International Journal of Science and Research (IJSR)
ISSN (Online): 2319-7064
Index Copernicus Value (2013): 6.14 | Impact Factor (2015): 6.391

Acceptability of PPIUCD versus Interval IUCD Insertion

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Abstract: ***Background: Post Partum IUCD has the benefits of providing highly effective contraception immediately after delivery, particularly where women have limited access to healthcare and have the unmet need of family planning. Aims and Objective: To study acceptability of PPIUCD and to compare with Interval IUCD insertion. Material and Methods: A Prospective observational study was carried out in the Department of Obstetrics and Gynaecology, J.N.M.C.H, A.M.U., Aligarh. Participants were divided into two major groups. PPIUCD within 10 minutes of delivery of the placenta (Group I) and Interval IUCD any time after 6 weeks of delivery (Group II). Group I and Group II was compared for verbal acceptance ,actual insertion , reason for acceptance and reason for refusal. Results: A total of 3,250 clients were counseled for IUCD insertion, 2,490 clients were counseled for insertion of PPIUCD and 760 clients were counseled for Interval IUCD .Acceptance rate was less in PPIUCD insertion (36.1% v/s 60.5%) but actual insertion was more in PPIUCD insertion (58.8% v/s 32.6%) and the difference was significant. Most common reason for acceptance by clients in both group was long term use. The reason for refusal in both group was mainly fear of side effects. Out of the total clients who got IUCD insertion 64.6% did not know about IUCD beforehand. Conclusion: Although the acceptance was low in PPIUCD insertion group but the maximum clients who accepted actually got it inserted. In Interval group were acceptance was high but the percentage of actual insertion was very low.***

Keywords: PPIUCD, Interval IUCD, Acceptability, refusal, actual insertion

1. Introduction

Family planning can avert more than 30% of maternal mortality and 10% of child mortality if couples spaced their pregnancies more than 2 years apart (Cleland J et al, 2006.Lancet).

Intrauterine devices are the most cost effective long- acting reversible contraceptives.

Post partum period is highly vulnerable period to unintended pregnancy as there are limited contraceptive options available in the breast feeding women. At the same time ovulation is highly unpredictable in non breast feeding or non exclusive breast feeding women.

Post partum period is the time when the women are highly receptive and motivated to adopt family planning methods. The time during pregnancy and that immediately after delivery may be the only time for the physician to communicate the women who are poorly motivated to obtain routine health care, best described as 'crisis-oriented'.
PPIUCD appears an IDEAL METHOD for family planning.

2. Material and Methods

The Prospective observational study was carried out in the Department of Obstetrics and Gynaecology, J.N.M.C.H, A.M.U., Aligarh between January 2013 to November 2015.

The subjects were recruited from OPD, Antenatal, post natal and those admitted in wards. Clients were divided into two major groups:

Group I: Participants willing for the Immediate Post Partum IUCD insertion within 10 minutes of Normal delivery and Cesarean section.

Group II:-Interval IUCD insertion any time after 6 weeks of delivery.

Inclusion criteria:
Women willing for Copper T insertion and its follow up and meeting all the eligibility criteria for IUCD Insertion.

Exclusion criteria:
Women having signs & symptoms of chorioamnionitis or puerperal sepsis, prolonged rupture of membranes of >18hrs,extensive genital trauma, unresolved PPH, any abnormality of uterus or a large fibroid distorting its cavity, PID , malignant or benign trophoblastic disease and HIV/AIDS.

Protective device Cu IUCD 380 A was used in the study .Post partum vaginal insertions was done with kelly forceps and intracaesarean with sponge holding forceps. Interval insertions were done by withdrawal technique. Comparison between two groups was done. Statistical analysis was done using chi square test.

3. Observations and Results

In this study total number of clients counseled for insertion of IUCD were 3,250 .Out of these, 1360 (41.8%) clients accepted for IUCD insertion ,out of this only 679 (49.9%)% got actually inserted. 529 PPIUCD and 150 Interval IUCD were inserted.

Table 1: Acceptance Rate

Time of insertion	Total no. of clients counseled	Verbally accepted clients	% of acceptance	Actual insertion	%Actual insertion
Group I- (PPIUCD)	2490	900	36.1%	529	58.8%
Group II- (Interval)	760	460	60.5%	150	32.60%
Total	3,250	1,360	41.8%	679	49.92%

A total of 3,250 clients were counseled for IUCD insertion and 1,360(41.8%) clients accepted during counseling. 2490 clients were counseled for insertion of IUCD within 10 min. of delivery (GROUP-I), out of which 900(36.1%) clients accepted for insertion but 529(58.8%) clients actually got it inserted.

760 clients were counseled for Interval IUCD(Group-II) insertion out of these 460 (60.5%) clients accepted but only 150 (32.60%) actually got it inserted .Although the acceptance was low in the early PPIUCD insertion group but the maximum clients who accepted actually got it inserted. The reverse situation was seen in Group II in which acceptance was high but the percentage of actual insertion was very low.

