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CLINICAL

TO STUDY SAFETY AND CLINICAL OUTCOME OF IMMEDIATE POSTPLACENTAL INSERTION OF IUCD IN NORMAL VAGINALLY DELIVERED PATIENTS

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ABSTRACT

Aims and Objectives : PRIMARY AIM : To study efficacy, safety and outcome of immediate postplacental IUCD insertion in normal vaginally delivered patients SECONDARY AIM : • To study the complications associated with it • To study the expulsion rates • To study the reasons of removal

KEYWORDS

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INTRODUCTION :

India is the first country in the world to launch the Family Planning Programme in 1952. However, the concept of Family Planning as a strategy for the population control received attention mainly after 1971 population census. Whereas National Population Policy of India was formulated in year 2000 with long term objective of achieving stable population by 2045 at the level consistent with requirements of sustainable economic growth and social development.1 Family planning services have undergone a paradigm shift and as emerged as one of the interventions to reduce maternal and neonatal morbidity and mortality.2 Contraceptive use is highest in West Bengal (71.8%) followed by Chandigarh (70.9 %) and lowest in Meghalaya (18.7 %).3

The five main methods of contraception that are provided through the National Family Planning Programme include the condom, oral contraceptives, Copper T and male and female sterilization. Contraception is grouped into three categories –

1. Traditional methods : Rhythm method , Calender Method

2. Modern spacing methods : IUD's , daily or weekly pills, female or male condoms, injectables

3. Permanent methods : Female and Male sterilization

Although contraceptive methods are promoted through Cafeteria Approach, yet female sterilization continues to be the most preferred method for contraception. Policy for contraceptive provision has evolved over time as per

the nation’s priority. India’s policy evolved with advent of RCH II (Reproductive and Child Health) and further with NRHM (National Rural Health Mission), which later transformed to NHM (National Health Mission).The latest policy is an integrated RMNCH+A (Reproductive, Maternal, Newborn, Child and Adolescent Health). The government is following an intensive approach to improve contraceptive practices throughout the country. For this purpose, government has engaged ASHA;s at village level, RMNCH+A counsellors, compensation to the acceptor of sterilization services and the providers (mishaps like complications, failure and death under FIPS – Family Planning Insurance Schemes), providing loss compensation to acceptors of sterilization services.

The following chart shows the incidence of key indicators in the family planning survey :

The PPIUCD was first experimented in 1965 by Dr Zervary at John Hopkins University of Public Hygiene and Health. The PPIUD is popular in countries like China, Egypt and Mexico.4 In 2010, Government of India along with International support of Bill and Melinda Gates Foundation, JHPIGEO and USAID introduced the postpartum IUCD programme in selected states of the country.5

MECHANISM OF ACTION OF IUD (INTRAUTERINE DEVICES) :

? Chemical and cellular changes in the endometrium : All unmedicated and Cu devices produce an inflammatory or foreign body reaction which in turn causes cellular and biochemical changes in the endometrium and tubal fluids (aseptic inflammation). These inflammatory cells engulf sperms and ova by the process of phagocytosis and thus prevents fertilization. When inserted post – coitally, IUD can prevent implantation of fertilized ovum.

? Increased Tubal Motility : Resulting in quick migration of the fertilized ovum into the uterine cavity before the endometrium becomes receptive.

? Impaired sperm ascent

? Copper devices : Local anti – fertility effect by preventing implantation through enzymatic interference.

In nutshell IUD’s prevent implantation of fertilized ovum.

TIMING OF INSERTION :

? Post-placental : Within 10 minutes following delivery of the placenta following a vaginal delivery.

Insertion during ceasarean delivery, after the removal of the placenta and before the closure of the uterine incision. 8

? Immediate postpartum : IUD is inserted following delivery after normal delivery within 48 hours of the delivery. Kelly’s forceps or long sponge holding forceps have been used to introduce CuT 380A near fundus. The expulsion rate is slightly higher.

? Interval Insertion : Insertion of IUD atleast 6 weeks after parturition or MTP or abortion. Insertion of IUD is done soon after menstruation when the cervix is usually softer, more dilated for easier insertion. However, IUD can be inserted at any time of period after excluding pregnancy.

? Post Abortal : IUD can be inserted safely immediately after medical termination of the pregnancy or within 12 days of an abortion is complete and infection and injury to the genital tract are ruled out.

IUD can be inserted around day 15 of medical method of abortion, provided the abortion procedure is complete.

? Post – coital insertion : Copper devices can be used for post coital contraception upto 5 days after unprotected coitus.

