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OPTIMIZATION OF OPERATIVE DELIVERY OF WOMEN IN LABOR WITH PLACENTA PREVIA

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SUMMARY. The aim – to evaluate the effectiveness of preventive ligation of uterine vessels during caesarean section in women with placenta previa.

Material and Methods. The study was conducted on the basis of the Regional Perinatal Center and Maternity Hospital № 5 (Odessa) for 2000–2020 and performing the main stage of cesarean section after reducing perfusion in the placenta. Uterine ligation was performed after fetal removal. The volume of blood loss, the condition of the mother and fetus were monitored, and perinatal results were analyzed.

Statistical processing was performed by methods of variance and frequency analysis using Statistica 13.0 software (TIBCO, USA).

Results. The mean age of pregnant women was 33.4±1.2 years. The clinic of placenta previa during pregnancy was extremely scanty. As a rule, the diagnosis was made during ultrasound monitoring. In 16 (17.7 %) there was repeated bleeding from the genital tract without pain and increased uterine tone, with the development of anemia of moderate severity. Single bleeding was observed in 53 (58.9 %) women.

Blood loss was 1380±112 ml in group I, 466±34 ml in group II ($p<0.05$). The frequency of anemia in the postoperative period was 38.0 % and 17.5 %, respectively ($p<0.05$). All newborns were discharged on the 5-7th day of the postpartum period in satisfactory condition. There were no cases of distress syndrome.

Conclusions: 1. The method of control of blood loss during placenta previa by ligation of the uterine arteries is effective – blood loss was in group I 1380±112 ml, in group II – 466±34 ml ($p<0,05$). 2. The frequency of anemia in the postoperative period was 38.0 in group I and 17.5 % in group II ($p<0.05$).

KEY WORDS: placenta previa; operative obstetrics; prevention.

Introduction. Placenta previa is a violation of the localization of the placenta in the uterus, while the placenta is located in the lower part of the uterus, partially or completely overlapping the internal pharynx. The leading risk factors for placenta previa include: history of cesarean section, history of interventions in the uterine cavity (instrumental, manual removal of the placenta, removal of submucous nodes, history of placenta previa, more than 5 births in history, frequent abortions, older 40 years old [1-3].

When presenting, the placenta is located below the presenting part of the fetus, that is, on the way of its birth. The term "praevia" consists of the two words "prae" and "via", which means "on the way." Normally, the placenta is attached in the area of the body of the uterus and its lower edge does not reach the internal pharynx at a distance of 7 cm or more [1, 2].

Placenta previa complicates 3-5 % of pregnancies and is the cause leading to perinatal and maternal mortality worldwide [4]. According to most experts, placenta praevia is the most important cause of prenatal bleeding that occurs after 24 weeks of gestation [1, 2, 5, 6].

Maternal mortality in placenta previa, according to various authors, ranges from 2.1 to 10.5 % [2, 7], and perinatal mortality ranges from 2.0 to 4.0 % [1, 2, 8]. The causes of perinatal losses are prematurity, functional immaturity of the fetus, and massive blood loss [8].

Placental accreta complicates 1–5 % of pregnancies with placenta previa and without uterine scarring [1–4]. In cases where placenta previa is combined with the presence of one scar on the uterus after cesarean section, the risk of placental accreta requiring hysterectomy is 10-20 % [9, 10]. If in previous pregnancies a woman has undergone more than one cesarean section, then the risk of placental accreta becomes even higher. In cases where placenta previa is combined with the presence of 1 scar after cesarean section, the risk of placenta praevia accrete increases to 11 % (OR 2.2 – 95 %, CI 1.4–3.4); in the presence of 2 scars - up to 40 % (OR 4.1 – 95 % CI 1.9 - 8.8); with three or more scars – from 61 % to 67 % (OR 22.4 - 95 %, CI 6.4 – 78.3) [9].

In our previous study, the detection rate of placenta praevia in pregnancy with a scar on the uterus after previous operative placement did not exceed 1.3 % [10]. However, in many cases, the spread of this pathology is more frequent. Given the high risk of bleeding during delivery in women with placenta praevia, the search for effective methods to reduce blood loss is an urgent task.

The aim of this study was to evaluate the effectiveness of preventive ligation of the uterine vessels during caesarean section in women in labor with placenta previa.

Material and Methods. The study was conducted on the basis of the Regional Perinatal Center and Maternity Hospital No. 5 (Odessa) for 2000-2020. The analysis of clinical outcomes of 90 cases of surgical delivery in the presence of placenta previa, where 50 interventions were performed according to the

traditional protocol [11], and 40 – with the removal of the uterus into the wound and the main stage of the caesarean section after a decrease in perfusion in the placenta presenting. The ligation of the uterine vessels was carried out after the fetus was removed. The volume of blood loss, the condition of the woman in labor and the fetus was monitored, and the analysis of perinatal results was carried out.

Statistical processing was carried out by methods of variance and frequency analysis using Statistica 13.0 software (TIBCO, USA) [12].

