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A Study to Evaluate the Efficacy and Complications of Postpartum IUCD Insertion at Tertiary Care Centre

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ABSTRACT

Background:
The postpartum period is an important time in a woman's life to promote the health of the newborn and the mother. Intra Uterine Contraceptive Device is the most commonly used reversible method of contraception worldwide.

Aims and objectives :
This study aims to evaluate the efficacy and rate of complications following PostPartum IntraUterine Contraceptive Device (PPIUCD) insertion both in vaginal and cesarean section deliveries among parturients with the ultimate goal to avoid unplanned pregnancies and to expand the usage of IUCD.

Method :
This retrospective longitudinal observational study was conducted at department of Obstetrics and Gynecology, V. S. General Hospital, Ahmedabad from January 2020 to December 2020.Total 600 patients who were delivered and fulfilled the medical eligibility criterias were counselled for postpartum IUCD insertion, out of which 100 patients who accepted were included in this study.With the help of data collected, relevant parameters and data are critically analysed. Women in whom PPIUCDwas inserted were followed up for 3 months post IUCD insertion.Copper T 380A was used.

Results:
The patients who accepted PPIUCD mostly belonged to the age group 19-24 years.15% of the patients experienced minor complications, most commonly, bleeding and abdominal pain.

Conclusions:
We can conclude that immediate PPIUCD is an effective and safe contraceptive method.

Keywords: Copper T 380A, Immediate postplacental insertion, Intracesarean insertion, Postpartum intrauterine contraceptive device

I. INTRODUCTION

Family planning is important for improvement of maternal and child health and for population stabilization(1).The postpartum period is potentially an ideal time to begin contraception as women are more strongly motivated to do so in postpartum period and it is convenient for both patients and healthcare providers(2).IUCDare among the most commonly used reversible method of contraception in women of reproductive age group worldwide(3)which is a highly effective, safe,private,long-acting,coitus independentwith few side effects.The current national strategy in India Is to increase the use of IUCD as contraceptive measure(4).

II. METHODS

Study group and period

This retrospective observational study was conducted at department of Obstetrics and Gynecology, VS General Hospital,Ahmedabad from January 2020 to December 2020.Total 600 patients who were delivered and fulfilled the medical eligibility criteria were counselled for PPIUCD insertion,out of which 100 patients who accepted were included in this study.With the help of data collected from case reports,relevant parameters and data are critically analysed in our study.Copper T 380A was used.

WHO Medical Eligibility criterias(5).

•No restriction for the use.
•Advantages of usingmethodoutweigh the risks.
•Risks outweigh the advantages of usingmethod.
•Unacceptable health risk if method used.

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Inclusion criteria

1. Age greater than or equal to 18 years
2. Those who do not have any contraindications for PPIUCD insertion.

Exclusion criteria

1 Fever during labour and delivery (Temp >380c)
2 Having active STD and other genital tract infection or high risk for STD
3 Known to have ruptured membranes for >18 hrs prior to delivery
4 Known uterine abnormalities ef. Bicornuate/septate uterus, uterine myomas
5 Manual removal of the placenta
6 Unresolved postpartum hemorrhage (PPH) requiring use of additional oxytocic agents in addition to AMTSL.
7 Instructed labour
8 Extensive genital tract trauma

After selecting the women who fulfilled the eligibilitycriteria,detailed informed consent, medical,obstetrical and gynecologicalhistory was taken and complete general physical as wellas pelvic examination was done and the findings wererecorded in the pre-designed performa.The procedurewas carefullyexplained to the women to make her ascomfortable as possible.

Post-partum IUD (PPIUCD) insertion

It is the insertion of IUD within 48 hours after delivery. Itis of 3 types on the basis of insertion time.

1.Post placental insertion

Insertion within 10 minutes following delivery of theplacenta following a vaginal delivery.

2.Intra cesarean insertion

Insertion that take place during a cesarean delivery, afterremoval of the placenta and before closure of the uterineincision.

3.Post partum before discharge

Insertion of IUD within 48 hours after delivery andbefore the women leaves the facility where she delivered.

Follow-up

After PPIUCD insertion,follow up was scheduled at 6 weeks and after 3 months for assessment of acceptability.During follow-up complete clinical examination was done.Those patients who did not come for follow-up were contacted on phone and enquired regarding any complains and complications about of copper T insertion.

Complications analysis

It was done on the basis of patient's complaints like excessive vaginal bleeding,abdominal pain ,vaginal spotting,foul smelling vaginal discharge, etc.

Efficacy analysis

In view of expulsion rate and continuation rate at follow-up visit.

III. RESULTS

Table 1:distribution according to age,parity and timing of insertion

Age	Parity				Timing of insertion			Total (%)
	Primi (%)	2 (%)	3 (%)	≥4 (%)	Postplacental (%)	Postpartum>48 hours (%)	Intracesarian (%)	
18-20	25 (92.59%)	02 (07.40%)	00 (0%)	00 (0%)	09 (33.33%)	11 (40.74%)	07 (25.93%)	27 (27%)
21-25	14 (32.56%)	22 (51.16%)	07 (16.28 %)	00 (0%)	04 (09.30%)	24 (55.81%)	15 (34.89%)	43 (43%)
26-30	06 (33.33%)	03 (16.67%)	09 (50%)	00 (0%)	01 (05.56%)	07 (38.88%)	10 (55.56%)	18 (18%)

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31-35	01 (12.5%)	03 (37.5%)	02 (25%)	02 (25%)	01 (12.50%)	05 (62.5%)	02 (25%)	08 (08%)
>35	01 (25%)	00 (0%)	01 (25%)	02 (50%)	00 (00%)	03 (75%)	01 (25%)	04 (04%)
Total	47 (47%)	30 (30%)	19 (19%)	04 (04%)	15 (15%)	50 (50%)	35 (35%)	100 (100%)

Out of 100 cases,majority of the patients opting for PPIUCD were primigravida and second gravidas and belonged to 21-25 years age group and among them majority of insertions were within 48 hour postpartum.Maximum number of IUCD i.e.50(50%) were insertedpost partum(<48 hrs),followed by intracesarean 35(35%)and only 15(15%) were inserted postplacental.

