

Importance of PPIUCD in the perspective of present Indian population scenerio

Population of India - present scenerio

India is a country of several problems. At present, population explosion is at the top of the list. In the recent census 2011 report total population of India has reached to 121 crores. Total absolute increase in population during the last decade is 18.15 crores. Population growth during the decade is 17.64 percent. Though this growth is lower in comparison to 21.15 per cent in 2001 this rate of increase is not acceptable and needs to be checked more. The absolute addition is slightly lower than the population of Brazil, the fifth most populous country in the world and is almost equal to the combined population of the United States, Indonesia, Brazil, Pakistan, Bangladesh and Japan put together. The combined population of UP and Maharashtra is bigger than that of the US. This population, accounts for 17.5 per cent of world's population bearing only 2.4% of world's land area. At present world's population is almost 7 billions. India contributes about 20% of births worldwide. China is the most populous nation with 1.3 billion people accounting for 19.4 per cent of the global population. India is on course to overtake China as the world's most populous nation by 2030, but its growth rate is falling.

Contraceptive prevalence in India

In India the contraceptive prevalence rate (CPR) among married women was only 56.3% in India more than 40% are not using any method. The main method of contraception is sterilization. Sterilization accounts for roughly 85% of all modern contraceptive methods used. Three out of four users rely on sterilization in India, overwhelmingly female sterilization. Less than 7% of currently married women use the officially sponsored spacing methods (pills, IUD and condoms), pills- 2.1%, IUD- 1.6%, condom-3.1%, traditional/natural-5.4%, female sterilization—34.2% and male sterilization is 1.9%. The scenario has not changed significantly in the last 10 years. India is a one such peculiar country where there is unchecked population growth on one side, on the other hand there is substantial unmet need for contraception and non-sterilization methods are employed less. In most developed countries more than 70% of couple uses some type of contraceptive measure. China is an exceptional country where more than 85% couple are protected by contraception.

Magnitude of unmet need in India

Despite improved availability and access to contraceptive services, a substantial proportion of pregnancies (21% of all pregnancies that result in live births) are mistimed or unplanned.

Unwanted and mistimed pregnancy results in adverse outcome both for mother and child. Studies show that pregnancies taking place within 24 months of a previous birth have a higher risk of adverse outcomes like abortions, premature labor, postpartum hemorrhage, low birth weight babies, fetal loss, death during neonatal period and child death and maternal death.

While the family planning needs of the majority (86%) of women who wish to stop childbearing are being satisfied, the needs of women who wish to delay or space childbearing remain largely unsatisfied (only 30% of these women have their needs met). This unmet need for family planning is maximum in postpartum year. It is estimated that meeting the unmet needs for contraception alone could cut — by almost a third — the number of maternal deaths.

Unmet need in postpartum period

A large proportion of women in the postpartum period want to accept a contraceptive method to regulate their fertility, either by spacing or limiting future pregnancies. Access to safe and effective contraceptive services in the postpartum period is of utmost importance for a woman to prevent unwanted /mistimed pregnancy. Women are highly motivated and receptive to accept Family Planning (FP) methods during the postpartum period. Demographic and Health Survey show that 40 percent of women in the first year postpartum intend to use a family planning (FP) method but are not doing so. Institutional deliveries have increased significantly all across the country, thereby creating opportunities for providing quality postpartum family planning services.

In India, 65% of women in the first year postpartum have an unmet need for family planning. Only 26% of women are using any method of family planning during the first year postpartum. 8% of the women desire to have another child within the next 2 years after giving birth and are vulnerable to the risks of early pregnancy.

Why postpartum period is most vulnerable to unplanned pregnancy?

While more than 55% of women exclusively breastfeed their babies in the first three months following delivery, this rate drops to nearly zero by one year and this exposes them to risk of pregnancy. In case of partially breastfeeding or not breastfeeding women may resume menses within 4-6 weeks of delivery and first ovulation may occur as early as 45 days postpartum thereby increasing the risk of pregnancy soon after childbirth. Some women may experience amenorrhoea during breast feeding even if they are not practicing exclusive breast feeding or do not satisfy the

three criteria of Lactational Amenorrhea Method (LAM). There is a probability that ovulation may occur before the return of menstruation. Therefore, amenorrhea after child birth is an unreliable indicator that a woman is protected against pregnancy.