Unmet need of contraception specially during lactation period leads to unwanted pregnancy. The patient is not aware that pregnancy can occur in this period. This leads to short interval between pregnancies leads to preterm labour, PPH, LBW, Fetal demise and maternal morbidity and mortality. Hence contraception needs to be practiced in this critical period as in immediate post delivery period women are highly motivated and has good acceptance too for contraception. Most woman do not desire a pregnancy immediately after a delivery but are unclear about contraceptive usage in postpartum period. This result in unplanned and undesired pregnancies, which in turn increases induced abortion rates and consequently maternal morbidity and mortality associated with it. In a recent study of postpartum unintended pregnancies 86% resulted from nonuse of contraception and 88% ended in induced abortions. 1 Continuation of these pregnancies is also associated with greater maternal complications and adverse perinatal outcomes. In India,65% woman in the first year postpartum have an unmet need for family planning. 2 Hence , providing contraception in this sensitive period is important. Contraception not only provides control over the pregnancy but also helps in spacing and the prevention of unintended pregnancies. Our study is an attempt to establish that PPIUD is as a safe and effective mode of contraception.

MATERIAL AND METHODS :

NUMBER OF INDIVIDUALS : Sample Size : 250 patients TYPE OF STUDY : Hospital based Interventional and Prospective study

STUDY CONDUCTED : The study was carried out in the department of Obstetrics and Gynaecology at Tertiary Care Centre in western Maharashtra STUDY DURATION : From September 2019 to November 2021

INCLUSION CRITERIA : Non high risk normal vaginally delivered patients .

EXCLUSION CRITERIAS :

4. Anaemia Hb < 8gm %

5. PPH, DIC, severe PIH

6. Obstructed Labour

7. PROM > 18 hours, Puerperal sepsis

8. Distorted uterine cavity by uterine fibroid

FOLLOW UP :

Patient is observed after the insertion of PPIUCD till discharge and then called for follow up : 1) Follow up after 15th day of delivery. 2) Follow up after 3 months of delivery. 3) Follow up after 6 months of delivery

METHODOLOGY :

• Individuals were selected from Government Tertiary Hospital from western Maharashtra Antenatal Out Patient Department (ANC OPD) and Labour Room and antenatal Ward by simple random sampling method.

• An informed consent was taken.

• History was obtained in detail & thorough clinical examination is carried out.

• The counselling was started from ANC period onwards in ANC OPD, wards and even in latent labour room too.

• IUCD was inserted within 10 mins of placental expulsion using Kelly's forceps under an aseptic precautions then episotomy was sutured.

• Patient was observed till discharge daily and called for follow up after 15 days, 3 months and 6 months of discharge.

At each visits patient was observed and asked for any complaints due to PPIUCD like pain in abdomen, abnormal Uterine Bleeding, misplaced,expulsion of IUCD, failure of contraception and sepsis. Ultrasonography was performed for the patient who came with the complaints of excessive per vaginal bleeding and severe pain in abdomen for the confirmation of location of IUCD and to rule out any other complications.

The patient who had missing strings with IUCD in – situ were reassured and counselled for the continuation of PPIUCD use. In patients who had expelled the IUCD was advised to use some other alternatives for the contraception.

STATISTICAL ANALYSIS : Final statistical data analysis was done by using Chi – square test and Fisher Extract test. These tests were used to evaluate association between the acceptance and non acceptance with various factors. p –value < 0.05 is considered as significant.

DISCUSSION :

The voluntary control of fertility is very important in modern society. The poor aaceptance of family planning is associated with illiteracy, ignorance, poverty, religious and social issues as well as family pressure. According to World Health Organization (WHO) it estimates that there were about 1,25,000 unwanted pregnancies terminated every day.

AGE : This table shows frequency of distribution of age among study subjects in 250 study cases, 39.2 % patients were in age group of 21-25 and 36.8 % were in age group of 26-30 , 13.6 % patients were teenagers. Only 8 % were above 35 age group. Hence acceptance of contraception was highest in middle age group.

GESTATION AGE : This table shows frequency of distribution of gestation age among study subjects in this study 35.2 % of the patients belonged to the gestation age of 38 weeks, 22.8% patients had gestation age of 39 weeks and 19.6 % patients had 37 weeks of gestation age.

GRAVIDA : This table shows frequency of distribution of gravida among study subjects, in our study 28.8 % of women who accepted PPIUCD as contraception had 3rd gravida , 28 % of women with primigravida where as only 2.8% with 5th gravida. So in our study women till third gravida were willing for the PPIUCD where as above 3rd gravida were straight away willing for permanent contraception.

