



ORIGINAL RESEARCH PAPER

Obstetrics & Gynaecology

ACCEPTABILITY AND UPTAKE OF IMMEDIATE POSTPLACENTAL INSERTION OF INTRAUTERINE CONTRACEPTIVE DEVICE (COPPER T) – A CROSS SECTIONAL STUDY

KEY WORDS: PPIUCD, COPPER T, LN, LSCS

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ABSTRACT

AIMS AND OBJECTIVES : To determine the proportion of women accepting immediate postplacental insertion and the factors like obstetric code, sociodemographic factors. To determine rates of pelvic infection, lost strings, expulsion and displacement among acceptors.

MATERIALS AND METHODS : this study was a prospective Observational study conducted in Institute of Obstetrics and Gynaecology from October 2017 – September 2018. About 250 women were selected according to inclusion criteria and Acceptability and awareness of PPIUCD use in these women were assessed.

RESULTS : We observed High acceptance rates in 21-30 years age group, lower SES groups, Chennai residents, secondary level educated group, primigravidae, last child birth interval of 2-3 years group. Complication rates were low <10%. Major complications were bleeding and expulsion. Bleeding higher in LSCS group while expulsion higher in Labour natural group. PPIUCD had High retention rates after 6 months(97%).

INTRODUCTION

Based on recent UN data India's 2019 population is 1.37 billion that is equivalent to 17.74% of total world population. Current ranking of India's quality of life is 49 out of 66 quality index of 121.61. Health care ratio is 86.04.

In an effort to control the projected population of two billion by twenty first century extensive family planning has become a priority.

On demographic transition model India falls in the third stage due to decreased birth rate and death rate. In 2026, it is projected to be in stage four.

This study is to determine the socioeconomic and demographic features associated with post placental insertion of copper T and it's complications.

According to NFHS-3 IUCD accounts for 1.2- 1.6% of total contraceptive usage that is due to lack of accurate information.

Due to increased institutional deliveries due to schemes like Janaki Suraksha Yojana- a cash transfer scheme, and high motivation in antenatal and immediate postpartum period. Intrauterine device is ideal due to its safety, convenience, coitus independent, long acting, temporary, reversible and can be inserted even by a paramedical person.

PPIUCD has added advantage of avoiding hospital visit for insertion, follow up can be with their baby's immunisation schedule

Success rate depends on effective counselling in the antenatal period by health care provider, timing and No Touch insertion technique, health care accessibility in complaints, and there is low risk of perforation in immediate postpartum.

AIMS AND OBJECTIVES

- In view of high risk of unintended pregnancy in postpartum women, the need for reliable and effective contraception like IUCD has to be emphasised.
- To determine the proportion of women accepting immediate postplacental insertion and the factors like obstetric code and sociodemographic factors.
- To determine rates if pelvic infection, lost strings, expulsion and displacement among acceptors.

MATERIALS AND METHODS

STUDY DESIGN

Prospective observational study

To assess acceptability, uptake, awareness of PPIUCD use in women inserted 10 minutes following delivery (vaginal or cesarean section)

Conducted in Institute of Obstetrics and Gynaecology, Madras medical college over a period of one year from October 2017 to September 2018.

250 women were enrolled, 239 women had PPIUCD insertion with informed consent, safety reassurance, possible complaints elaboration and follow up.

INCLUSION CRITERIA

All patients delivering (Vaginal or C- section) willing to participate

EXCLUSION CRITERIA

- Anemia Hb< 10
- PPROM
- Obstructed labour
- Distorted uterine cavity

DATA ANALYSIS

Statistical analysis was done by statistical package of social sciences (SPSS version 16.0) Values are represented in numbers(%) and mean + standard deviation. Statistical test of comparison done. Continuous variables were analysed with unpaired t test. Categorical tables analysed with chi square test and Fisher's exact test. P<0.05 was taken to be statistically significant.

SAMPLE SIZE ESTIMATION

Based on retrospective evaluation authored by Sonal Palod et al in 2015 published in Annals of Women and Child health Volume 3 2017

Using confidence level at 95% Z value of 1.96 and Error + 7 p% 47.66 q% 52.34% n= 196 and 10% attrition sample size 215 estimated minimum for study 80% power.

ACCEPTANCE

Out of selected 250 women participants, 239 (95.60%) accepted PPLUIP, 11 refused (4.40%).

REASON FOR REFUSAL

Preference of another method and fear of pain and bleeding amounts to 22% in LN group and 27% in LSCS group don't want contraception immediately.