Research results. The average age of pregnant women was 33.4±1.2 years. Clinic for placenta previa during pregnancy was extremely scarce. As a rule, the diagnosis was made during ultrasound monitoring. In 16 (17.7 %), there was repeated bleeding from the genital tract without pain and increased uterine tone, with the development of moderate anemia. One-time bleeding was observed in 53 (58.9 %) women.

All pregnant women with verified complete placenta previa were subject to planned hospitalization at 34 weeks. The same tactic was carried out for women with incomplete placenta previa, confirmed by ultrasound at 32 weeks, and showed that the placenta partially overlaps the internal pharynx.

With full and incomplete presentation, the most acceptable time for a planned caesarean section is 37–38 weeks, to reduce the risk of having an immature baby.

With the marginal and low presentation of the placenta, childbirth is possible through the natural birth canal. In this case, the risk of bleeding during childbirth is increased. If there is an indication for amniotomy, it should be performed very carefully so as not to touch the edge of the placenta, preferably in the operating room. With stopped bleeding and a stable condition of the mother: (pink skin, blood pressure not lower than 90/60, diuresis not less than 30 ml/h, pulse no more than 90 beats per minute and fetal heart rate within 160-120 beats per minute, no tachycardia/bradycardia) gestational age less than 30 weeks used expectant tactics, for the prevention of SDR, the pregnant woman was injected with dexamethasone 6 mg every 12 hours for 48 hours.

In case of hypotonic bleeding during the operation, 20 units of oxytocin per 1 liter of saline was injected intravenously at a rate of 60 drops per minute. In the absence of the effect of oxytocin, methylergometrine 0.2 mg intravenously or intramuscularly is administered up to 5 doses (1.0 mg), or enzoprost 2.5–5 mg into the uterine muscle up to 8 doses (20 mg). And / or misoprostol at a dose of 800–1000 mcg per rectum [10].

Blood loss was 1380±112 ml in group I, and 466±34 ml in group II ($p<0.05$). The incidence of anemia in the postoperative period was 38.0 % and 17.5 %, respectively ($p<0.05$).

All newborns were discharged on the 5-–7th day of the postpartum period in satisfactory condition. No cases of SDR were registered.

Conclusions: 1. The method of blood loss control in placenta previa by ligation of the uterine arteries is effective – blood loss in group I was 1380±112 ml, in group II – 466±34 ml ($p<0.05$).

2. The frequency of anemia in the postoperative period was 38.0 % in Group I and 17.5 % in Group II, respectively ($p<0.05$).

Prospects for further research may be associated with the development of approaches to reduce blood loss when performing an extended cesarean section for women in labor with multiple myomatous nodes.

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ОПТИМІЗАЦІЯ ОПЕРАТИВНОГО РОЗРОДЖЕННЯ ПОРОДІЛЬ ІЗ ПЕРЕДЛЕЖАННЯМ ПЛАЦЕНТИ

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РЕЗЮМЕ. Метою дослідження була оцінка ефективності превентивного лігування маткових судин при виконанні кесаревого розтину у породіль з передлежанням плаценти.

Матеріал і методи. Дослідження проведено на базі Обласного перинатального центру та Пологового будинку № 5 (м. Одеса) за 2000–2020 рр. Проведено аналіз клінічних результатів 90 випадків оперативного розродження при наявності передлежання плаценти, де 50 втручань виконані за традиційним протоколом, а 40 – з виведенням матки в рану і виконанням основного етапу кесаревого розтину після зниження перфузії в передлеглій плаценті. Перев'язку маткових судин здійснювали після вилучення плода. Контролювали обсяг крововтрати, стан породіллі і плода, проводили аналіз перинатальних результатів.

Статистична обробка проведена методами дисперсійного і приватного аналізу із застосуванням програмного забезпечення Statistica 13.0 (TIBCO, США).

Результати. Середній вік вагітних становив (33,4±1,2) років. Клініка передлежання плаценти під час вагітності була вкрай мізерна. Як правило, діагноз встановлювали при проведенні УЗД моніторингу. У 16 (17,7 %) жінок відзначалася повторна кровотеча зі статевих шляхів без больового синдрому і підвищеного тонусу матки, з розвитком анемії середнього ступеня тяжкості. Одноразова кровотеча відзначалася у 53 (58,9 %) жінок.

Крововтрата склала в I групі (1380±112) мл, у II групі – (466±34) мл ($p<0,05$). Частота анемії в післяопераційному періоді склала відповідно 38,0 % і 17,5 % ($p<0,05$). Усі новонароджені були виписані на 5–7 день післяпологового періоду в задовільному стані. Випадків дистрес-синдрому не було.

Висновки. 1. Метод контролю крововтрати при передлежанні плаценти шляхом перев'язки маткових артерій є ефективним – крововтрата склала в I групі (1380±112) мл, у II групі – (466±34) мл ($p<0,05$). 2. Частота анемії в післяопераційному періоді склала відповідно 38,0 % в I групі і 17,5 % – у II групі ($p<0,05$).

КЛЮЧОВІ СЛОВА: передлежання плаценти; оперативне акушерство; профілактика.

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