ORIGINAL RESEARCH PAPER

Volume-7 | Issue-9 | September-2018 | PRINT ISSN No 2277 - 8179

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

ACCEPTABILITY, OUTCOME AND COMPLICATION OF POSTPARTUM CONTRACEPTIVE DEVICE; A STUDY IN TERTIARY CARE CENTRE

Gynecology

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ABSTRACT

This is retrospective observational study from 2012 to 2017 at NRSMCH. Women delivered at NRSMCH, were counselled and PPIUCD inserted within 48 hours of delivery, who fulfilled the medical eligibility criteria. Mothers were followed up at 6 weeks after delivery. The study outcome measures analysed were acceptance, complications like menstrual irregularities, vaginal discharge, pelvic infection and perforation and causes of removal.

A total of 76005 Antenatal Mothers visited NRSMCH Obstetrics OPD and Emergency and counselled. 4729 PPIUCD inserted-2002 cases after Vaginal Delivery and 2725 cases after Caesarean section. Delivery-Insertion ratio is progressively increasing from 3.52% to 19.5%. Acceptance is higher among Urban people (71%) and Parity 1 and 2. Almost, 62% clients are in ≤ 25year-age group. Pain Abdomen and Bleeding per Vagina are the most common complications.

KEYWORDS

PPIUCD, Acceptability, Postpartum Period

INTRODUCTION

Postpartum is a very important period to introduce contraceptive information because women are more willing to receive messages. In India,65% of postpartum women during their first year want to space or limit their future pregnancies, but don't use any modern family planning methods.[1] During the postpartum period, mothers are not aware of their risk for pregnancy due to various reasons like taking care of new babies and families, confusion and misconception regarding contraceptive options and they present at Health facility when they are pregnant again.

61% of births in India occurs at intervals that are shorter than the recommended birth-to-birth interval of 36 months (27% of birth occurs within 24 months after a previous birth and 34% of birth between 24 to 36 months). Only 26% of women are using any method of Family Planning during 1st year Postpartum.[2]

The most successful procedure on providing PPIUCD is counselling women at every opportunity. Ideally counselling would be initiated during pregnancy, such as at every ANC visit and during admission at antenatal ward.

AIMS AND OBJECTIVES

An IUCD is an effective form of long lasting reversible contraception with high efficacy, safe, private and it is coitus independent. Present study is aimed at

1. Determining the acceptance, outcome and complication regarding PPIUCD contraception with time
2. Follow up of these patients
3. Identify causes of removal of PPIUCD

Materials and Methods

Study Place, Period and Type

This is a single institute based retrospective observational study from January 2012 to December 2017 In Department of Obstetrics and Gynaecology at NRSMCH, a tertiary care Hospital in Eastern India.

METHODS

During study period, 76,005 women visited the Antenatal OPD and Emergency of NRSMCH and counselled regarding PPIUCD. 54,831Women delivered and 4729 PPIUCD insertion done with informed consent within 48 hours of delivery, irrespective of parity among mothers who fulfilled the medical eligibility criteria. Mothers were followed up at 6 months postpartum and Outcome measures analysed were complications like Menstrual Irregularities, vaginal Discharge, Expulsion, Pelvic Infection and Perforation.

INCLUSION CRITERIA

- All mothers within 48 hours of delivery with informed consent fulfilling WHO MEC

EXCLUSION CRITERIA

- Chorioamnionitis
- Rupture of Membranes >18hours prior to delivery.
- Occurrence of unresolved Post-Partum Haemorrhage.
- Extensive vaginal laceration.
- Puerperal sepsis.

STATISTICAL PLAN FOR ANALYSIS:

Descriptive statistical analysis was carried out in the present study.

The results on categorical measurements were presented in Number (%). Significance was assessed at 5 %. P<0.05 was considered as statistically significant.

Inferential statistical analysis: Chi-square test for trend analysis and Fischer's exact test for equal proportions were used to find significance of the study parameters

STATISTICAL SOFTWARE: The Statistical software namely SAS version 9.2, Stata 10.1, SPSS Version 21 , Systat 12.0 and R environment ver.2.11.1 were used for the analysis of the data and Microsoft word and Excel have been used to generate graphs, tables etc.