EDUCATION : This table shows frequency of distribution of education among study subjects, in this study 16.8 % of women were illiterate where as rest that is 83.2% were literate population. There is a strong correlation noted between women's education and the acceptance of the 66 contraception. Low education in study group was major unfavourable factor for accepting the contraception. Similar results obtained in studies of Sinha 82 1994, Kanoji 83 1996, Sing M et a 77 2010.

OCCUPATION : This table shows frequency of distribution of occupation among study subjects , 56 % of women were housewives where as remaining that is 34 % of women were working. If women were working they had a power to take decision and they can better regulate their sexuality and fertility. But housewives remain confined to their homes and depend upon the husband and family members for any decision making. Rather more counselling and motivation was needed for the acceptance of contraception in housewives than working women. There were similar studies conducted in the South Delhi 84 and in resettlement colony of Delhi 85, Singh Met al 77.

RESIDENCY : This table shows frequency of distribution of residency among study subjects, most of the women belonged in our study were from urban residency that is; 70.4 %. Urban slum area have access to transportation and health facilities than population staying in the rural area.Socio- economic status has a definitive role in accepting the contraception.

COMMON CONTRACEPTIVE KNOWN : This table shows frequency of distribution of most common contraceptive known among study subjects, in our study 37.6% were aware about the barrier method where as 26 % of women were of the tubectomy mode of the

contraception. The incidence of awareness of contraception was more in the urban area. In NFHS 3 92 maximum awareness was for tubectomy (98%) where as in study by Srivastav et al 2013 maximum awareness was for barrier method (88.7%).

TIME OF COUNSELLING : This table shows frequency of time of counsellng among study subjects, in our study during intrapartum period women were more receptive for the acceptance of the contraception. It was comparable with other studies like Singh M et al (2010)77, ssssRomero et al 98, as well as to NFHS 3 (56.3%). Women in this study were given health education and were counselled for accepting one of th e methods of contraception in antenatal OPD, in maternity wards, family planning OPD and even in latent periods in intrapartum period. It was observed `that women in the intrapartum period were more receptive for the couselling of the contraception.

SOURCE OF KNOWLEDGE : This table shows frequency of distribution of most common contraceptive known among study subjects, in our study 34.4% women had received knowledge about the contraception from health facilities, 26.4 % women from family members and 14.8 % from media. But, Tuladhar H et al 91 observed that most common source of knowledge of contraception was media (55.5%). Similar observation in the study Thapa S et al in 2013.

REASON FOR REFUSAL OF PPIUCD : This table shows frequency of distribution of reason for not accepting PPIUCD among the population, even after counseling few women did not accept to PPIUCD as contraceptive methods. Various reasons were enumerated from patients for not accepting contraception was further analyzed. The main reason for non-acceptance for contraception was fear of complications (37.33%) and second most common reason was husband not willing (18.67%). 20.4 % patients were ignorant of contraception where as 12 % patients had a fear. Similar results were observed in studies done at Delhi 104 and Chandigarh 106.

MODERATE – SEVERE ABDOMINAL PAIN : This table shows frequency of distribution of moderate to severe pain in our study, 16.4 % patients had moderate to severe pain post IUCD insertion when they came for follow up. Among all patients in the study 2.4 % patients, CuT was removed due to moderate to severe pain where as others were managed medically. Similarly 83.6% of the patients came with mild pain which were managed by conservative mode by oral Mephenamic acid 250 thrice daily for 5 days. It is observed that maximum patient came with the complaints of moderate to severe pain abdomen in early follow that is within a month. As days progressed patient was adapted to PPIUCD and with reassurance, the patient came less frequently with any complaints.

These findings are comparable with study by Gupta et al 33 in Meerut in 2013, where the cumulative incidence of excessive pain in abdomen was 5.6%.

EXCESSIVE PV BLEEDING : This table shows the frequency of distribution of excessive per vaginal bleeding in this study, 16.0 % of the patients had excessive per vaginal bleeding at follow up. Excessive PV bleeding is defined as change of sanitary pads every two hours during the period of menstruation. In which 2.4 % patients CuT was removed for the same reason. But 45 % patents who had mild per vaginal bleeding which were tackled by mere counselling and by medications like Tab Tranaxemic acid 500mg thrice daily for five days and Tab. Sylate for five days.

In study conducted by Eroglu et al in Turkey the incidence of excessive per vaginal bleeding is 2.4% which is much less than our study. In study done by Gupta et al in India in 2013 on 300 patients with PPIUCD the incidence of per vaginal bleeding was 4.3%.

