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POSTPARTUM CONTRACEPTION

Suci Nurfajriah[1]
[1]Universitas Muhammadiyah Tangerang, Indonesia
Email: suci_nurfajriah@yahoo.co.id

ABSTRACT

The postpartum period is critical to start using contraception because it is one way to maintain maternal health and increase maternal motivation to avoid future pregnancies. The principle of contraceptive methods in the postpartum period is a contraceptive method that does not interfere with milk production. This study method is a literature review that tries to explore postpartum contraception. Sources for conducting this literature review include systematic search studies of computerized databases (EBSCOHOST, Pubmed, and Cochrane Collaboration) journal studies published since 201 2-20 20. The writing of this scientific article uses vancouver bibliography writing. The results of this literature study explain the various contraceptive methods that can be used in the postpartum period. The study results conclude that the methods that can be used in the postpartum period are Kontap, IUD, Implant, injection, minipill, simple se method(condom, MAL, coitus interruptus).
Keywords*: Contraceptive, postpartum*

INTRODUCTION

The postpartum period is quite a significant period to start using contraception because it is one way to maintain women's health and increase women's motivation to avoid future pregnancies. Ovulation can occur as soon as 25 days postpartum in women who do not breastfeed, which is a strong reason for women to use contraception as soon as possible. Nevertheless, the safety of postpartum contraceptive use must also be considered.

Postpartum mothers can use various contraceptive methods. Male and female sterilization is one option to provide adequate protection against pregnancy. Both types of sterilization are safe, convenient, and cost-effective. The most commonly used sterilization procedure for postpartum mothers is minilaparotomy. Couples who want to sterilize should be counseled first because this method is irreversible. Postplacental IUD insertion is also an effective, safe, and easy option to perform. An important thing to note in this method is the increased incidence of expulsion in postpartum mothers than in nonpartum mothers. An important thing that affects the rate of IUD expulsion is the correct placement of the fundus IUD in the uterus so that the IUD must be placed right in the fundus. An IUD inserted through an abdominal incision can also be done for mothers who give birth by cesarean section. Side effects associated with inserting this IUD include bleeding and an increased likelihood of pelvic inflammatory disease; This method is not recommended for women with sexually transmitted diseases. Although hormonal methods such as oral contraceptives and injections are very effective, there is much concern about their effects on breast milk. The use of the progestin-only mini-pill in nursing mothers should not begin until 6 weeks after delivery. The restrictions involved with the mini-pill follow the daily regime and availability in some developing countries. Combined progestin-estrogen oral contraceptives are not recommended for nursing mothers. However, it may be an option if the mini-pill is unavailable and its use does not begin until 6 months

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after delivery. Progestin-only implants and injectable methods are long-term, but when to begin use is uncertain. Methods that do not affect breast milk include condoms and spermicides. Limitations associated with condoms are a partner's willingness to use condoms and the availability of condoms at home. The diaphragm and cervical cap are not designed for immediate postpartum use; the diaphragm and cervical cap can be fitted 4-6 weeks postpartum. Family planning aLAMi includes measuring basal temperature and cervical mucus to detect ovulation. This method is only recommended for skilled women with fertility awareness. [1]

METHOD

The method used is a literature review study (*literature review*) including systematic search studies of computerized *databases*: EBSCOHOST, Pubmed, and Cochrane Collaboration) in the form of research journals totaling 8 journalspublished from 2011-2015, 1 *text book*. This literature study tries to explore contraception in the postpartum period. The writing of this scientific article uses *the writing of the Vancouver bibliography*.

RESULT AND DISCUSSION

1. Knock

Types of regular contraception are divided into 2, namely tubectomy and vasectomy. Tubectomy (Female Surgical Method / MOW) is a steady contraceptive method that is voluntary for a woman if she does not want to get pregnant again by occluding the fallopian tubes (binding and cutting or inserting rings), so that sperm cannot meet with the ovum. There are 2 types of tubectomy: mini laparotomy and laparoscopy (not appropriate for postpartum patients). Tubectomy can be done 48 hours postpartum, immediately after delivery or after cesarean section and if it cannot be done inlam 1 week after delivery, delayed 4-6 weeks. The benefits of contraception are that its effectiveness is high 99.5% (0.5 pregnancies per 100 women perLAMa first year of use), does not affect the breastfeeding process, doesnot depend on sexual factors, there is no change in sexual function. Couples who want to do a steady contraceptive method should be counseled first because this method is not reversible and must be done by a trained doctor.

