



# BIRTH TRAUMATISM OF THE BIRTH CANAL, AS A RISK FACTOR FOR THE DEVELOPMENT OF CERVICAL PATHOLOGY

**Ruzmetova F.A.**

**Matyakubova S.A.**

## ABSTRACT

*Obstetric injuries of the cervix are the background condition leading to cervical pathologies such as ectropion, atypical leukoplakia, cervical intraepithelial neoplasia, which represent a high risk of cervical cancer. That remains relevant for further study of the factors leading to cervical trauma during childbirth, for the prevention of background diseases leading to oncological transformations of the cervical canal.*

**KEY WORDS:** *cervix, birth trauma, ectropion, precancerous conditions: atypical leukoplakia, cervical intraepithelial neoplasia.*

## DISCUSSION

Cervical injuries acquired during childbirth play an important role in the development of most benign and precancerous diseases of the cervix. The causes of cervical injuries vary, and mechanical causes include large fetuses, delayed births, fetal head miscarriage, scarring of the soft tissues of the birth canal, and inflammatory diseases [3, 12, 31, 34].

Cervical injuries are most often observed in women of first birth and account for 17–28%, according to a number of authors [22, 9, 12]. Cervical rupture is twice as common in first-born women over 30 years of age as in young women [12, 3, 19, 26, 32]. Some authors explain these complications by changes in the colloidal structure of cervical tissue, i.e., fibrous tissue growth and a decrease in muscle cell volume, resulting in decreased cervical elongation and increased stiffness [3, 10, 19, 21, 24, 27].

The risk of cervical rupture during childbirth is increased in severe births, as well as in prolonged births, anomalies of childbirth [3, 6, 10, 33, 34]. Risk factors for cervical rupture in early childbirth include anomalies of childbirth, amniotomy, large fetus, inflammatory diseases, history of cervical diathermocoagulation, women over 30 years of age, low mobility during pregnancy [7,8, 27, 28].

Dehydration is also an important factor in the observation of cervical rupture. An increase in

dehydration time of more than 24 hours doubles the risk of cervical rupture. This is mainly due to the loss of water, a decrease in the volume of the uterine cavity and an increase in cervical retraction, a pressure effect on the internal taste, which is not the anterior part of the fetus [2, 18].

Some literature has provided information on the role of extragenital diseases in cervical tears associated with childbirth. For example, anemia has been shown to decrease the blood supply to the cervix. In cardiac pathologies, early cervical maturation and severe complications of labor have been reported [3, 2, 19, 27].

There are 3 levels of cervical rupture according to the size and depth of the injury.

- I degree - tearing is observed on one or both sides, up to 2 cm in length;

- II degree - the length of the tear exceeds 2 cm and does not reach the dome of the vagina;

- Level III - the tear reaches the vagina and extends to the upper part of the vagina.

It is also divided into uncomplicated and complicated cervical tears:

1. Uncomplicated cervical tears are grade I and II tears.

2. Complicated cervical tears:

- Rupture of the vagina;

- Rupture of the upper part of the vagina;

- The tear rises along the cervical canal and reaches the cervix;



- rupture occupies the peritoneum or parameter [3].

A number of technical errors are made when providing primary surgical care to women who have experienced cervical rupture during surgery. According to well-known authors, in 25% of cases cervical rupture is not sutured at all, in 40-60% of cases postpartum cervical rupture is observed as a result of inadequate suturing [4,5,6,25]. When a cervical tear is sutured, the main focus is on achieving a hemostatic result, as the boundaries of the injured cervix become rough and lead to scar formation. In cervical tears of less than 1 cm in size, the cervix is usually not sutured unless active bleeding is observed [6,13,14,19]. Impairment of architectonics in cervical rupture leads to injury of cervical connective tissue muscle fibers, nerve endings, tissue ganglia, disruption of cervical tissue trophism, abnormal regeneration process, prolonged prolonged inflammatory process [23, 24, 27, 34]. Secondary recovery of cervical obstetric injuries is an important factor in the development of cervical cancer, leading to scarring, ectropion formation, precancerous conditions (atypical leukoplakia, cervical intraepithelial neoplasia) [12, 27, 28, 29]. There are data on the development of cervical dysplasia against the background of scarring in more than 40% of women [15,16,20,31]. Among the background diseases, cervical scarring has a special place, according to a number of authors, it is about 15.3-54.9%, and among women of reproductive age can reach up to 70%. In scarring deformities of the cervix, disruption of the anatomical integrity of the cervical canal leads to loss of mucus production, decreased barrier function, resulting in the development of infectious factors and the development of acute and chronic inflammatory diseases.

F.F. According to Badretdinova (2014), cervical scar deformities are divided into 4 levels:

- Scarring deformity grade I - single or multiple cervical old tears up to 2 cm in length. The cervical canal is partially preserved, conical in shape. Overturning of the lower part of the cervical canal.

- Stage II scarring is an old tear of the cervix that is unilateral or bilateral, reaching to the vagina. The integrity of the cervical canal is compromised, the endocervic vagina collapses, hypertrophy of one of the cervical lips.

Stage III scarring - old tears in the upper part of the vaginal dome, accompanied by asymmetric hypertrophy of one of the cervical lips, dystopia, dysplasia.

- Stage IV scarring - old tears in the upper part of the vagina, with a lack of pelvic floor [4].

Surgical-excision and destructive methods are used in the treatment of cervical pathologies developed against the background of cervical scar deformity [30,39,45,46]. The first group of methods

includes acute and laser concision, loop electroencephalography, combined cervical concussion, resection of tissue with scarring, and removal of almost external lesions.

The following surgical procedures are often used in clinical practice:

- 1) Cervical ponasimon amputation on Schroeder;
- 2) Conical amputation of the cervix on Sturmendorf;
- 3) Upper amputation of the cervix;
- 4) Emmeta operation;
- 5) Cervical plastic surgery on Eltsov-Strelkov.

Among the practices of Eltsov-Strelkov, cervical plastic surgery can be applied and achieved success in all types of cervical scar deformities while maintaining cervical length [1, 2, 11, 17].

The second group of methods (destructive or ablation) includes cryodestruction, laser vaporization, cervical electrocoagulation [30]. The use of ablation methods in cervical scar deformities can lead to exacerbation of anatomical and physiological disorders.

One of the key moments in the treatment of cervical tears is the timely restoration of the normal anatomical and functional structure of the cervix in the postpartum period. To reduce and prevent cervical obstetric injuries during childbirth, especially in first-time mothers, requires the development of a systematic, multi-step approach using new and modern technologies.

Preventive measures to prevent cervical rupture include:

- Pregnancy planning and preparation for pregnancy (detection and treatment of chronic diseases before pregnancy, prevention of unwanted pregnancies).
- Rational nutrition of pregnant women (avoidance of fatty, fried, hot, spicy foods).
- Avoidance of excessive physical and psycho-emotional stress.
- Rational delivery: assessment of contraindications and contraindications to natural childbirth or cesarean section, timely analgesia, adequate use of uterotonics, timely detection of cervical stenosis (prolonged cervical compression between the fetal head and pelvic bones) caution and instruction in the use of obstetric procedures (obstetric clamps, fetal vacuum-extraction).

Thus, obstetric injuries of the cervix are a high risk factor in the development of cervical cancer, leading to background conditions of the cervix, such as ectropion, atypical leukoplakia, cervical intrepithelial neoplasia. Therefore, the study of factors leading to cervical injuries during childbirth, as well as the prevention of background diseases leading to oncological changes in the cervical canal, remains relevant.

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