

MODERN VIEWS ON EFFECTIVENESS AND ACCEPTABILITY OF VARIOUS METHODS OF CONTRACEPTION AFTER CESAREAN SECTION

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Abstract: after the birth of a baby, a woman's body needs to be restored, because pregnancy and childbirth are the biggest burden a woman suffers during her life. Вместе с тем женщину после кесарева сечения нельзя считать больной, и, несмотря на увеличивающуюся занятость с ребенком, после операции она может и должна возобновлять интимные отношения. However, a woman after cesarean section cannot be considered sick, and despite the increased load with the child, she can and should resume intimate relationships after the surgery. According to sample surveys, two-thirds of residents of Uzbekistan resume sexual relations by the end of the first month and almost all (94%) within 4-6 months after childbirth. About 12% of all unplanned pregnancies occur in the 24-month period after childbirth. Pregnancy that occurs during this period negatively affects the health of newborns and mothers, increasing the risk of premature birth, a birth of low weight babies, and early neonatal and infant mortality. According to some authors, 49.3% of women interrupt an unwanted pregnancy in the first year after surgical delivery due to lack of contraception or due to use of ineffective methods. Thus, interruption of pregnancy during the first year after cesarean section increases the risk of the uterine scar failure by 1.3 times, premature detachment of the placenta - by 2.3 times and the risk of interruption of pregnancy and perinatal loss - by several times.

Keywords: cesarean section, contraception, reproductive health, indications, uterine scar.

СОВРЕМЕННЫЕ ВЗГЛЯДЫ НА ЭФФЕКТИВНОСТЬ И ПРИЕМЛЕМОСТЬ РАЗЛИЧНЫХ МЕТОДОВ КОНТРАЦЕПЦИИ ПОСЛЕ КЕСАРЕВА СЕЧЕНИЯ

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Аннотация: после рождения ребенка организм женщины нуждается в восстановлении, потому что беременность и роды – это самая большая нагрузка, которую переносит женщина в течение своей жизни. Вместе с тем женщину после кесарева сечения нельзя считать больной, и, несмотря на увеличивающуюся занятость с ребенком, после операции она может и должна возобновлять интимные отношения. По данным выборочных опросов, две трети жительниц Узбекистана возобновляют сексуальные отношения к концу первого месяца и почти все (94%) – в течение 4–6 мес. после родов. Около 12% всех незапланированных беременностей приходится на 24-месячный период после родов. Беременность, наступившая в этот период, негативно влияет на здоровье новорожденных и матерей, повышая риск преждевременных родов, рождения детей с низкой массой тела, раннюю неонатальную и младенческую смертность. Согласно данным некоторых авторов, в первый год после оперативного родоразрешения 49,3% женщин прерывают нежелательную беременность, что обусловлено отсутствием контрацепции или применением малоэффективных методов. Так, прерывание беременности в течение первого года после кесарева сечения увеличивает риск несостоятельности рубца на матке в 1,3 раза, преждевременной отслойки плаценты – в 2,3 раза и риск угрозы прерывания беременности и перинатальных потерь – в несколько раз.

Ключевые слова: кесарево сечение, контрацепция, репродуктивное здоровье, показания, рубец на матке.

UDC: 616-089.888.61

Despite a number of works on the problem of postpartum contraception, there is still no single point of view on the possibility of early use of various methods of contraception (MC) in this period, especially after cesarean section. According to S. Barber (2017), women who have received family planning recommendations before giving birth are 2.2 times more likely to choose an effective postpartum contraception.

Specialists advise discussing contraception with each woman before childbirth, given that after delivery she has less time and effort to familiarize herself with this information [10, 15]. Recommendations regarding to start

using contraception after childbirth relate to providing additional contraceptive protection when the effectiveness of lactational amenorrhea is reduced to a significantly low level.

The method of lactational amenorrhea (MLA) plays a major role in the natural regulation of fertility. However, only recently MLA has become a recognized method of postpartum contraception: with full or almost complete breastfeeding and the absence of menstruation, breastfeeding provides more than 98% protection against pregnancy during the first 6 months after giving birth. The advantage of MLA is that the method is available to all nursing women without exception, based on the benefits of breastfeeding, as well as costs free for women [21]. Recent clinical studies have confirmed the theoretically substantiated high efficiency of this method. [2]. However, after surgical delivery, MLA is of limited use, since most women have revealed insufficient effectiveness of lactation as a natural contraceptive protection due to hypogalactia, which is frequent after cesarean section in 72% of cases. [1,13]. The rehabilitation of menstrual function occurs after 4-6 months in breast-feeding women, and 1.5-3 months in non-lactating women [9]. During the first 3 months after cesarean section, menstrual function is restored in 78.2-85.0% of women [18]. Some authors believe that an early use of contraceptives should be practiced particularly in women after cesarean section too, taking into account the downward trend in breastfeeding in the general population [19,20,21].