Table 2:Complications of PPIUCD at 6 weeks follow up.

		Intracesarean insertion (%)	Postvaginal delivery insertion(%)	Total(%)
Complications	None	25(71.43%)	60(92.31%)	85(85%)
	Bleeding pv	03(08.57%)	02(03.07%)	05(05%)
	Spotting pv	02(05.71%)	01(01.54%)	03(03%)
	Infection	01(02.86%)	00(00%)	01(01%)
	Pain	03(08.57%)	01(01.54%%)	04(04%)
	Expulsion	01(02.86%)	01(01.54%%)	02(02%)
	Perforation	00(00%)	00(00%)	00(00%)
	Total	35(100%)	65(100%)	100(100%)
Missing strings	No	27(60%)	63(93.3%)	90(76.70%)
	Yes	08(40%)	02(06.70%)	10(23.3%)
	Total	35(100%)	65(100%)	100(100%)

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Table 3:Reason for removal at 3 months follow up.

Reason for removal	N	%
Pain	02	10%
Infection	01	05%
Bleeding	03	15%
Desire for use of other contraceptive methods	01	05%
For tubal ligation	03	15%
Vague causes like family pressure	10	50%
Total	20	100%

Table 4:Continuation rate at 3 months follow up.

Total insertions	100	%
Expulsion	02	02%
Removal	20	20%
Continuation	78	78%

Among the cases followed up,2% had spontaneousexpulsion of IUCD and 20% cases sought voluntaryremoval,while 78% of the cases continued using PPIUCDas an acceptable method of contraception at follow up.

IV. DISCUSSION

Acceptance was common among age group of 21-25 years and primigravida and second gravida patients comprising of 77% which is comparable to study done by Gunjan Goswamy et al[6].

Maximum number of IUCD i.e. 50%were inserted post partum(<48 hrs),followed by intracesarean insertion35%and15%were inserted postplacental.In shah et al Maximum number of IUCD i.e. 51.2%were inserted in immediate postpartum period, followed by postplacental 39.6%and9.2% were insertedintra caesarean[7].

During follow up examination at 6 weeks, in 10casesppiucd strings were not visualized on per speculum examination.We further did ultrasound examination for localisation of ppiucd and found that out of these 10cases,8 cases had IUCD in proper position while none of the IUCD was found to be displaced whereas In 2 casesIUCD had expelled spontaneously.Expulsion rate was 2%.As per study conducted by Haldar A et al at NRS Medical College, Kolkata expulsion rate was 4% after post placental vaginal insertion and 2% after postplacental caesarean insertion.In our study the expulsion rate after postplacental vaginal insertion was 1% and post placental caesarean was also 1%[8].

Continuation Rate at 3 months is 78% which is similar with the study by Gunjan Goswamy et al in which continuation rate was 76.67% at 3 months follow up[6].

85% ofcases were comfortable and satisfied with PPIUCD at 6 weeks follow up examination and did not report any complains or complications whereas 15% of casesreported complications like bleeding, infection, spotting, abdominal pain among which 9 patients had intracesareaninsertion and 6 patients had vaginal insertion.Bleeding was the most common complicationreported by 5% of cases and abdominal pain was 2nd most common complication reported in 4 % of patients whichcorrelates with study by Gunjan Goswamy et al[6].There were no cases of uterine perforation or misplaced IUCD or Pelvic Inflammatory Disease (PID) .

Reason for removal of IUCD wasevaluated.Total 20 out of 100 patients desired for IUCD removal at their follow up visit at 3 months.Maximum number of CuT removed was due to vague causes i.e.family pressure,lack of satisfaction,religious beliefs, etc (50%) and 15% removal were due to bleeding per vaginum.15% removal were for nonmedical reasonsi.e. tubal ligation.Gunjan Goswamy et al found bleeding/discharge (30%), abdominal pain (20%), family pressure (20%), just did not want to continue (5%) were the reasons they found for removal of IUCD in the follow up[6].

V. CONCLUSION

PPIUCD is asafe,convenient and effective longacting reversible contraceptive method and is particularly beneficial in a country like india currently facing population crisis and high maternal and neonatal morbidity and mortality due to great number of births occuring at short intervals and where women do not return for contraceptive advice.Acceptance was high among young patients and primigravida.The expulsion

rates werehigher than the conventional Interval method but with proper counselling,maintaining strict aseptic precautions and with proper insertion technique, the expulsion rates decrease and PPIUCD proves to be a very effective contraceptive method. Maximum patients desired removal due to family pressure which reveals the importance of partner involvement during counseling and decision making.With the high level of acceptance despite low levels of awareness, the government needs to develop strategies to increase public awareness of the PPIUCD through different media sources.All healthcare personnel including ANM, staff nurse and doctors should be trained to give proper counselling regarding PPIUCD and its benefits.

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