Vasectomy (Male Surgical Method / MOP) is a clinical procedure to stop male reproductive capacity by occluding the vasa deferensia so that the flow of sperm transport is hampered and the fertilization process (union with the ovum) does not occur. Types of vasectomy are incision and VTP (knifeless vasectomy). Vasectomy can be done at any time. The advantages of vasectomy are high effectiveness of 99.6-99.8%, very safe, no long-term side effects found, rare orbidity and mortality, only once application and effective in long-term LAM,higher cost efficiency ratio and LAMis contraceptive use. While the disadvantage is that it is not effective immediately, the WHO recommends additional contraception at3months after the procedure (approximately 20 ejaculations), the knifeless technique is an option to reduce bleeding and pain compared to incision techniques.

Based on the journal "**F** ailure to obtain desired postpartum sterilization" conducted by Zite N et al which aims to determine the level and risk factors in pregnant women who want **to sterilize** during postpartum. The study used a retrospective method to identify groups of pregnant women who expressed wanting to sterilize at the time of postpartum based on demographics, antenatal factors and intrapartum factors. Of the 712 mothers who stated that they wanted sterilization, only 54% were sterilizedand the remaining 46% were with other contraceptive methods.

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2. IUD

Intrauterine device (IUD) is a safe and highly effective contraceptive. There are three IUDs available in America:Cu T 380A (ParaGard) and two levonorgestrel-releasing IUDs (LNGIUDs), the first is a 20 mcg release 14 mcg per 24-hour levonorgestrel (Mirena) and the latest is a low-dose release 14 mcg per 24 hours (Skyla). The failure rate in thefirst year after insertion was 0.6% to 0.8% for Cu T 380A IUDs, 0.2% for 20-mcgLNG-IUDs, and 0.9% for 14-mcg LNGIUDs. Unlike many other contraceptive methods, the effectiveness of IUDs is independent of user compliance. [2]

Insertion of a 380A T IUD or 20-mcg LNG-IUD is also considered safe and effective immediately after vaginal delivery or cesarean section (and10 minutes after placenta birth), although the risk of expulsion is much higher than if the installation is done more LAMbat. A study comparing the insertion of an LNG-IUD immediately after the placenta was born compared to six months after delivery found 24 percent and 4 percent expulsion rates, respectively. Two other studies compared expulsion rates between installation immediately after placenta birth and delayed Cu T 380A IUDs for both vaginal and cesarean delivery rates of 12% and 17%, respectively. Information for both types of LNGIUD suggests a waiting period of six weeks after delivery. [2]

Although the expulsion rate is low in delayed IUD insertion, the disadvantage of postpartum visits is that some mothers may not return for follow-up. Therefore, the mothers who may benefit most from IUD insertion immediately after delivery are unlikely to return for IUD insertion. When discussing postpartum contraception at prenatal visits, mothers should be counseled about the pros and cons of fitting immediately after delivery with delayed IUD insertion. [2]

IUD use is acceptable in breastfeeding women, although limited data on breastfeeding success rates differ among women using Cu T 380A with LNG-IUDs. One study found no difference in infant growth and overall breastfeeding success between the two IUD types. The American Academy of Family doctors endorse the use of IUDs in women who breastfeed. [2]

The side effects of the LNG-IUD, similar to other progestin-based contraceptives, headaches, nausea, hair loss, breast tenderness, depression, decreased libido, and ovarian cysts. Mothers taking the 14-mcg or 20-mcg LNG-IUD also hadLAMi vulvovaginitis at 20.2% and less than 5%, and abdominal pelvic pain at 18.9% and 12.8%. The mother will haveirregular amenorrhea or *spotting*during LNG-IUD use, although the amount of bleeding decreases for some women who increasingly use the IUD due to thinning of the endometrium. Up to 70% of women taking the 20-mcg LNG-IUD report developingLAMi oligomenorrhea or amenorrhea after two years of use. Because the 20-mcgLNG-IUD reduces endometrial thickness, it has been successfully used for the treatment of menorrhagia. [2]