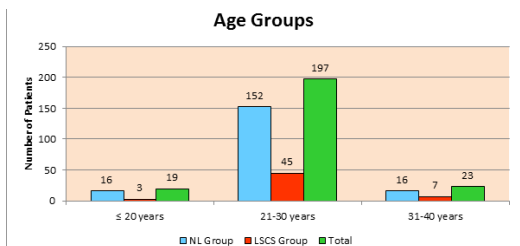
AGE GROUPS

In our study acceptance high in 21-30 years both in LN and CS group not statistically different. LN 82%, LNCS group 81.82%. Majority of study groups 21-30 years 82.43%

Less than 20 years 8% LN, 7.95% in CS

More than 30 years 8% LN, 12% in CS

Age Groups	NL Group	%	LSCS Group	%	Total	%
≤ 20 years	16	8.70	3	5.45	19	7.95
21-30 years	152	82.61	45	81.82	197	82.43
31-40 years	16	8.70	7	12.73	23	9.62
Total	184	100.00	55	100.00	239	100.00

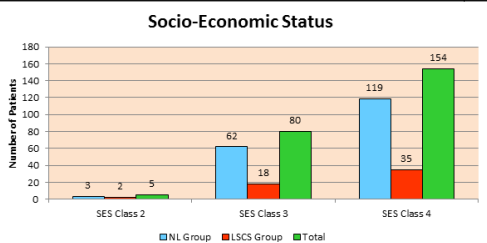


SOCIO ECONOMIC STATUS

Majority of study group belong to SES class 4 (64%). Acceptance high in SES class 4 (both LN and CS) 64.67% and 63.64% and this difference is not statistically different.

Fischer exact test shows statistically non-significant association between SES and study group, P > 0.05. Acceptably is inversely proportional to income SES class 3 good acceptance 33% & SES class 2 least (1.63%).

Socio-Economic Status	NL Group	%	LSCS Group	%	Total	%
SES Class 2	3	1.63	2	3.64	5	2.09
SES Class 3	62	33.70	18	32.73	80	33.47
SES Class 4	119	64.67	35	63.64	154	64.44
Total	184	100.00	55	100.00	239	100.00



EDUCATIONAL STATUS

Majority of total group belonged to primary education level 81.5%

LN group 81.52% had primary educational level

LSCS group 81.82% had primary educational level

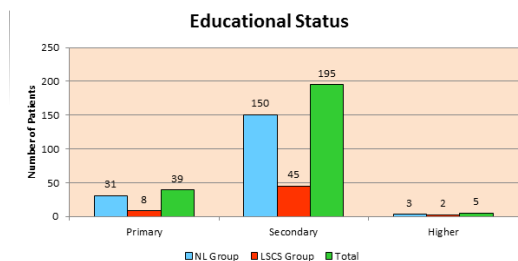
Statistically non significant association P > 0.05 between educational status and study group.

In the study acceptance high in secondary level education both LN and CS 81.5%. This difference statistically not different.

Education Status	NL Group	%	LSCS Group	%	Total	%
Primary	31	16.85	8	14.55	39	16.32
Secondary	150	81.52	45	81.82	195	81.59
Higher	3	1.63	2	3.64	5	2.09
Total	184	100.00	55	100.00	239	100.00

P value Fishers Exact Test

0.491



PARITY STATUS

Total group subjects were primi gravida 84.52%

LN group primi gravida 85.5%

CS group primi gravida 81.82%

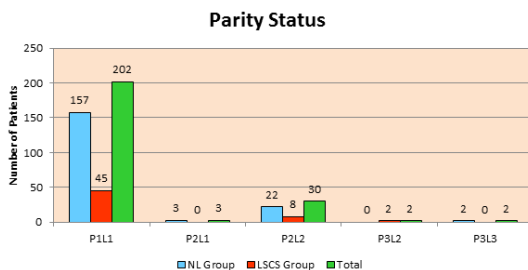
Fischers exact test statically non-significant association between parity status and study groups p > 0.05

Acceptance high in primigravida of LN group 85% CS group P 81.82% but this difference not statistically different. Multigravida showed least acceptable.