RESULTS AND ANALYSIS

A total no. of 76005 Antenatal mothers visited NRSMCH Obstetrics OPD and Emergency and Counselled regarding PPIUCD from January 2012to December 2017. A total of 54,831deliveries underwent at NRS Medical college in that time period.31,473 patients underwent vaginal delivery and 23375 patients underwent C-section over a period of six years from 2012 to 2017.In that time period total number of PPIUCD was 4729.Of which,2002 cases after Vaginal Delivery and 2725 cases after Caesarean section. 861(43%) Mothers of vaginal deliveries and 1663(61%) Mothers of Caesarean Section attended OPD for follow up within 6 months period.

TABLE NO.1: Sociodemographic and Obstetrics characterized pattern of PPIUCD

Criteria		No. of Cases	Percentage
Age(years)	≤20	1362	28.8
	21-25	1906	40.3
	26-30	1192	25.2
	≥31	269	5.7
Parity	1	1929	40.8
	2	1958	41.4
	3	714	15.1
	≥4	128	2.7
Residence	Urban	3357	71
	Rural	1372	29
Religion	Hindu	3544	74.94
	Muslim	1185	25.05

The sociodemographic and obstetrics characterized pattern of PPIUCD is shown at Table no 1.

FIGURE NO 1: Year Wise Breakup Diagram According To Mode Of Insertion

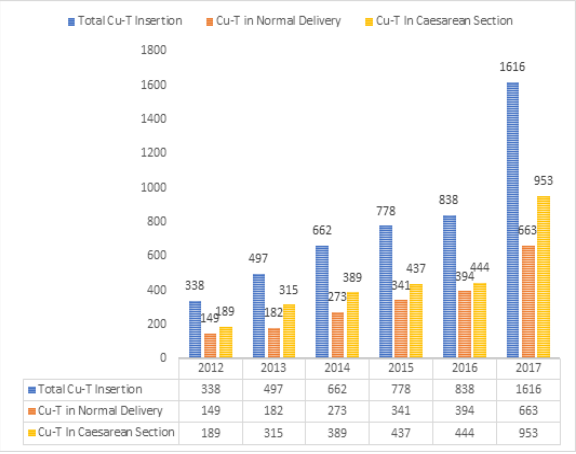


TABLE NO 2: Complications Of PPIUCD

Complications		Vaginal Delivery, n= 861	Caesarean Section, n= 2727	P value
Bleeding per vagina		114(13.24%)	242 (14.56%)	0.679
		81 (9.39%)	15 (0.88%)	0.002
Expulsion	Complete Expulsion	62	4	
	Partial Expulsion	19	11	
Infection		11(1.30%)	13 (0.80%)	0.167
Perforation		0	0	
Pain Abdomen		89 (10.29%)	249(14.96%)	0.072
White Discharge		12 (7.74%)	94 (5.65%)	0.279
Pregnancy		1 (0.049%)	0	0.89

P computed by Fischer's exact test, p<0.05 considered as statistically significant

Table 2 indicates that there is significantly higher complications with regards to the expulsion after PPIUCD insertion in the vaginal delivery cohort as compared to the C-section cohort, p value (p=0.002).

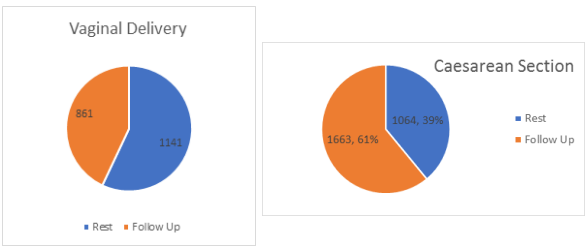
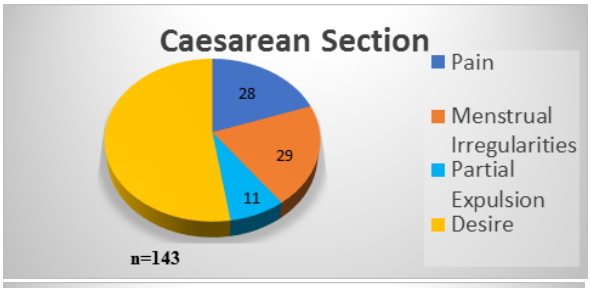
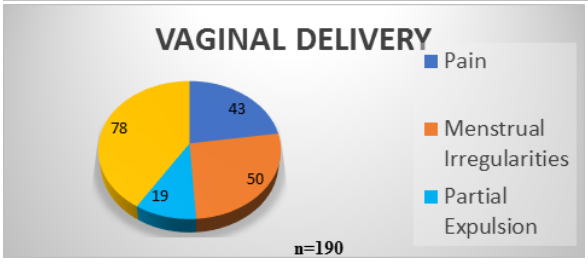