The Cu T 380A IUD can cause heavy and irregular bleeding. Unlike the LNG-IUD, bleeding, including painful intermenstrual bleeding, may continue throughout use. However, termination rates are similar between types of IUDs. Because the Cu device does not contain hormonal agents, it does not cause progestin-related side effects possibly associated with the LNG-IUD. [2]

3. IMPLANS

Continuation rates and acceptability

An Australian study compared contraceptive methods over the 24-month postpartum period among users of implanon, *combined oral contraceptive pill*

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(COCP) or DMPA and barrier methods. They found that the progression rate was significantly higher for implants than other methods and pregnancies occurred the most LAMbat compared to the other contraceptive groups (P = 0.022). The continuation rate was 86.6% at 12 months reflecting high acceptance and comparing favorably with 74.8% in the general reproductive age range. [3]

Maternal Safety

In a pilot study randomized to 40 women in either immediate etonogestrel implant insertion or DMPA injection at six weeks, none of the mothers experiencedsignificant clinical effects or maternal metabolic changes seen in the implant group. Notably, there were no differences in bleeding patterns between the two groups, changes in maternal blood pressure, or signs of breastmilk. Mean changes in low-density lipoprotein (LDL) levels occurred in both groups, as in high-density lipoprotein (HDL) levels and cholesterol counts but significantly less in the implant group. Average maternal weight loss was more significant in the implanted group in the first six weeks than those allocated for DMPA. [3]

Infant safety

In particular, the use of etonogestrel implants has been studied in breastfeeding mothersbeginning within three days of postpartum insertion compared to insertion at 4-8 weeks postpartum. No differences were found in milk production and cessation of breastfeeding between the two groups. Randomized breastfeeding mothers who had implants compared to Cu-IUDs either started at least four weeks postpartum, found no difference inmilk volume or composition, and no effects associated with small amounts of etonogestrel ingested by infants. In the same study, mothers and their babies were followed for up to three years, and no differences were noted in breastfeeding duration, infant weight and body length, biparietal diameter or psychomotor development. [3]

However, animal studies have suggested the possibility of some adverse effects on infant development with the onset of progestogens. Studies conducted on rats found long-term effects on central nervous system and reproductive system function in males exposed to progesterone neonatally. The study raises caution in recommendations by the World Health Organization (WHO). [3]

Side effectsinclude bleeding, emotional unstable, depression, weight gain, acne and headaches.

4. Injection

Types of progestin injections:

Depo Medroxy Progesterone Acetate (DMPA) Yesit is depot provera which is *6-alphamedroxyprogesterone* used for parenteral contraceptive purposes, has a strong progesterone effect and is very effective. This drug includes Depo noristerat drugs also included in this group containing 150 mg of DMPA which is given every 3 months by injection Intra Muscular (IM) in the buttocks area. Depo provera or depo metroxy progesterone acetate is a progestin synthesis that has the effect of natural progesterone from the female body. Depo provera as an injectable contraceptive drug was effective and safe in family planning services. The assumption that depo provera can cause cancer in the cervix or breast in women who use it, has not been obtained firm enough evidence, even vice versa. There are 3 monthly KB injections packaged in 3ml or 1ml liquid.

1) NET-EN (Norethindrone Enanthate or Depo Noristerat) contains 200 mg of Noratindron Enantat, given every 2 months or 8 weeks or every 8 weeks for the first 6 months (= the first 3 injections, then once every 12 weeks) by intramuscular injection (IM). Noristerate is an injected drug (Depot). 1 ampoule

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of Noriterate contains 200 mg of Noratindron Enantat andoil solution. The solution is a mixture of benzyl benzoate and castor oil in a ratio of 4: 6. Its contraceptive effect mainly prevents the entry of sperm through the cervical lender. After treatment is stopped, fertility usually returns within a few weeks. Because there may be atypical bleeding in some cases, it is necessary to inform each prospective acceptor of this possibility. 99.7% effective in preventing pregnancy if used regularly and on time every three months. A relatively more minor amount of hormones that enter the body so that it will not interfere with the menstrual cycle. Each vial contains the same hormones, making it very unlikely for birth control failure.