Table 2: Socio Demographic Characteristics Of The Participants

Socio-demographic Characteristics	Group I (PPIUCD) (n=529)	Group II (Interval) (n=150)
Age (in yrs.)	**% (No.)**	**%(No.)**
20-25	3.5 (19)	1.3 (2)
25-30	52.9 (280)	25.3 (38)
30-35	37.8 (200)	41.3 (62)
35-40	5.6 (30)	32 (48)
Educational Status		
Literate	44.8 (237)	78 (117)
Illiterate	55.1 (292)	22 (33)
Religion		
Hindu	24.5 (130)	36 (54)
Muslim	75.4 (399)	64 (96)
Occupation		
Housewife	85.8(454)	76 (114)
Employed	14.17(75)	24 (36)
Residence		
Urban	81.1(429)	86.7 (130)
Rural	18.9(100)	13.3 (20)

Socio demographic characteristics of both group was comparable .

Table 3: Reasons for acceptance

Reason for Acceptance	*GrpI (n=900)*		*GrpII (n=460)*		*Total (n=1360)*	
	No.	*%*	*No.*	*%*	*No.*	*%*
Long term	460	51.1	148	32.2	608	44.7
Safe and Reliable	25	2.7	90	19.6	115	8.5
Reversible	307	34.1	120	26.1	427	31.4
No interference with breast feeding	10	1.1	15	3.3	25	1.8
Non hormonal	3	0.3	7	1.5	10	0.7
No remembrance once inserted	95	10.5	80	17.4	175	12.9

Most common reason for acceptance by clients is its long term use in both Group I (51.1%) and in Group II (32.2%) was mainly due to long term use. Second most common cause for acceptance was reversible nature in both Group I (34.1%) and in Group II (26.1%).

Table 4: Source of information before counselling:

Source of information	GroupI (n=529)		GroupII (n=150)		Total (n=679)	
	No.	**%**	**No.**	**%**	**No.**	**%**
Relative/Friend	20	3.8	16	10.7	36	5.3
Peer educators	170	32.1	20	13.3	190	27.9
Media	10	1.9	4	2.7	14	2.1
Not heard before	329	62.2	110	7.3	439	64.6

Out of the total clients who got IUCD insertion in both groups, most of them (64.6%) did not know about IUCD beforehand. Those who knew about it before hand was mainly through peer educators 32.1% in Group I and 13.3% in Group II.

Table 5: The reasons for refusal at the time of counseling

Reason for Refusal	**GroupI (n=1,590)**		**GroupII (n=300)**		**Total (n=1,890)**	
	No.	**%**	**No.**	**%**	**No.**	**%**
Family refusal	159	10	30	10	189	10
Fear of side effects (Pain/bleeding)	960	60.4	160	53.3	1120	59.2
Fear of complications (Perforation)	230	14.5	50	16.7	280	14.8
Desire of other family planning methods	60	3.8	10	3.3	70	3.7
Satisfied with previous family planning methods	95	5.9	24	8	119	6.3
Religious belief	38	2.4	15	5	53	2.8
Interferes with Intercourse	8	0.5	2	0.6	10	0.5
None	40	2.5	9	3	49	2.6
Total	1590	63.8	300	39.5	1890	58.2

1590 (63.8%) clients out of 2490 counselled in group I refused for insertion.300 (39.5%) clients out of 760 counselled in group II refused for insertion. The reason for refusal in group I was mainly fear of side effect (pain/bleeding) 60.4% and in group II was also fear of side effects (pain/bleeding)53.30%.

Table 6: Parity

No. of Parity	GroupI (n=529)		GroupII (n=150)		Total (n=679)	
	No	%	No	%	No	%
1	66	12.5	20	13.3	86	12.7
2	195	36.9	72	48	267	39.3
3	187	35.3	46	30.7	233	34.3
4	50	9.4	8	5.3	58	8.5
5 or>5	31	5.9	4	2.7	35	5.2

Out of total IUCD inserted, in Group I primiparous was only 12.7% and in GroupII. It was also only 13.3%.IUCD insertions in multipara was more compared to nullipara in both groups. Mean parity after which clients opted for IUCD insertion were 2.6 (SD $\pm$ 1.2) from Group I and 2.4 (SD $\pm$ 0.96) in Group II. The difference between two groups was not significant **(p>0.05)**.

Table 7: No. of. Live issues

No. of Live issues	Group I (n=529)		Group II (n=150)		Total (n=679)	
	No	**%**	**No**	**%**	**No**	**%**
1	75	14.2	25	16.7	100	14.7
2	206	38.9	80	53.3	286	42.1
3	168	31.7	33	22	201	29.6
4	47	8.8	8	5.3	55	8.1
5 or>5	33	6.2	4	2.7	37	5.5

Majority of IUCD insertions was in clients with two or three live issue compared to single or four or more live issues in both groups. Mean live issues after which clients opted for IUCD insertion were 2.6(SD $\pm$ 1.2) in Group I and 2.3 (SD $\pm$ 0.97) in Group II. The difference between two groups was not significant **(p>0.05)**.