Sexual activity after delivery- During the first year postpartum, approximately 40% women return to sexual activity within the first three months. By 10-12 months postpartum 90% have resumed sexual activity which exposes the woman to risk of having an unintended pregnancy. *The period after three months, when exclusive breastfeeding is falling, menses is returning and couples resume sexual activity, can be considered a period of high-yet unperceived-risk of an unintended pregnancy.* Couples will not necessarily see themselves at risk of pregnancy at this time and will not fully recognize the need for family planning.

Approximately 27% of births in India occur in less than 24 months after a previous birth. Another 34% of births occur between 24 and 35 months. 61% of births in India occur at intervals that are shorter than the recommended birth-to-birth interval of approximately 36 months.

Family planning methods available in postpartum period

Various postpartum family planning includes condoms, IUCD, LAM (lactational amenorrhoea method), progesterone only pill or injection, female and male sterilization. In breast feeding women LAM is effective for first 6 months, progesterone only pill or injection can be given from 6 weeks onwards and combined pill to be started after 6 months. In non-breast feeding women progesterone only contraceptive can be started immediately after delivery and combined pill from 3 weeks onwards.

Why postpartum IUCD ?

Provision of IUCD in the immediate postpartum period offers an effective and safe method for spacing and limiting births. Use of IUCD in immediate postpartum period is not a new issue. But its necessity and importance are not addressed properly and are underestimated. Despite persistent misconceptions, IUCD users have higher satisfaction rates (99% versus 91% for pill users) and continuation rates than users of many other methods. Risk of PID in IUCD users is negligible. There has been global changes in thinking about IUCD new advances and new understanding about IUCD. Recent research has led to important changes in WHO Medical Eligibility Criteria (MEC). While the expulsion rate may be as high as 10%, this implies that the retention rate is still 90%. Thus, despite the potentially higher expulsion rates for immediate PPIUCDs, the public health benefit of the service is high.

Advantages of PPIUCD

Counselling during antenatal period and in early labour is very successful and woman and family become highly motivated to accept it as a reliable birth spacing method.

It is safe to use as it is certain that the woman is not pregnant at the time of insertion. There is minimal risk of uterine perforation because of the thick wall of the uterus. There is reduced perception of initial side effects (bleeding and cramping)

and reduced chance of heavy bleeding, especially among lactational amenorrhea method (LAM) users, since they experience amenorrhea. There is no effect on amount or quality of breast milk. It saves time as performed on the same delivery table for postplacental/intracesarean insertions. Additional evaluations and separate clinical procedure is not required. It needs minimal additional instruments, supplies and equipment. The woman has an effective method for contraception before discharge from hospital.

The increased institutional deliveries are the opportunity to provide women easy access to immediate PPIUCD services. Launching of Janani Suraksha Yojana (JSY) has enabled to achieve 73% (CES-2009) institutional delivery.

The popularity of immediate post-partum IUCD insertion in countries as diverse as China, Mexico, Egypt and Paraguay support the feasibility of this approach.

Effectiveness

The CuT-380A is a highly effective (>99% effective). There are 0.6 to 0.8 pregnancies per 100 women in first year of use. The CuT-380A is effective for 10 years of continuous use. It can, however, be used for whatever time period the woman wants, up to 10 years.

Limitations of an IUCD placed in the immediate postpartum period

- Expulsion rates appear to be higher than with interval insertion. Expulsion rates vary from 3 – 37%. In general, expulsion rates for PPIUCD range between 10 – 14%. Good technique can reduce expulsion to 4 – 5%. The skilled clinicians with right technique of insertion are associated with lower expulsion rates. Postplacental and intracesarean insertions have lowest expulsion rates than immediate postpartum.
- Perforation of the uterus is unlikely because of the thickness of the uterine wall in the postpartum period.
- The other limitations of the immediate PPIUCD are the same as the interval IUCD.

Timing of PPIUCD insertion

The PPIUCD can be placed immediately following delivery of the placenta, during cesarean section or within 48 hours following childbirth.

