stage 0	no prolapse is demonstrated
Stage 1	the most distal portion of the prolapse is more than 1 cm above the level of the hymen
Stage 2	the most distal portion of the prolapse is 1 cm or less proximal or distal to the hymenal plane
Stage 3	the most distal portion of the prolapse protrudes more than 1 cm below the hymen but no farther than 2 cm less than the total vaginal length (for example, not all of the vagina has prolapsed).
Stage 4	vaginal eversion is essentially complete.

Table 2. Stages of POP-Q system measurement [12].

Cellulite and stretch marks

Women with light complexion are most likely to develop stretch marks after pregnancy. These changes occur as a result of strong stretching of the skin, which in the place of cracks is filled with scars. The most common cause of stretch marks is low stretchability or elasticity of the skin and hormonal disorders. In addition, cellulite appears, which is the result

of fluctuations in the hormonal economy. All this increases the permeability of vessels, which is the cause of swelling and cellulite. [1]

The best ways to prevent the above mentioned problems is to take care of proper hydration, both the skin and the body. Drink about 2.5 liters of water a day and use moisturizing creams or body lotions. In addition, physical activity should be taken into account. Walks and exercises for pregnant women will be suitable for pregnant women. [1]

In the period after pregnancy and childbirth, non-invasive methods of body modeling can be distinguished, among others:

- revitalizing massage,
- laser therapy,
- Zelting Coolsculpting - the treatment is based on the use of cryolipolysis, i.e. controlled freezing of fat cells. The treatment is an alternative to classic liposuction. When exposed to low temperature, cells begin to die and after about 2-4 months after the treatment they are completely excreted by the body in a natural metabolic process.
- Proshock Ice - is a two-stage procedure, which involves the combination of cryotherapy and then the use of an acoustic wave of high energy.
- Icoone - a non-invasive way to fight cellulite, excess body fat, swelling, flaccidity of the skin, or scars. The treatment involves a massage with the use of special rollers working under pressure. [1,5,7]

Summary

Complications in childbirth continue to be a major problem and challenge for modern medicine. The development of repair methods and techniques has a positive impact on the comfort of women's lives, but we should always try to minimize the risk of complications and develop methods of their treatment.

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