

## COMPLETE UTERUS DIDELPHIA AND STAGE 3 GENITAL PROLAPSE DURING THE LABOR OF A WOMAN AT 35–36 WEEKS OF PREGNANCY WHILE USING INTRAUTERINE DEVICE

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■ A clinical case of operative delivery of a woman with stage 3 genital prolapse, which was diagnosed at 35–36 weeks of gestation, is addressed in this article. The woman became pregnant while using intrauterine device. During cesarean section, the patient was diagnosed with complete uterus didelphia. In the abdominal cavity, between the two uteruses, a T-shaped intrauterine device was detected, with no signs of uterus perforation revealed.

■ **Keywords:** genital prolapse; gestation; intrauterine device; cervical prolapse; uterus didelphia; uterine malformation; intrauterine device complications.

## КЛИНИЧЕСКИЙ СЛУЧАЙ РОДОРАЗРЕШЕНИЯ ЖЕНЩИНЫ С ПОЛНЫМ УДВОЕНИЕМ МАТКИ И ПРОЛАПСОМ ГЕНИТАЛИЙ III СТАДИИ НА СРОКЕ БЕРЕМЕННОСТИ 35–36 НЕДЕЛЬ, НАСТУПИВШЕЙ НА ФОНЕ ПРИМЕНЕНИЯ ВНУТРИМАТОЧНОЙ КОНТРАЦЕПЦИИ

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■ В статье представлен клинический случай оперативного родоразрешения женщины с пролапсом гениталий III стадии, который был диагностирован на сроке гестации 35–36 нед. Данная беременность наступила на фоне применения внутриматочного контрацептива. При проведении кесарева сечения было выявлено полное удвоение матки. В брюшной полости, между двумя матками, был обнаружен Т-образный внутриматочный контрацептив, при этом признаки перфорации маток отсутствовали.

■ **Ключевые слова:** пролапс гениталий; беременность; внутриматочная контрацепция; выпадение шейки матки; удвоение матки; пороки развития матки; осложнение внутриматочной контрацепции.

### Introduction

The frequency of intrauterine devices (IUD) use varies significantly in different countries worldwide. In the USA, only 2% of women use this method, while it is used by 33–36% of women in the Russian

Federation and by approximately half of women (49%) in East Asia [1]. These are mainly women aged above 35 years old who have implemented their reproductive function and are interested in long-term contraception [2]. The advantages

of IUD include no necessity for regular drug intake, a systemic metabolic effect on a woman's body, reliability (Pearl index varies from 2.3 to 0.3 for various types of IUDs), and low cost [3].

Despite all the advantages of this contraceptive method, its use is associated with the risk of a number of complications, such as pelvic pain, dysmenorrhea, and inflammatory diseases of the pelvic organs. However, the most harmful of them is uterine perforation [3]. According to international literature, uterine perforation occurs at a frequency of 1:350–1:2,500 with IUD use. On the other hand, Russian scientists less frequently encounter this complication (1:5,000). Uterine perforation that occurs during IUD placement is most often localized in the fundus or at the junction between the uterine body and cervix [4]. This explains why conditions that are associated with a deformity of the uterine cavity, such as congenital malformations of the uterus, are considered a relative contraindication for the use of IUDs [3].

The proportion of congenital malformations of the reproductive system organs among all malformations is 14%. Among these, uterine malformations are the most common [5]. Defects resulting from the paramesonephric ducts fusion disorder (uterus didelphia, bifid uterus, arcuate uterus, unicornuate uterus) can be asymptomatic, which is associated with their late diagnosis [6].

The use of IUD in patients with an undiagnosed uterine malformation can lead to technical difficulties in inserting the IUD, and is also associated with a high risk of uterine perforation during the manipulation [3]. This complication is often asymptomatic and may not be diagnosed for a long time [4, 7].

Genital prolapse is a syndrome comprising of pelvic floor and pelvic organs prolapse in isolation or in combination [8]. According to the literature, the number of patients with a similar pathology varies from 5 to 48%. Most often, genital prolapse occurs in women of the late reproductive age and perimenopausal period, and it develops in women under the age of 40 years in 26% of cases [9]. Risk factors of this pathology include heavy physical labor; bowel diseases accompanied by frequent constipation; lung diseases leading to continuous coughing; connective tissue dysplasia syndrome; a history of vaginal delivery; course of labor complicated by perineal rupture, and the use of perineal surgical protection in childbirth.

The degree of genital prolapse is directly related to the number of spontaneous vaginal deliveries [8, 10]. There are several classifications of this disease, the most common is the POP-Q classification (Pelvic Organ Prolapse Quantifications System), according to which, there are four stages of genital prolapse. Stage I implies that the distal component prolapses by more than 1 cm above the level of the hymenal ring, stage II represents prolapse to a distance of less than 1 cm above and not more than 1 cm below the level of the hymenal ring, stage III represents prolapse to a distance below 1 cm from the level of the hymenal ring, but less than 2 cm of the total length of the vagina, and stage IV implies complete eversion of the vagina [8]. Stage III and IV genital prolapse are often accompanied by severe sexual dysfunction. This explains the extremely rare cases of pregnancy in case of genital prolapse above stage II.