The types of insertion can be categorised into:

- **Postplacental:** Insertion within 10 minutes after expulsion of the placenta following a vaginal delivery on the same delivery table.
- **Intracesarean:** Insertion that takes place during a cesarean delivery, after removal of the placenta and before closure of the uterine incision.
- **Immediate postpartum:** Within 48 hours after delivery: Insertion within 48 hours of delivery and prior to discharge from the postpartum ward.

Extended Postpartum/Interval: Insertion any time after 6 weeks postpartum.

The IUCD should not be inserted from 48 hours to 6 weeks following delivery because there is an increased risk of infection and expulsion.

Technical aspects of IUCD insertion

Provider needs specific training in postpartum insertion. Fundal placement of IUCD is the most important. In postplacental insertion long placental forceps is needed to insert. It can also be done manually with the hand. Negotiation of the "bend" where the uterine body flops over the lower uterine segment is a common challenge during insertion. For intra caesarean insertion it is best done manually with the fingers. Alternatively, regular ring forceps can be used. After the placenta is removed, the provider inserts the IUCD, and then closes the uterine incision. It is important not to attempt to pass the strings of the IUCD through the cervical os before closure of the uterus as this will displace the IUCD and leave it lower down in the uterine cavity. There is no need to fix the IUCD with a ligature. In immediate postpartum (within 48 hours after delivery) insertion regular ring forceps is sufficient for insertion. The provider must insert the IUCD by following all recommended clinical and infection prevention measures for successful insertion. Patient should be selected according to WHO Medical Eligibility Criteria. Membranes ruptured for more than 18 hours, uncontrolled PPH, evidence of chorioamnionitis and extensive vaginal lacerations are the contraindications of PPIUCD insertion.

Follow up

After immediate PPIUCD insertion, a woman should be advised to return to the clinic for routine postpartum care at 6th week as per guidelines, unless she has serious problems which require emergency services. Routine immediate PPIUCD follow up care should be integrated with standard postpartum services. A pelvic examination is done to examine the visibility of the strings and to cut them if the woman finds them uncomfortable. At six weeks postpartum, the IUCD strings can be felt by some women.

If the string is not seen or felt at 6th week, it is mostly in the cervical canal in coiled condition. However, a USG can be done to exclude expulsion. It is not necessary for the woman to check the strings.

Training and implementation

Considering the huge potentiality and abundant scope in India, specially after increase of institutional delivery Govt. of India has started the training on immediate postpartum insertion of IUCD from 2010 with technical support from USAID and JHPIEGO and this will equip the service providers with knowledge and skills to ensure the quality of post partum IUCD services. In many states in India like Tamilnadu, Assam, Rajasthan, Bihar, Jharkhand, Chhatisgarh, Madhya Pradesh and West Bengal the programme has been also implemented and going on with significant achievement.

Conclusion

Provision of IUCD in the immediate postpartum period offers an effective and safe method for spacing and limiting births. Taking advantage of the immediate postpartum period for counselling on family planning IUCD is a good option as a contraceptive method. The increased institutional deliveries are the opportunity to provide women easy access to immediate PPIUCD services. The popularity of immediate post-partum IUCD insertion in countries as diverse as China, Mexico, and Egypt support the feasibility of this approach. PPIUCD has a huge potentiality and abundant scope in India and if widely used it will have a strong impact on population control and will prevent unplanned pregnancy and its sequel.

Sources

1. Census 2011: Provisional Population Totals : Office of the Registrar General and Census Commissioner, India Ministry of Home Affairs 31st March 2011
2. India Reproductive Health Survey, 2003-Family planning fact sheets India.
3. Postpartum IUCD Reference Manual; November 2010, Family Planning Division. Ministry of Health and Family Welfare, Government of India, Nirman Bhawan, New Delhi 11001
4. USAID/ACCESS.2009. Family Planning Needs during the Extended Postpartum Period in India.

Dr Arup Kumar Majhi, MD,DNB, FICOG

Editor in Chief, IJOPARB

Professor, Department of Obstetrics and Gynaecology

R G Kar Medical College, Kolkata, INDIA

E-mail-drarupkmajhi@yahoo.com