Medroxyprogesterone (Depo Provera, Pfizer, New York, NY) is the only synthetic progestin-administered hormonal contraceptive injection intramuscularly towomen at 150mg every 3 months to prevent ovulation. The insert package recommends progesterone medication to mothers who do not breastfeed within 5 days after delivery and after 6 weeks postpartum for mothers who breastfeed exclusively. *The Food and Drug Administration* approved medroxyprogesterone use as a contraceptive in 1,992. Data on medroxyprogesterone used in the early postpartum period (< 6 weeks) are not available for inclusion in the Food and Drug Administration application, and consequently no such data are included in the insert package. In addition, the insert package does not provide guidelines for postpartum use between breastfeeding women ona non-exclusive basis. [4]

Mechanically, the hormones estrogen and progesterone increase duringpregnancy which inhibits milk production. A decrease in progesterone (within 72 hours after delivery) initiates excessive milk production and secretion, giving rise to secretion signals of oriactivation. Breastfeeding the baby will increase prolactin levels, which causes alveolar cells to produce milk. The combination of breastfeeding and high prolactin levels increases oxytocin, causing contractions around the alveoli that release milk into the ductal system. If a breastfeeding mother receives medroxyprogesterone directly (before discharge from the hospital) or early <6 weeks) postpartum period, artificially elevated progesterone can prevent a homeostatic increase in prolactin needed for breastfeeding and may eventually interfere with milk production before the transition from endocrine to autocrine processes. Therefore, administration of medroxyprogesterone can delay the onset of urinary sectarian activation and inhibit breast milk's production, secretion, and volume. Use of medroxyprogesterone immediately or at the beginning of postpartum may limit the duration of breastfeeding, thereby negating the shorter and longer termmaternal / infant benefits associated with breastfeeding (e.g., reduced maternal risk of breast and ovarian cancer; reduced infant risk of allergies, asthma, and obesity). [4]

5. Minipil

Minipil consists of:

a. Package with the contents of 35 pills: 300ug levonorgestrel or 350ug noretindron.
b. Pack with 28 pills: 75ug dosegestrel

   Very effective mini pills (98.5%). Do not forget one or two tablets in the use of minipills because the possibility of pregnancy is huge. The use of acetylcysteine mucolytic drugs along with minipills should be avoided because it can increase sperm penetration. When using minipil should not let any tablets forget, tablets are used at the same time, intercourse should be done 3-20 hours after using minipill.

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Research conducted by ambassadors et al entitled Desogastrel minipill: is this safe in lactating mother which aims to determine the safety, effectiveness, and tolerability of using desogastrel 75 mcg per day in 200 breastfeeding mothers got results not changing the amount of breast milk composition and preventing pregnancy, this drug has good tolerability with minor side effects, does not affect the growth and development of the baby, and breast milk with a success rate of 97.5% and provides good contraceptive efficacy duringthe breastfeeding period.

6. Simple Method

a. MALL

The lactation amenorhe method (MAL) is very suitable for mothers with low economy, because it prevents pregnancy in the first 6 months after giving birth. MALis an inexpensive contraceptive, safe for mothers, and provides ideal nutrition and disease resistance for babies. The use of MAL must meet three criteria: (1) postpartum amenorrhea, (2) breastfeeding entirely/exclusively, which means that infants must breastfeed at least every 4 hours during the day and every 6 hours at night, and (3) infants must be less than 6 months old. Some studies have shown the effectiveness of MAL at 98% or higher among women whomeet all these conditions.

In Review Article entitled "**Assessing the quality of data regarding use of the lactational amenorrhea method**" by Fabic MS1, Choi Y. MAL is an essential modern contraceptive method that, when practiced correctly, has a 98 percent effectiveness rate six months after delivery. This study aimed to test the accuracy of self-reported MAL use and explore differences in accuracy measures by characteristics at the individual and survey level by analyzing data from 73 DHS (Demographic and Health Surveys) conducted in 45 countries between 1998 and 2011. The findings showed that only 26 percent of MAL users reported correctly meeting the MAL practices criteria.