According to literature, contraception should be indicated from the third week after delivery for mothers who use additional feeding, who breastfeed irregularly, as well as who do not breastfeed at all [4]. The family planning program has provided different methods of contraception in women after cesarean section. However, the data analysis has shown that there is not some universal method of contraception, which prevents undesirable pregnancy over the coming years after surgical delivery. To be more precise, the method which fits one couple does not satisfy another couple.

The usage of traditional methods of contraception, such as rhythmical method, interrupted sexual intercourse, syringing, as well as barrier methods like condoms, cervical caps, sponges, diaphragms and spermicides in women after cesarean section do not principally differ from women of general population. The rationality of using barrier contraception is not only to prevent undesired pregnancy, but also to prevent sexually transmitted infections [9].

The main disadvantage of barrier methods is the connection of their use with sexual intercourse, which requires a high level of motivation. Unfortunately, the effectiveness of these types of contraception after childbirth [12 - 35%] is significantly inferior to the effectiveness of intrauterine and hormonal contraception [5].

Using a contraceptive method such as female sterilization remains a controversial issue of cesarean section. The effectiveness of this type of contraception reaches 100%. However, it should be noted that the performance of this surgery requires a woman's conscious decision and her full familiarization with this process. This method of contraception is most commonly used after repeated cesarean section surgery [4].

In recent years, an interest has grown related to the development of principles for using hormonal contraception. According to statistics from the Ministry of Health of the Republic of Uzbekistan, about 30.6% among women of childbearing age use hormonal contraception in the form of tablets and injections. In the literature there are enough principles of using hormonal contraception in the coming months after childbirth, but there are really few works related to the study of this issue in women after cesarean section. The use of oral contraceptives (OC) provides a high efficiency (up to 99%). Their effect is easily reversible; the physiological rhythm of the secretion of gonadotropic hormones and ovulation is restored by the 3rd month after drug withdrawal in 95 - 97% of women [6,19]. In addition, they have a therapeutic effect on endometriosis, premenstrual syndrome, algodismenorrhea, dysfunctional uterine bleeding, functional ovarian cysts, endometrial hyperplastic processes [7, 14].

For the purpose of contraception in the postpartum period, gestagens [mini pilli] are primarily used. In the vast majority of studies using pure progestogens, their effect on breastfeeding was not found, in contrast to combined oral contraceptives that reduce milk production [5, 13]. According to the WHO, there are no restrictions on the use of tableted OCs containing only progestogens in nursing mothers, starting from the 6th week after childbirth and cesarean section. However, V.N. Prilepskaya (2017) advises an earlier appointment of mini pills for lactating and non-nursing mothers (in the first 3-4 weeks). It should be remembered that with the use of gestagens in the first weeks after childbirth and cesarean section, smearing bloody issues from the genital tract is very likely [19]. The literature discusses the question of the possible use of prolonged progestogens after childbirth and cesarean section, which include an injection of medicament called the "Depo-Provera" and the subcutaneous implant "Norplant". They are also highly effective and do not affect the lactation and a child's development [6,8]. At the same time, they are not designed for a long-term use, and during that time withdrawal is not possible. In addition, menstrual irregularities are not uncommon; and the fact is that drug injections, introduction and removal of implant capsules require the presence of specially trained medical personnel [5, 8].

The estrogenic component of COCs can induce thromboembolic complications in the early postpartum period, impaired lipid metabolism, and hepatic dysfunction [1,8]. In addition, EE inhibits lactation [9, 17]. So in a study of M.Tankeyoon and coauthors after 18 weeks of using COC containing 30 µg EE, the amount of milk

decreased by 41.9% compared with 61% in the control group. The theoretical possibility of the influence of steroids on the development of the liver and brain of newborns is not excluded [50].