Parity Status	NL Group	%	LSCS Group	%	Total	%
P1L1	157	85.33	45	81.82	202	84.52
P2L1	3	1.63	0	0.00	3	1.26
P2L2	22	11.96	8	14.55	30	12.55
P3L2	0	0.00	2	3.64	2	0.84
P3L3	2	1.09	0	0.00	2	0.84
Total	184	100.00	55	100.00	239	100.00

P value Fishers Exact Test

0.406



LAST CHILD BIRTH

Study group belonged to 3 and 2 years ago (6.28%)

LN group 3 years ago LCB (7.07%)

CS group LCB 3 years ago (12.3%)

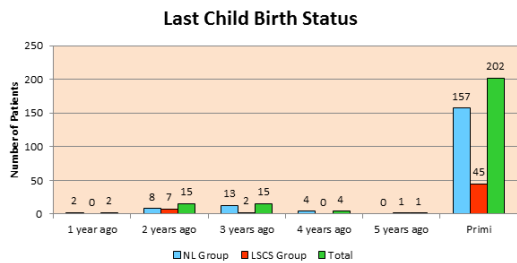
Data not significant

Acceptance high among LCB 2-3 years ago in LN group compared to CS group but this difference is not statistically significant. Acceptability seems to be directly proportional to interval between last child birth highest in interval up to 3 years

Reversibility was least 3.26% in LN group 1.82% in CS group Acceptability was directly proportional to long term safety and convenience

Last Child Birth Status	NL Group	%	LSCS Group	%	Total	%
1 year ago	2	1.09	0	0.00	2	0.84
2 years ago	8	4.35	7	12.73	15	6.28
3 years ago	13	7.07	2	3.64	15	6.28
4 years ago	4	2.17	0	0.00	4	1.67
5 years ago	0	0.00	1	1.82	1	0.42

Primi	157	85.33	45	81.82	202	84.52
Total	184	100.00	55	100.00	239	100.00
P value Fishers Exact Test					0.723	



COMPLICATION STATUS

Total group subjects had no complication 90% LN group without complication 87.5% CS group without complication 90%

Fischers exact test reveals statistically significant association between complication status and study group p < 0.05

Ethiopian multicenter study followed up to 6 weeks reported 97% continuation rate 2-3%, expulsion, 9% removal rate

In our study bleeding high in CS 5.45% compared to 2% in LN group is 60% higher.

Expulsion high in LN 8% vs 3% in CS group. Difference statically significant P < 0.05

Expulsion within 3 months higher in CS group 3.6% vs LN group 0.54%) 85% higher.

Expulsion within 6 months higher in LN group (7.6%)vs 0.00% in CS group 100% higher

Difference statically significant P < 0.05

Retention rate lower in LN group compared to LSCS group difference non different statically.

Retention of LN at books 100%, 99% at 3 months, 91.5% at 6 month. LSCS group 98% at books, 96% at 3 months 96.36% at 6 months.

Reason for acceptance due to long term protection highest in parity 3 suggests 100% high in parity 1 subjects 95%. This difference is not statistically significant

Chi square testing reveals statistically non significant association between parity and acceptability p > 0.05

Reason for acceptance as decreased expulsion (6 months) high in parity 3 lowest in parity 1 not statistically significant

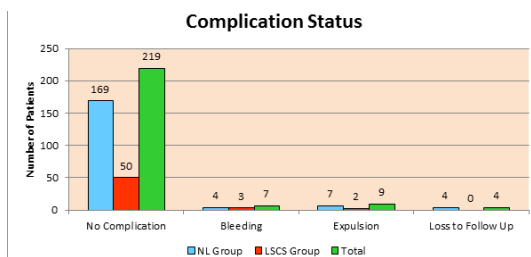
Reason for acceptance as long term protection highest at SES class 2 100%, high in class 4 96%

Acceptance for decreased expulsion highest in class 2 lowest in class 4

Statically not significant difference.

Complication Status	NL Group	%	LSCS Group	%	Total	%
No Complication	169	91.85	50	90.91	219	91.63
Bleeding	4	2.17	3	5.45	7	2.93
Expulsion	7	3.80	2	3.64	9	3.77
Loss to Follow Up	4	2.17	0	0.00	4	1.67
Total	184	100.00	55	100.00	239	100.00

P value Fishers Exact Test	0.494
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CONCLUSION

- High acceptance in 21-30 years age
- High acceptance in lower SES groups
- High acceptance among Chennai residents
- High acceptance among secondary level Education group
- High acceptance among primigravidae
- High acceptance among last child birth interval 2-3 years
- Low complication rates < 10%
- Major ones bleeding and expulsion
- No infection
- Bleeding high in LSCS and expulsion higher in labour Nature
- Time of expulsion less at or after 6 months
- High retention rates after 6 months
- Study is hypothesis proving and has high clinical significance.

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