In Research Journal " **Pattern and determinants of breast feeding and contraceptive practices among mothers within six months postpartum**" Shipra Kunwar1,*, Mohammad. M. A. Faridi2, Shivani Singh1, Fatima Zahra1, Zeashan Alizaidi (1). This study aims to determine breastfeeding patterns, menstrual return patterns, and contraceptive practices in the first six months after childbirth in women visiting the outpatient department at a teaching hospital in Lucknow, North India. A cross-sectional hospital-based survey was conducted between January 2009 to October 2009 at Lucknow Medical College and Hospital, Lucknow, Uttar Pradesh, India. Results of the study: Of all women interviewed only 75.8% practiced exclusive breastfeeding with the average duration of exclusive breastfeeding (EBF) being 3.5 months with only 41% practicing EBF forsix months, 28% being sexually active six weeks after giving birth, 64.5% of women having a return to menstruation six months. Contraception has been practiced by only 54.4% of women with barrier methods such as condoms being the most common. Better education was the only significant factor affecting EBF ($p < 0.004$) and contraceptive use ($p < 0.027$). There were a total of 10 pregnancies six months after delivery.

b. CI (Coitus Interrupt)

Coitus interruptus is the oldest form of contraception in the world, accepted in various religious backgrounds. The man pulls his penis from the woman before ejaculation. It has an effectiveness of 96% if done carefully and consistently, and by 80% if done less carefully. The success of this method depends on the couple. It should be emphasized that sperm ispresent in the pre-ejaculatory

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fluid and is therefore capable of fertilizing a woman, even when complete sexual intercourse with ejaculation has not occurred.

Based on the study "**Contraception after delivery and short interpregnancy intervals among women in the unites states"** conducted by White K et al which aims to determine the effectiveness of the use of contraceptive coitus interrupttus after childbirth with the use of this method and the risk of pregnancy that will occur. It was found that 25% of mothers used a simple method (Coitus Interuptus) and 17.8% hadunwanted pregnancies in less than 1 year first.

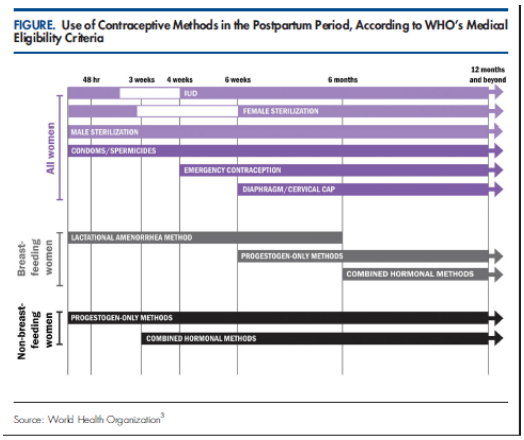
c. Male condoms

Male condoms are the most accessible form of contraception to obtain and use. To be used effectively, condoms must be used before genital contact occurs. The use of condoms in the first week after delivery, sexual intercourse may feel uncomfortable or painful so it is necessary to use water-based lubricants. Oil-based lubricants will interact with the latex and cause the condom to tear. Baby oil will destroy up to 95% of the condom's strength in15 minutes. The use of unique products from kitchen or bathroom cabinets needs to be avoided. If the mother does not breastfeed then it is risky to get pregnant, even in the first cycle of menstruation after delivery. For exclusively breastfed mothers who breastfeed all day and long, the risk of getting pregnant is minimal and if you use condoms you need water-based lubrication because estrogen levels are deficient during breastfeeding.

If one or more of your partners is sensitive or allergic to latex, a hypoallergenic non-latex condom is available, Avanti. Condoms can only be used once and should not be reused.

CONCLUSION

Contraceptive methods used in the postpartum period are Kontap, IUD, Implant, injection, minipill, simple methods (condom, LAM, coitus interruptus).



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