FIGURE NO2: Follow Up





Total removal were done in 333 cases for different causes.190 cases among 861 vaginal deliveries and 143 cases among 1663 c. section were considered for removal of PPIUCD

DISCUSSION

In this study, almost 69.1% acceptors are below 25 years of age. The result supported by Halder et al where they found acceptance of PPIUCD is more in the age group <25 years is 63%.[3].A study by Usha et al shown that the unmet need for Family Planning is high among 20-24 years for spacing and only 6% chose for limiting method.[4]. It is indicating the necessity to influence them at this age for proper spacing and limiting.

Acceptance of IUCD is almost equal among Parity-1 and Parity-2(40.8% and 41.4%) which is contradicted by Grimes et al where they found higher acceptance in multi-Para client (65.1%) .[5] and also contradicted by Safwat et al ,where only 16% primi mothers accept the PPIUCD.[6].In this study, urban populations(71%) accepted PPIUCD more than rural populations. This is contradicted by Halder et al where it is equal(50%)[3]

It is found that number of acceptance of PPIUCD has increased from 2012 to 2017. Delivery – Insertion ratio has increased from 3.52% to 19.51% in this fiveyear time period. Good Family Planning Counselling, Mutual trust between Client and Counsellor and relevant, accurate and complete information help to increase the insertion ratio from 3.52% to 19.5%. Vidyarama-et-al in her experience at a tertiary care showed an acceptance rate from 2 to 15% which support the study result.[7]

Regarding complications, bleeding per vagina is most common and it is independent of route of insertion.13.24%among vaginal deliveries and 14.56% among c.section complained about bleeding. Shukla et al also supported this result and found 27.2% complained about bleeding [8]. AndcelenS,et al [9] also found same result .(2004)

Expulsion of PPIUCD was another common complication and in present study it is more in vaginal deliveries (9.39%) where as 0.88% among C.sections.Celen S(2004) et al reported 1 year cumulative expulsion rates of 12.3% and 17.6% in two different studies [9,10].Expulsions were significantly higher after vaginal deliveries in comparison to c.section according to Knapp N et al[11].

A study have found no incidence of Infection after PPIUCD insertion [8]
No significant difference regarding bleeding and infection were found among vaginal deliveries and c.section(value-0.679 and 0.169) which supported by welkovic S et al.[12]

Follow-up Clinic attendance of PPIUCD is not so much of expected levels.Shukla et al, reported a follow-up of 78.7% in a prospective longitudinal study.[8].Being a retrospective study, poor follow-up in present study was noted. 43% of vaginal deliveries and 61% of

caesareans mothers attend OPD for follow-up. No case of perforation is present. Pregnancy with Cu-T is found in only one case.

Total removal is done was 333 cases and almost 46% of removal was done as per patients' choice. 9.00% removal is due to partial expulsion of Cu-T. Pain Abdomen and Irregular Spotting is in insignificant percentage. Thus PPIUCD is demonstrably safe ,effective method , convenient and non-expensive which is congruous with the result of Grimes DA et al (2010) [13].

CONCLUSION

The higher expulsion rate($p < .001$) after vaginal deliveries can be overcome by trained personnel and fundal placement of PPIUCD by long placental forceps. Positive and proper Counselling and Public awareness, Government campaigns, Community based activities regarding PPIUCD can overcome the stigma of PPIUCD.

ACKNOWLEDGEMENTS:

The authors thank Professor Saibal Mukherjee PRINCIPAL of NRS Medical College for allowing to carry out the study and work of PPIUCD counsellor Mrs Oli and Family Planning unit for their active help and support.

Competing Interests

The authors declare no competing interests.

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