In this regard, WHO does not recommend COCs for lactating women up to 3 weeks after birth (the risk of using them exceeds the benefits), and for lactating women it is absolutely contraindicated until the 6th week and is not recommended until 6 months [20, 21]. There are works devoted to study of the method of I.U.C. (Intrauterine contraception) in women after childbirth. According to most obstetricians-gynecologists, IUC remains the most popular method of contraception in women of reproductive age [14, 15, 21]. In many countries of Asia, the Middle East and Latin America, among which North Korea is the leader in terms of the absolute number of users (almost 79 million women of reproductive age) making up 49% [8,14] and Uzbekistan (46.1%) [15]. In Russia, it is used by 14.5% of women of reproductive age (The state report on a condition of population's health, Russian Federation, 2005). The method of IUC fully meets the requirements for pregnancy prevention. It is reversible, highly effective (98 - 99.5%), does not have a systemic effect on the woman's body, is convenient to use, available for different social groups, does not require constant self-monitoring, and can be used for a long time and continuously [8,19].

Scientific publications on the study of IUC in women undergoing cesarean section are rare. All researchers believe that the correct selection of IUC does not adversely affect the course of the postoperative period, complication rate, lactation function, and subsequently the recovery of menstrual function. The frequency of complications of this method is not higher than the frequency as a whole for the contingent using IUC [3,7].

Fertility recovery after contraceptive removal occurs on average after 1-2 months [61]. For women who do not have contraindications to the method and continue breastfeeding, IUC becomes the method of choice in stable monogamous marriage [5, 7, 19]. Currently, there are at least 20 types of intrauterine devices of various forms. Silver, copper, plastic are used for their manufacture; one of the species contains levonorgestrel (Mirena, Bayer) [15]. There are publications about a new copper-containing contraceptive without lateral branches called "Gyne Fix" [6].

Copper-containing and inert IUC can also be used in nursing mothers, since these agents do not affect the quantity and composition of breast milk [6]. When using levonorgestrel-containing IUC in breast milk, a small amount of gestagen is detected, however, such a low contraception of this hormone does not affect the development and health of the child [7, 10].

The pregnancy rate with the correct use of copper / gestagen-containing IUC ranges from 0.1 to 1.5%, with the inert IUC it reaches 2-4% [5, 8]. Cases of uterine perforation, according to recent data, are rare - no more than 1.3 per 1000 injections of the IUC [6, 18]. Studies conducted in China (over 17 years), in Belgium and in Mexico showed that with the introduction of IUC during cesarean section with its placement at the bottom of the uterus under direct visual control, there were no cases of uterine perforation, infectious complications and bleeding. The introduction of IUC during Caesarean section did not affect the nature of the lochia, uterine involution, and the duration of postpartum hospitalization [5]. This issue is of particular importance to women after cesarean section. The question of uterine perforation in the long term after surgical labor is undoubtedly associated with the problem of scar healing in the uterus.

Currently, there are few and contradictory data on immunological studies using IUC after cesarean section in the literature. However, there are no specific data on the effect of early administration of IUC on general immune system.

The frequency of expulsion of IUC varies from 1.2% to 13% [16, 19]. The main drawback of the IUC after childbirth and cesarean section is an increased incidence of IUC expulsion, since the uterus contracts sharply during this period and the cervix is dilated. To reduce the expulsion coefficient, some researchers propose using a copper-containing contraceptive, which is introduced into the uterus not later than 10 minutes after birth of a placenta [5,8].

According to S.Welkovich and authors [2001] the introduction of IUC not later than 48 hours after birth does not increase the risk of infection, perforation or bleeding, while the coefficient of expulsions over the next 6 months varies from 6 to 15 cases per 100 women. If IUC was not administered immediately after birth, some authors recommend waiting 6-8 weeks, since the highest frequency of expulsions is observed from 1-2 days to 6 weeks after delivery [9]. According to a number of authors, when an IUC is introduced directly during a cesarean section, contraceptive expulsions are observed quite rarely (less often than with the introduction of IUC after childbirth) [10].

In clinical studies of IUC called Cooper-T 380 and Multiloid Cu 375 type, there were no statistically significant differences in efficacy indicators, cases of IUC expulsion, or removal of the agent due to bleeding or pain for about 12 to 24 months after introduction of IUC compared with groups of lactating and non-breastfeeding women [12]. It is believed that an appointment of inhibitors of prostaglandin synthesis significantly reduces the pain syndrome and the risk of IUC expulsion [14, 22]. The good effect of anti-inflammatory non-steroid drugs is explained by their pronounced antiprostaglandin effect; therefore they are also useful for bleeding. Others [88] note that the use of prostaglandin synthesis inhibitors, in particular ibuprofen, does not affect the frequency of pain when using IUC. To date, discussion continues on the timing of the

introduction of IUC after cesarean section. It should be emphasized that the introduction of IUC immediately after childbirth can be possible only in the absence of prolonged birth, a long anhydrous gap, cervical rupture of 2 stage, tight attachment of the placenta, manual entry into the uterine cavity, bleeding in the postpartum and early postpartum period, uterine scar failure [5].