### Clinical case description

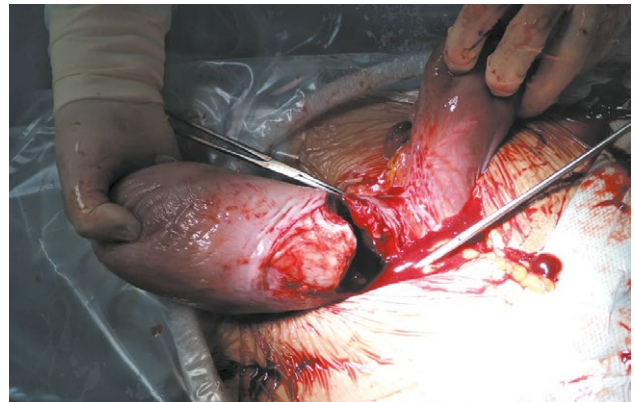
Patient A., 25 years old, was followed-up during pregnancy at the antenatal clinic of Mogocho (Trans-Baikal Territory). During childhood, the patient was well developed for her age, was not physically or mentally retarded in comparison to her peers. She had chronic iron deficiency anemia, but did report any history of gynecological diseases. In addition, she had no history of allergies or blood transfusion. She had her first pregnancy in 2013 and it ended in a timely spontaneous vaginal delivery of a full-term boy weighing 2,000 g. According to the woman, the pregnancy, childbirth, and the postpartum period were uneventful. In 2014, the patient underwent a medical instrumental abortion at an early gestation stage, which also was uneventful. In 2016, she had another timely spontaneous vaginal delivery of a full-term girl weighing 2,600 g was; the pregnancy, childbirth, and the postpartum period were uneventful. Regarding contraception, an intrauterine contraceptive device was inserted in 2016; however, another pregnancy occurred in 2018 while using the IUD. The patient was registered for pregnancy at the antenatal clinic at a gestation period of 20 weeks; the total number of visits was 4. Upon registration, an exacerbation of the chronic iron deficiency anemia of moderate severity with a maximum decrease in hemoglobin level to 7 g/l was revealed. The patient received antianemic therapy with ferric iron tablets.

At a gestational age of 35–36 weeks of pregnancy, the patient was admitted to the maternity ward of the Regional Clinical Hospital of the city of Chita with complaints of fluid discharge from the vagina for 2 hours. Physical examination revealed that the uterus had a normal tonus. Vaginal examination revealed that the uterine cervix extended beyond the hymenal ring by 5 cm, was tight, up to 5.0 cm long, the external os of the cervical canal was passable for 3.0 cm, and up to 1 cm in the region of the internal os (Fig. 1). The fetal bladder was absent, and the fetal head was pressed to the pelvic inlet. The discharge represented as light amniotic fluid. Laboratory examination at the time of admission showed that the general and biochemical analysis of blood and a coagulogram were normal. Ultrasound examination showed a fetus with size corresponded to 35 weeks of gestation, oligoamnios, an amniotic fluid index of 50 mm; the estimated fetal weight was 2,550 g. The diagnosis of prenatal amniotic fluid discharge at a gestational age of 35–36 weeks and stage III genital prolapse were established. Taking into account the prenatal outflow of amniotic fluid in the patient with stage III genital prolapse, it was decided that delivery should be performed by cesarean section. After obtaining the patient's consent, antibiotic prophylaxis with cefazolin was administered intravenously 30 min before surgery. A lower midline incision was performed followed by cesarean section in the lower uterine segment and drainage of the abdominal cavity. A live premature infant boy weighing 2,710 g was born, with an Apgar score of 9 and 9 points. The placenta was located on the posterior wall of the uterus, 7 cm above the internal os, separated by moderate traction for the umbilical cord, the size of the retained products was 20 × 20 × 2 cm. When performing the exteriorization, a complete uterus didelphia was revealed (Fig. 2). The fetus was located in the right uterus. During the lavage of the abdominal cavity, a T-shaped uterine contraceptive was found inside between the two uteri (removed). No perforation or cicatricial changes were detected in the area of the fundus and walls of the two uteri. The abdominal cavity was drained by an active drainage in the left iliac region. The laparotomy incision was closed in layers. Blood loss during surgery amounted to 600 ml. The postoperative diagnosis was operative preterm delivery at 35–36 weeks; congenital malformation of the



**Fig. 1.** Stage 3 genital prolapse

**Рис. 1.** Проплапс гениталий III стадии



**Fig. 2.** Intraoperative image of the complete uterus didelphia

**Рис. 2.** Интраоперационная картина полного удвоения матки

genital organs; complete uterus didelphia; stage III genital prolapse; chronic iron deficiency anemia; remission; lower midline incision; cesarean section in the lower uterine segment; abdominal drainage.

The postoperative period was uneventful. The parturient woman was discharged with her baby on the day 5 postpartum. A planned surgical treatment for the genital prolapse was recommended.

## Discussion

Since a congenital malformation of the genitals was not diagnosed, there were no contraindications to use an IUD. In most cases of IUD insertion, there was a complete perforation of the uterus, and the contraceptive device was initially installed in the abdominal cavity, or the perforation of the uterus was incomplete and the IUD migrated later.

The lack of a symptomatic clinical presentation did not allow for the timely diagnosis of this condition, which led to the development of pregnancy.

Complete uterus didelphia was a trigger for premature birth, and the stage III genital prolapse became an indication for surgical delivery.

**Conflict of interest.** The authors declare no conflict of interest.

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