EXPULSION OF PPIUCD : This table shows the frequency of distribution of the expulsion of the PPIUCD, one of the most important drawback of postpartum IUCD insertion is expulsion rates. In our study among 250 patients 29 patients that is 11.6 % came with expulsion of CuT.

The expulsion rate in a study by Celen et al 2003 who inserted PPIUCD in both vaginal and intra caesarean cases total of 235, the cumulative expulsion rate is 12.3%. In comparative evaluation by Gupta et al 30, 150 patients in each in vaginal and intra caserean PPIUCD group at the end of 6 months follow up the cumulative expulsion rate was higher in vaginal PPIUCD (6 %) than intra caserean PPIUCD (2%).

PPIUCD FAILURE : In our study no patient had contraceptive failure. Hence it proves that PPIUCD is one of the most efficacious mode of the contraception.

REASON FOR PPIUCD REMOVAL : This table shows the frequency of distribution of reason for removal of CuT in our study, 2.4 % patients reason for removal for CuT was moderate to severe pain and 2.4 % patients reason was excessive per vaginal bleeding. In maximum cases (94%) cases continued with CuT.

Theiry et al 51 in his study in Belgium with PPIUCD insertion using ML Cu 250 and CuT 200 in 562 patients, found the removal due to pain and bleeding is 3.2% and 1.8% respectively. The removal rate was 4.9% in study in 1317 women over 5 years conducted by Shukla et al 32.

SAFETY OUTCOME : 8.8 % of the patients had unusual vaginal discharge, 4.4 % patients had irregular bleeding and 3.2 % patients had infection. There were no perforation cases amongst the study population. Infection was defined by the presence of fever, purulent vaginal discharge and signs of sepsis.

EFFICACY OUTCOME : In our study, 11.6 % women came with the expulsion rates and 4.4 % came with discontinuation of PPIUCD. Where as no patients had contraceptive failure which proves PPIUCD is efficacious contraception.

SUMMARY AND CONCLUSION :

Following conclusions can be drawn from our study.

In our study total 250 patients were included in which majority of women were in the age group of 21 to 25 years with 39.2%. . There was an association that higher age group of women were willing for permanent sterilisation and more the acceptances of the use of contraception was in the age group of middle age. Adolescents were the age group where more counselling and the motivation was needed. Majority of the women were of gestation age of 38 weeks that is 35.2% and majority of women in this study had 3rd parity who had accepted for PPIUCD, where as parity more that three were willing for tubectomy as the means of contraception. 56% of women in this study were housewives by occupation whereas 44 % women were from working class. 70.4% of the patients who accepted the PPIUCD belonged to urban residency , whereas it was a tough task to council the rural population due to inadequate knowledge. It was observed that barrier method (37.6%) followed by tubectomy (26%) was most commonly known method for the contraception to the population and women had more acceptance of contraception in intrapatum period (58%). 34.4% women came to know PPIUCD as contraception method from health facility followed by 26.4% women from their family members. The fear of complications (37.33%) was most common reason for not accepting the contraception and second most common reason was refusal from the husband(18.67%). The most common complication noticed after PPIUCD insertion was excessive PV bleeding(16%). The expulsion rate of immediate postplacental insertion of PPIUCD according to this study was 11.4%. There were no cases of uterine perforation in this study. No patients had contraceptive failures hence this proves that PPIUCD is most safe and efficacious mode of contraception. Th

In our study , we concluded that the insertion of postpartum IUCD using a Kelly’s forceps is an effective , safe, convenient and comfortable method of PPIUCD insertion. In India where population explosion is biggest crisis, family planning is utmost important. Hence every effort should be made to make population aware about the contraception, to bring down the failure rates and the complication rates of the contraception measures so that more couples will accept the contraception. Caregiver should educate the patient about the potential benefits , adverse effects and the complication of IUCD. A regular self examination for the missing thread is mandatory and any warning signs patient should immediately report to concerned obstetricians. 75 Lack of well organized outreach activities in slums has emerged major problem and need to be solved. This can be sorted by more information, education and communication with immediate postabortion and postpartum contraception measures. Health education , counselling, strong political commitment, effective health care system, change in the knowledge, attitude and practices of contraception as a whole constitutes important factor to increase awareness as well as its acceptance in the society. There was no contraception failure in our study cases thus it proves the safety and efficacy of the PPIUCD use as contraceptive method. There are large number of contraceptive options available today. It is important to choose a method that best suits the need of a couple so as to avoid unintended pregnancies. The choice of contraception should be made by active participation of the client supported by health care provider.

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Conflict of Interest

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