According to E.A Chernukha, when performing a cesarean section, first of all, attention should be focused on the correct technical implementation of surgery and introduction of postoperative period, and the issue of contraception can be resolved later [8]. WHO recommendations contain the following provisions for the use of IUC after unprompted delivery and cesarean section:

1. The benefits of administering an IUC during the first 48 hours after delivery generally exceed the theoretical or confirmed risk of use.
2. In the period from 48 hours to 4 weeks, the introduction of any IUC is not recommended;
3. After 4 weeks any IUC can be administered according to indications;
4. All IUC are absolutely contraindicated with postpartum septic complications [5].

According to Prilepskaya V.N. and authors it is advisable to enter the IUC starting from 6-8 weeks of the postpartum period [6].

There is evidence that the administration of IUC in lactating women is less painful, as well as bleeding after administration is less common than in non-lactating women [8]. Adverse reactions and complications when using copper-bearing IUC in women after childbirth include hyperpolymenorrhea (2.7 - 19%), lower abdominal pain (10.8%), acyclic bleeding (8.1%), and pelvic inflammatory disease (1,6 - 2.7%) [5]. Despite an increased frequency of inflammatory diseases of the pelvic organs while using an IUC, it does not pose a great risk for women who have a regular sex [9].

There are publications that consider a predominant role of intrauterine contraceptives in the occurrence of inflammatory processes of the reproductive organs with an emphasis on the severe course of the inflammatory process against the background of contraception [16, 22], and Amidonova I.P. et al. (2000) indicate a frequency of 25.9 - 31.8%. In 1980 P. Senanayke and D. Kramer published a review of 25 studies conducted in several countries around the world and concluded that women with IUC are at risk for inflammatory pelvic diseases and tubal infertility [9]. According to their results, the risk of IPD on the background of IUC is 9 times higher than in patients who do not use intrauterine contraception. Such publications have contributed to a significant reduction in the use of the method worldwide. However, further studies have shown that with an exception of the first weeks after introduction of IUC, the risk of IPD appears to be low for women who have regular sexual intercourse and do not have other partners [10]. A greater likelihood of an occurrence of IPD is observed only in the first 20 days after the introduction of IUC [9]. Inflammatory diseases that occur after 3-4 months are not associated with the introduction of IUC, but have a different reason [6].

Some authors, in order to reduce the risk of possible complications of an inflammatory nature, recommend antibiotics of a wide spectrum for prophylactic purposes [16]. Other researchers have not revealed a positive effect of antibacterial prophylaxis with the introduction of IUC in order to reduce the frequency of IPD [8].

Menstrual irregularities are one of the most common adverse reactions that force to remove an IUC prematurely. They can be manifested by a greater intensity of bleeding, an increase in the period of menstruation (hyperpolymenorrhea) and intermenstrual bleeding. According to experts, the percentage of such complications ranges from 1.5 to 24% [6], with the introduction of copper-containing agents varies from 4.4 to 13.1 per 100 women during 1 year of use [9]. Copper-containing contraceptives can increase menstrual blood by 20-50% during the first 6-12 months of contraception, after that the level of blood loss gradually returns to its original level [9]. It was found that progestogen-releasing agents reduce the volume of blood loss by 40-50% compared with the initial level. The best results are obtained by the IUC "Mirena", which is considered to prevent iron deficiency anemia on the background of intrauterine contraception [6].

Intermenstrual bleeding is possible, especially in the first 3 months after the introduction of IUC. The percentage of women with such complications is higher when using inert types compared to women using copper-containing types of IUC. Intermenstrual bleeding with the use of hormonal contraceptives releasing progestogen is observed more often than with non-medical and copper-containing ones, but the blood loss volume is less [9]. An increase in the endogenous production of prostaglandins in the endometrium is one of the reasons for an increase in menstrual blood loss, dysmenorrhea and uterine contractions [6, 9]. If there is a risk of menstrual irregularities, it is recommended to use a combined method, which means the parallel use of monophasic contraceptives before and during the first 2-3 cycles. The combination of these two methods of contraception contributes to a more rapid adaptation of the body to contraception, due to changes in the biochemical environment of the uterine cavity and endometrial morphology [17, 22].

Thus, despite a significant attention to the problem of contraception by clinicians, many issues related to use of modern types of contraception after cesarean section remain debatable.

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