Table 8: Clients according to the previous contraceptive use:

Previous method of contraception	Group-I (n=529)		Group-II (n=150)		Total (n=679)	
	No	%	No	%	No	%
Condom	200	37.8	50	33.4	250	36.8
OCPs	20	3.8	2	1.3	22	3.2
DMPA	16	3	2	1.3	18	2.7
Traditional	108	20.4	33	22	141	20.8
Interval IUCD	5	1	2	1.3	7	1
PPIUCD	6	1.1	1	0.7	7	1
Never used	174	32.9	60	40	234	34.5

Most common means of previous contraceptive use was condom both in Group I, 200 (37.8%) and in Group II, 50(33.4%). 32.9% clients in Group I and 40% clients in Group II never used any means of contraception. But the difference between two groups was not significant **(p>0.05)**.

4. Discussion

In our study a total of 41.8% clients accepted during counseling for IUCD insertion out of these only 49.9% client's actual insertion was done.

For PPIUCD insertion (Group-I) percentage of verbal acceptance was 36.1% and percentage of actual insertion was 58.8%.

For Interval insertion (Group-II) percentage of verbal acceptance was 60.5% and percentage of actual insertion was 32.60%.

Although the acceptance was low in the early PPIUCD insertion group but the maximum clients who accepted actually got it inserted. The reverse situation was seen in Group II. The acceptance was high but the percentage of actual insertion was very low. Our study was somewhat consistent with study conducted by **Safwat et al.**

Safwat et al (**2003**) study had shown percentage of actual insertion of PPIUCD was 71.2% and 7.2% for interval insertion [1].

Gautam et al (2014) study had acceptance rate 21.77% for PPIUCD[2].

The reason for acceptance by clients was mainly due to long term effectiveness , 51.1% in Group I and in 32.2% Group II. Second most common cause for acceptance was reversible nature in both Group I and in Group II (34.1% and 26.1% respectively). Our study was similar to study **Gautam et al (2014), Kumar et al [3]**

Gautam et al (2014) reported that 54.8% clients accepted due to long term effect, 34.9% due to reversibility for PPIUCD insertion.

Kumar et al (2014) reported acceptance of PPIUCD as it is a long acting method in 87% patients and 12.7% acceptance due to infrequent follow up trips.

In **Mishra et al** study reason for acceptance was mainly my doctors advice may be good one (49.29%) and second highest reason was no remembrance once inserted (36.88%)[4].

Out of the total clients who got IUCD insertion in both groups, most of them (64.6%) did not know about IUCD beforehand. Those who knew about it before hand was mainly through peer educators 32.1% in Group I and 13.3% in Group II.

Our study was similar to **Safwat et al (2003)** were acceptance rate was approximately the same during antetenatal and postpartum counselling 26.4% and 31.8% respectively.

The reason for refusal in PPIUCD was mainly fear of side effect (pain/bleeding) 60.4% and in Interval insertion was also fear of side effects (pain/bleeding) 53.30%.

Gautam et al (2014) among those patients who declined PPIUCD insertion 30.0% preferred to use another contraceptive method,15% were satisfied with previous contraceptive,13% need to discuss with their partner.

Out of total IUCD inserted in Group I primipara were only 12.7% and in GroupII it was also only 13.3%.IUCD insertions in multipara was more compared to nullipara in both groups. Mean parity after which clients opted for IUCD insertion were 2.6 (SD $\pm$ 1.2) in Group I and 2.4 (SD $\pm$ 0.96) in Group II.The difference between two groups was not significant **(p>0.05)**. Our study is consistent with study of **Grimes et al** where they found higher acceptance in multiparous (65.1%)[5].

But our study was not consistent with **Mishra et al(2014)** where acceptance was most common among primigravida (20.73%).

In our study mean live issues after which clients opted for PPIUCD insertion were 2.6(SD $\pm$ 1.2) and 2.3 (SD $\pm$ 0.97) for Interval insertion. The difference between two groups was not significant (p>0.05).Our study was comparable with **Celen et al, Eroglu et al and Morrison et al** [6],[7],[8].

In the study conducted by **Celen et al in 2004** the mean live issues were 1.62 (SD $\pm$ 0.8) after which they opted for IUCD insertion. **Eroglu et al in 2006** found the mean number of

live issues of acceptance of IUCD was 1.73 (SD ± 0.79) and that by **Morrison et al in 1996** was 2.3.

5. Conclusion

Verbal acceptance was less in PPIUCD insertion but actual insertion was more in PPIUCD insertion as compared to interval insertion. PPIUCD has the benefits of providing highly effective long term contraception immediately after delivery particularly in country like ours where women have limited access to healthcare. Proper counselling can help to generate awareness and complaince especially for PPIUCD use in patients who have institutional delivery.

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